User's Guide

Moduc Elements MagiCAD plugin

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www.progman.fi

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Chapter 1. General

About this document

This document contains instructions on using *Moduc Elements MagiCAD plugin*.

Moduc Elements MagiCAD plug-in makes adding and designing Moduc elements easy and fast.

Installing the software

Required third-party software

Moduc Elements MagiCAD plugin works with the following MagiCAD for AutoCAD versions

- MagiCAD 2013.11 AutoCAD 2010-2014 or MagiCAD 2014.4 and AutoCAD 2010-2015

Installation

1. Download setup file from

   https://portal.magicad.com/Download/GetProductCategoryList?categoryId=3

2. Install Moduc Elements MagiCAD plugin.

Administrator privileges are recommended for installation. **Note if you have several AutoCAD versions on your workstation:**
Before you run the installation program, start MagiCAD to make sure that *Moduc ElementsMagiCAD Plugin* installs on the same AutoCAD platform as MagiCAD.

Starting the program

Before you start using *Moduc Elements MagiCAD Plugin*, start MagiCAD and open a Heating and piping project.

Run **CUILOAD (**or **MENULOAD)** in AutoCAD, and browse the customization file from the directory where you installed the program

Directory for cui/cuix-file is by default for

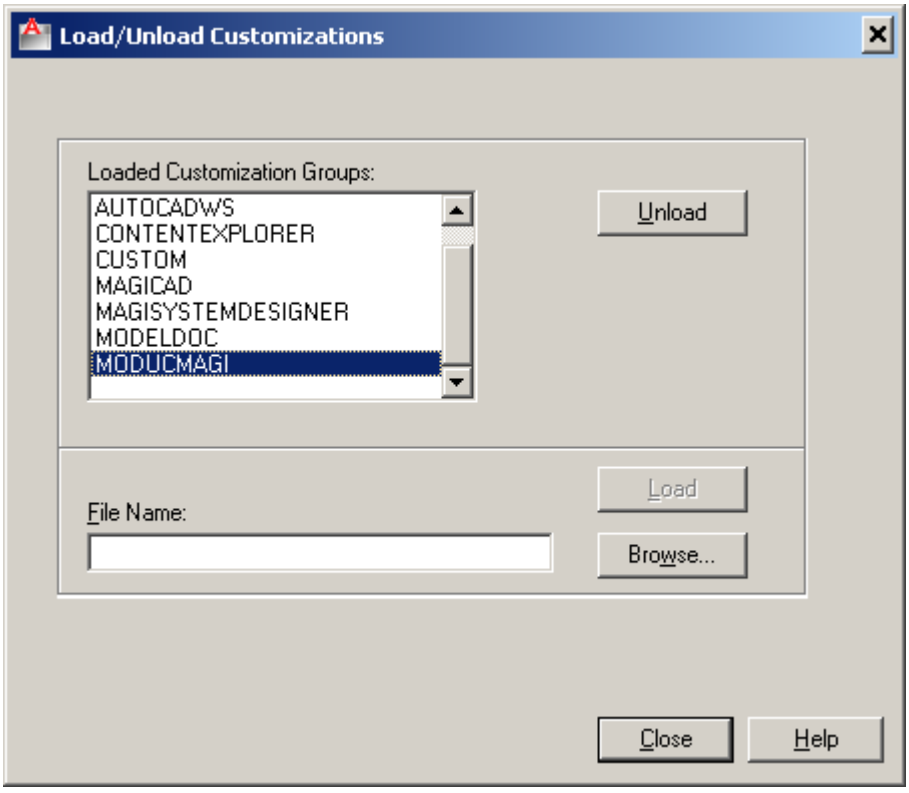
XP: *C:\Documents and Settings\All Users\Application Data\ Moduc Elements*

Win7: *C:\Users\All Users\Moduc Elements* or *C:\ProgramData\ Moduc Elements*

Win8/Win8.1: *C:\ProgramData\Moduc Elements*

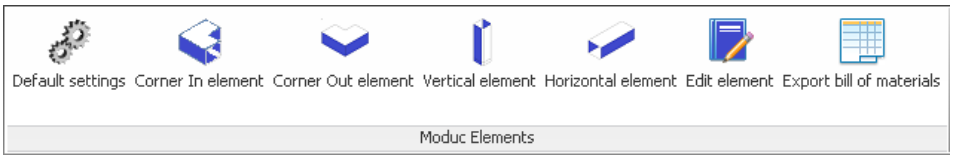
When you first time start using *Moduc Elements MagiCAD Plugin*, you need to load the customization file (*ModucMagi.cuix*) manually if you are using AutoCAD 2012 or older version.

AutoCAD 2013 or newer version toolbar and ribbon will be loaded automatically.



When you click *Load*, *Moduc Elements* toolbar appears on the desktop.

and ribbon



Next time you use AutoCAD, the customization file is automatically loaded.

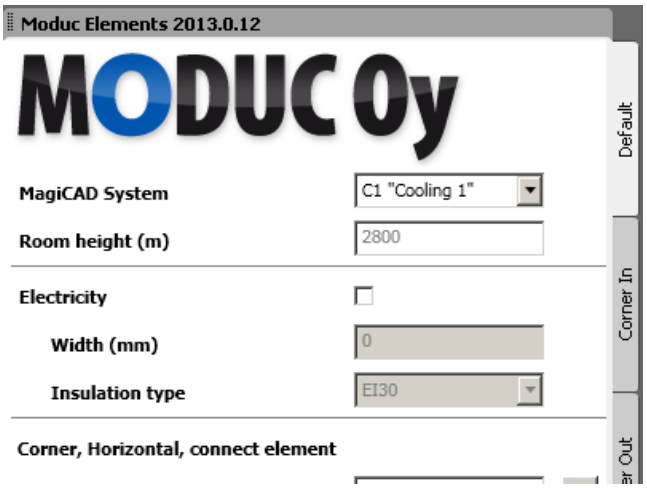
Chapter 2. Functions

Moduc Elements UI

Moduc Elements MagiCAD plugin contains following functions:

- - default settings
- - corner in element
- - corner out element
- - vertical element
- - horizontal element
- - edit element
- - export bill of materials

It is recommended to start with default settings dialog. In Default settings dialog user can define elements width and depth as well as other selections. Designer does not necessarily need to change any values in element type specific dialog, except only in special occasion. See typical workflow example at the end of the document.



Default settings

Following fields should be filled in default settings dialog. After all settings have been defined, press Apply to save default settings. These settings are auto loaded as default values for element specific dialogs such as Corner In element dialog.

- MagiCAD System : set system for Moduc elements
- Room height(m) : plugin reads the value from MagiCAD project and it cannot be changed. This value is used as installation height for the elements.
- Electricity : Insert needed width for electricity cabels and select insulation type, if needed. Electricity selection is taken into consideration in bill of materials(BOM)-list, but do not effect to elements dimensions.
- Corner, Horizontal, connect element : input desired default width and depth for elements. These dimensions are used by default when inserting new element to the drawing. User can always modify special width or depth in element specific dialog if needed.

  Click aid-functions

and

if you want to measure the required width or depth in magicad drawing. When clicking these buttons “measure assistant” command is started and user can measure distance between two points in magicad drawing. This measured distance is automatically filled to the corresponding field in default settings dialog.

  Check roof installation if is needed (pipes parallel near the ceiling). Roof installation selection is shown in BOM, but it has no effect on the geometry of the elements.
- Vertical element : Check connect element if vertical element is needed to connect to horizontal element.

  Input desired default width and depth for vertical element.

Corner In element

- Roof installation(pipes parallel near the ceiling) selection is shown in BOM, not effect to element dimensions.
- Input width and depth dimensions for element if default values are not suitable.

  Click aid-functions

and

if you need to measure space for elements.
- Electricity : input needed width for electricity cabels and select insulation type, if needed. Electricity selection is taken into consideration in bill of materials(BOM)-list, but do not effect to elements dimensions.

Note ! if any values or settings are changed in this dialog, the values are not saved to defaults settings dialog. Changes reflect only to

elements that you insert directly from this dialog. When entering to this dialog again, default settings are loaded again.

Corner Out element

- Roof installation(pipes parallel near the ceiling) selection is shown in BOM, not effect to element dimensions.
- Insert width and depth dimensions for element if default values are not suitable.

  Click aid-functions W and D if you need to measure space for elements.
- Electricity : input needed width for electricity cabels and select insulation type, if needed. Electricity selection is taken into consideration in bill of materials(BOM)-list, but do not effect to elements dimensions.

Note ! if any values or settings are changed in this dialog, the values are not saved to defaults settings dialog.

Vertical element

- Input width and depth dimensions for element. Height is automatically set based on room height and connect element depth.

  Click aid-functions W and D if you need to measure space for elements.
- Electricity : input needed width for electricity cabels and select insulation type, if needed. Electricity selection is taken into consideration in bill of materials(BOM)-list, but do not effect to elements dimensions.
- Electrical device : elecrical device reservation possibility. Symbol is drawn also to element and taken into consideration in bill of materials.

  Moduc will contact to ask more detailed information regarding the electrical device once they receive the BOM.
- Add connect element: check connect element if you want to connect horizontal element with vertical element.

  Input width and depth dimensions for element if default values were not suitable.

  Click aid-functions W and D if you need to measure dimensions for elements.
- Roof installation selection is shown in BOM, not effect to element dimensions.

Note ! if any values or settings are changed in this dialog, the values are not saved to defaults settings dialog.

Horizontal element

- Roof installation selection is shown in BOM, not effect to element dimensions.
- Electricity : insert needed width for electricity cabels and select insulation type, if needed. Electricity selection is taken into consideration in bill of materials(BOM)-list, but do not effect to elements dimensions.
- Electrical device : elecrical device reservation possibility. It is drawn also to element and taken into consideration in bill of materials
- Select two elements to be connected with horizontal elements:

  When inserting horizontal element user is asked first to select two elements and then horizontal elements is drawn between selected elements as long as the two elements have been aligned properly.
- Free position and length:

  Draw freely horizontal element. After the element is drawn, choose element front side(diagonal side) by clicking on that side of the line.

Plug-in automatically creates the horizontal element with same size(width/depth) as selected elements. Plug-in also automatically divides inserted element into 2450mm (=standard moduc element size) pieces if distance between selected elements is more than 2450mm.

Note ! if any values or settings are changed in this dialog, the values are not saved to defaults settings dialog.

Edit element

Click button and select element. Current values of the element is filled to the dialog fields. Update needed values in fields and click Update-button.

Note! Element is updated when cursor is moved top of the drawing.

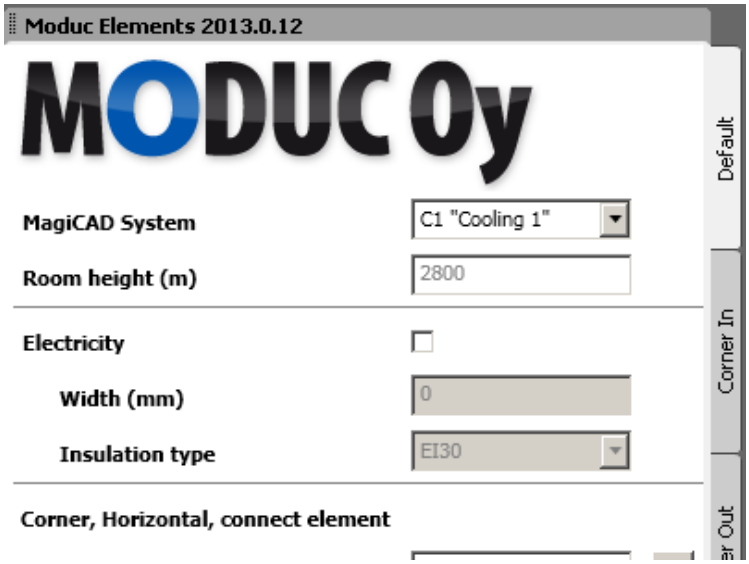
Export bill of materials

Create bill of materials by clicking export bill of material -button in ribbon and select elements by normal autocad means. After that press enter to generate Excel-spread sheet that contains BOM table for Moduc Elements.

Note! Moduc elements are not included to MagiCAD own bill of materials

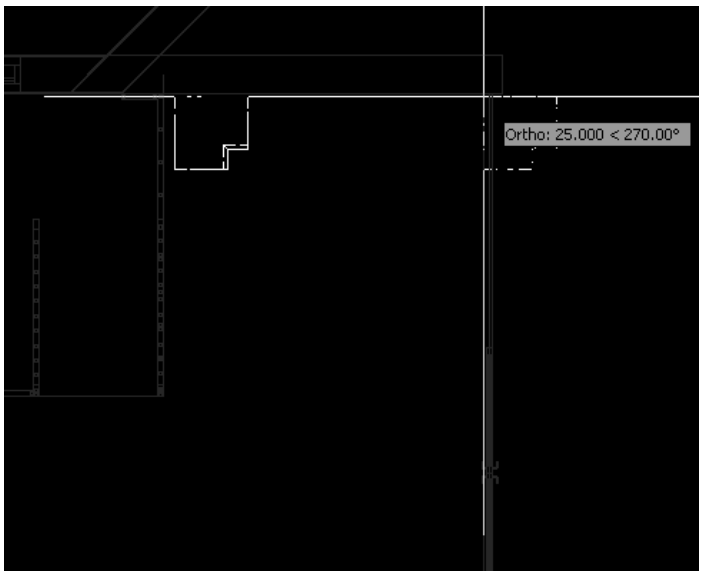
Using Moduc Elements plugin

1. Start using plug-in by setting first default values for elements.

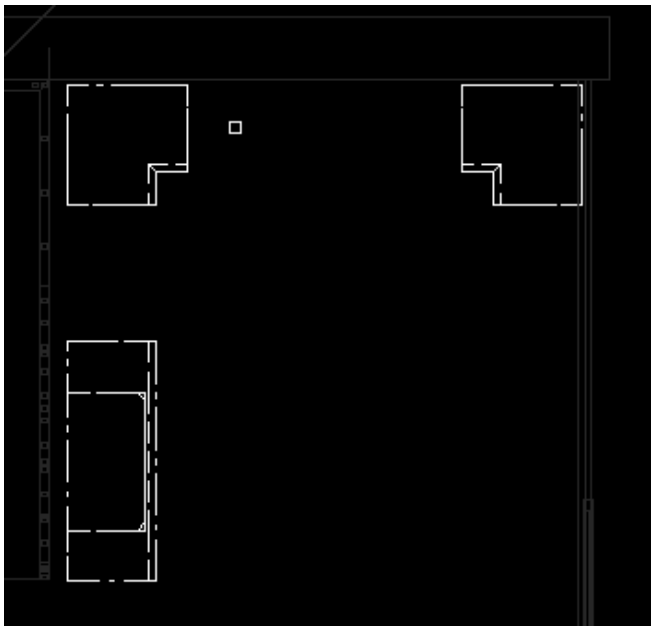


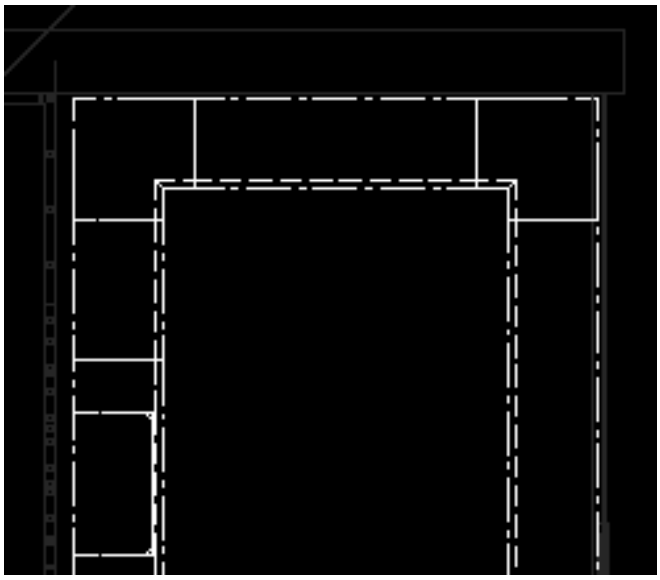
2. Proceed by adding first corner and vertical elements to drawing.

   Note that when clicking corner or vertical element button in ribbon/toolbar, insert operation is automatically started with the given default settings. If default settings are defined properly user can right away insert element to the drawing. If modifications to the settings(size etc.) are needed user can make needed changes and then click insert button found in activated Moduc tool palette window.



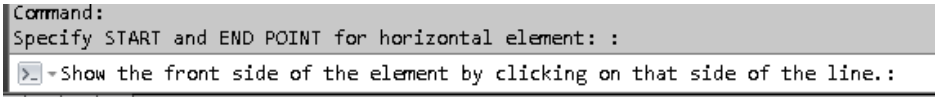
Connect two corner elements together by adding horizontal element between them. Same way it is possible to add horizontal element between corner and connect element. When inserting horizontal element user is asked to select two elements and then horizontal elements is drawn between selected elements as long as the two elements have been aligned properly.

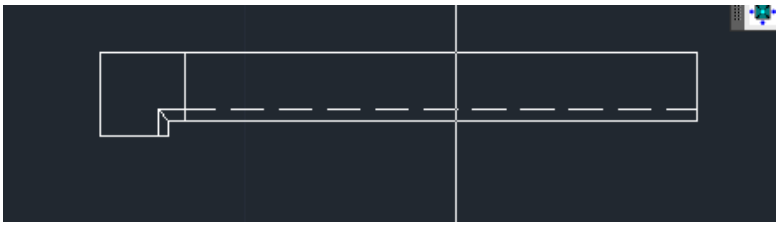




Optionally user can choose ”Free positining and length” option from the horizontal element page. That will allow user to freely insert new

horizontal element. This option should be used when horizontal element is not inserted between two elements.





3. Once element ”network” is finished in the drawing generate bill of materials list.

	A	B	C	D	E	F	G	H
1	Element type	Element length	Number of elements	Total length	Electricity	Num. elements including Electr. device	Num. collars	Roof installation
2	Horizontal (750x450)		1*	2100			2	
3		700	1	700				X
4		1400	1	1400				X
5	Vertical (700x400)		1*	2050			1	
6		2050	1	2050				X
7	Connect (750x450)	1225	1	1225				X
8	Corner-in (750x450)	1225	2	2450				X
9				7825				
10								
11			*) Number of full elements of 2450mm.					