



# **Systemair MagiCAD plugin**

User guide

03/04/2020

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## 1 Chapter 1. General

### 1.1 About this document

This document contains instructions on using *Systemair MagiCAD plugin for AutoCAD* and *Systemair MagiCAD plugin for Revit*. Plugins allows inserting Systemair air handling units into to MagiCAD, AutoCAD, or Revit drawing.

### 1.2 Installing the software

#### 1.2.1 Required third-party software

Systemair MagiCAD plugins works with the following MagiCAD for AutoCAD versions

- MagiCAD 2020 and AutoCAD 2015-2020
- MagiCAD 2021 and AutoCAD 2017-2021

SystemairCAD software (optional)

- Version C2016-06.07.E9 or newer

Download from

<https://www.systemair.com/Global/support/installable-product-selection-tools/Software-tools/SystemairCAD/>

#### 1.2.2 Installation

1. Download setup file from  
<https://portal.magicad.com/download/ProductSearch?searchStr=Systemair&categoryId=3>
2. Install Systemair 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 *Systemair MagiCAD plugin* installs on the same AutoCAD platform as MagiCAD.

### 1.3 Starting the program

Before you start using *Systemair MagiCAD plugin*, (re)-start MagiCAD and open a Heating and piping project.

The plug-in is automatically loaded and is ready to be used once AutoCAD is started next time after installing the plugin. If this does not work for some reason then plugin CUI-file needs to be loaded manually.

Run **CUILOAD** in AutoCAD and browse the customization file from following directory:

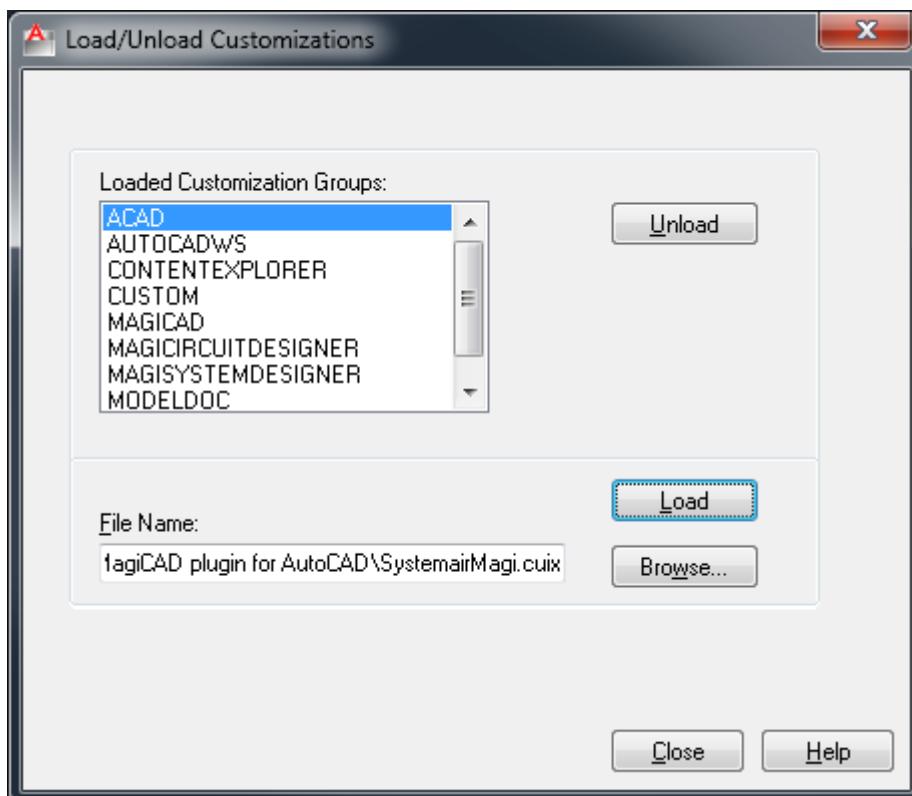
Directory for cui/cuix-file is by default for

**XP:** C:\Documents and Settings\All Users\Application Data\Systemair MagiCAD plugin for AutoCAD/Revit

**Win7:** C:\Users\All Users\Systemair MagiCAD plugin for AutoCAD/Revit

**Win8/Win8.1:** C:\ProgramData\Systemair MagiCAD plugin for AutoCAD/Revit

**Win10:** C:\ProgramData\Systemair MagiCAD plugin for AutoCAD/Revit



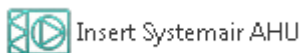
When you click Load, Systemair MagiCAD plugin's ribbon panel is loaded.

## 2 Chapter 2. Functions

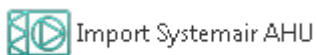
### 2.1 Systemair MagiCAD plugin's User Interfaces

#### 2.1.1 Main functions

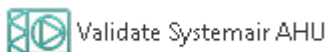
Plugin contains the following functions:



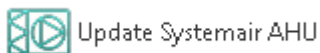
Opens the SystemairCAD where air handling units can be created and configured. User can choose products to be inserted to the drawing.



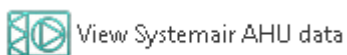
Opens the File Open dialog where user can select MagiCAD AHU import file. These MagiCAD AHU import files can be created by SystemairCAD's export functionality.



Validates Systemair's air handling unit. Checks if air flows / pressures drops are still valid for the dimensioning.



Updates selected Systemair's air handling unit by opening SystemairCAD. The selected air handling unit will be replaced/updated to the drawing.



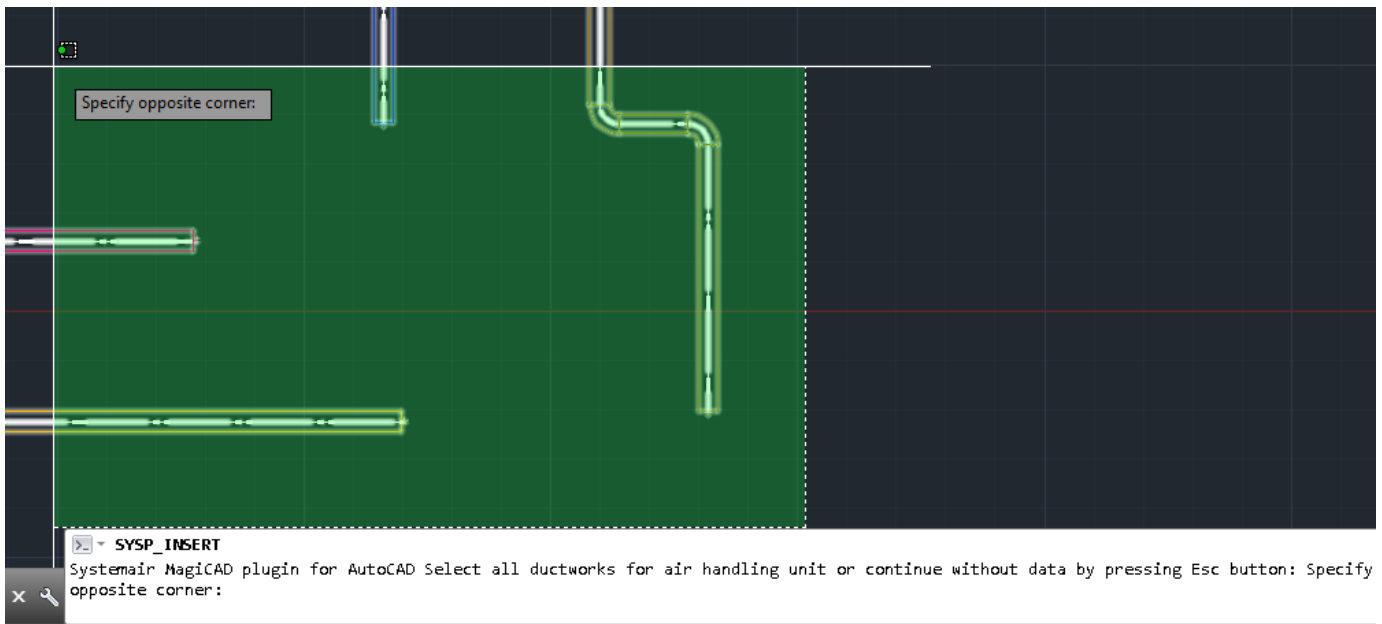
Allows user to view technical data of the selected product. The selected product can be air handling unit or duct component which is dimensioned by SystemairCAD.

#### 2.1.2 Insert Systemair AHU

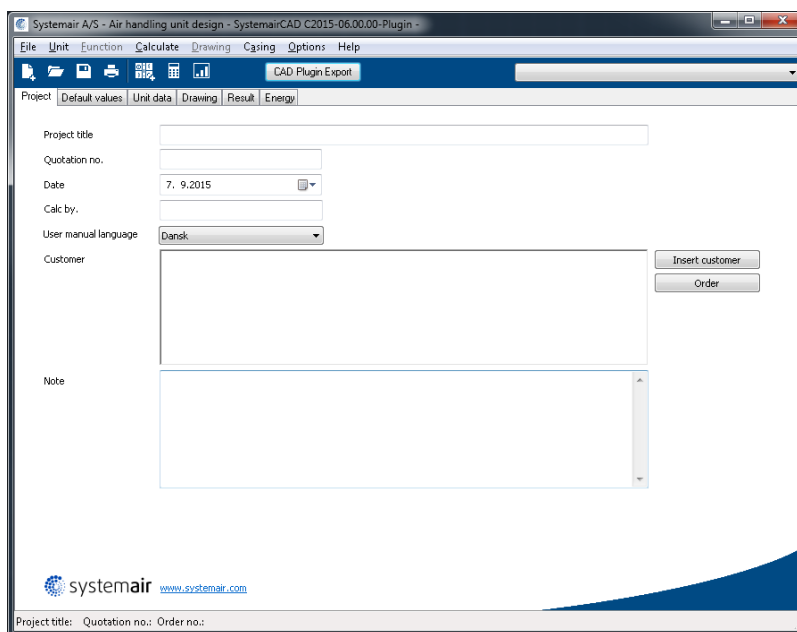


Follow these steps for Inserting Systemair's air handling unit into MagiCAD drawing:

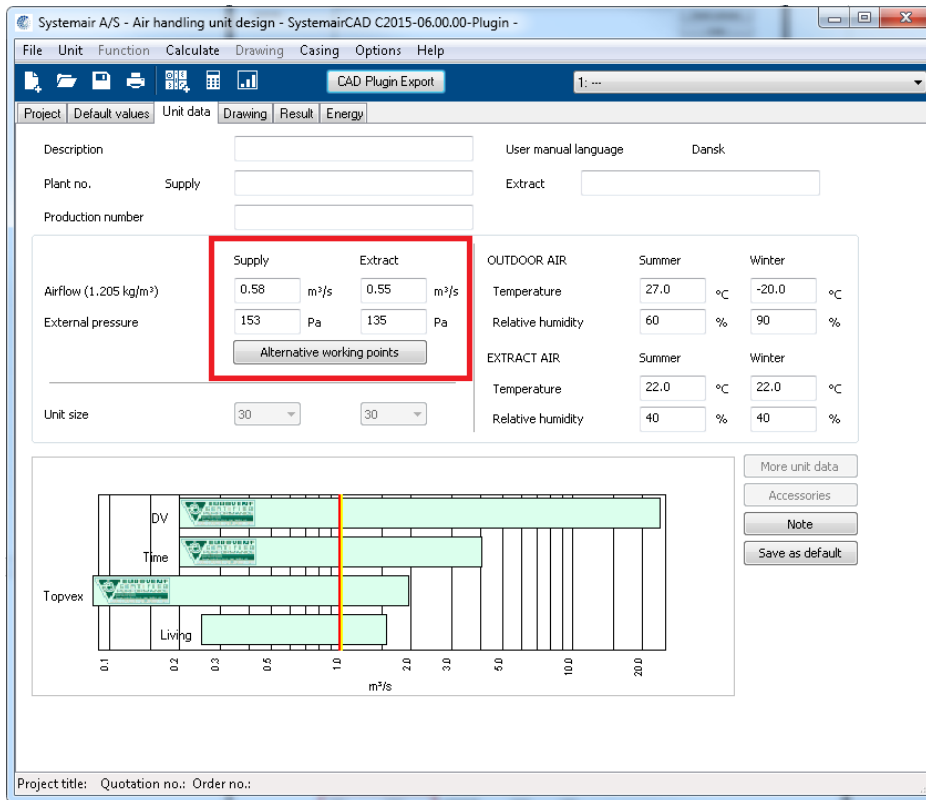
1. Click Insert Systemair AHU button from plugin's ribbon panel in AutoCAD/Revit.
2. If MagiCAD drawing is opened plugins ask to point ductworks for getting air flows, pressure drops and MagiCAD systems. This phase can be skipped by pressing Esc button.



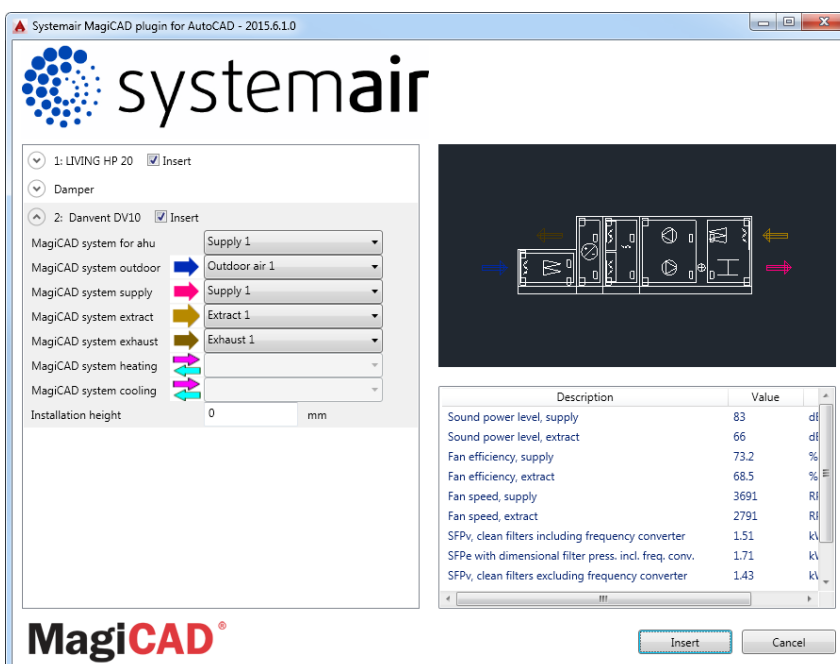
3. SystemairCAD program is started.



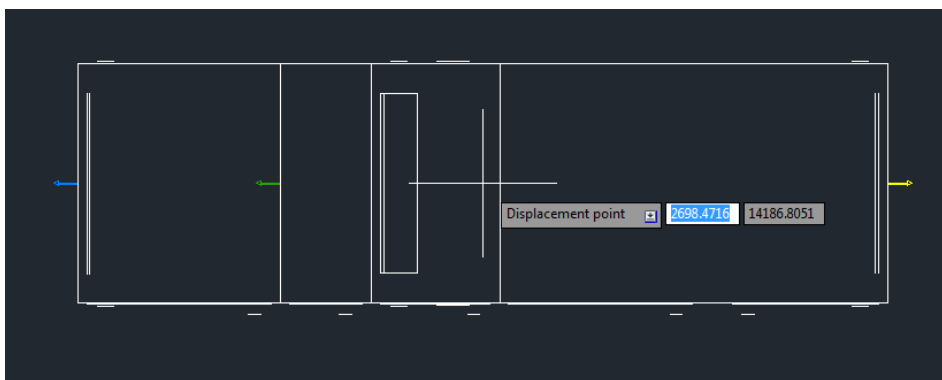
Air flow and external pressure values are auto-filled with values received from CAD:



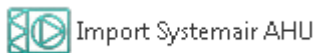
- Configure and dimension an air handling unit and save the project file. Plugin supports also exporting several air handling units at once.
- When *CAD Plugin Export* button is clicked the following dialog is displayed for the user:



6. Available products are shown in list view on the left side of the dialog. Geometry of the product is displayed on the top right side. Before installing product to drawing, user needs to first select MagiCAD system (if MagiCAD drawing is available) for each duct connection (for each product installed to the drawing). Also installation height of the product can be defined here. Duct components inherit system selections from parent air handling unit.
7. Once MagiCAD systems have been defined for all products, installation can be started by clicking *Insert* button. Notice that it's possible to uncheck insert checkbox in case you want to exclude some of the unit's from insert operation.
8. Products can be placed to the drawing one by one by dragging them to wanted position in the drawing.

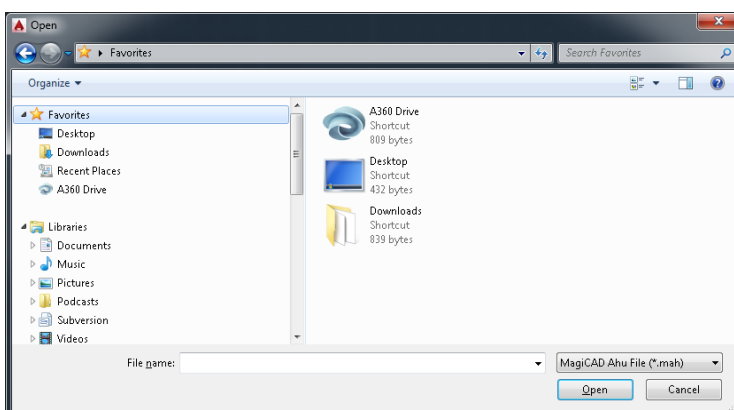


### 2.1.3 Import Systemair AHU



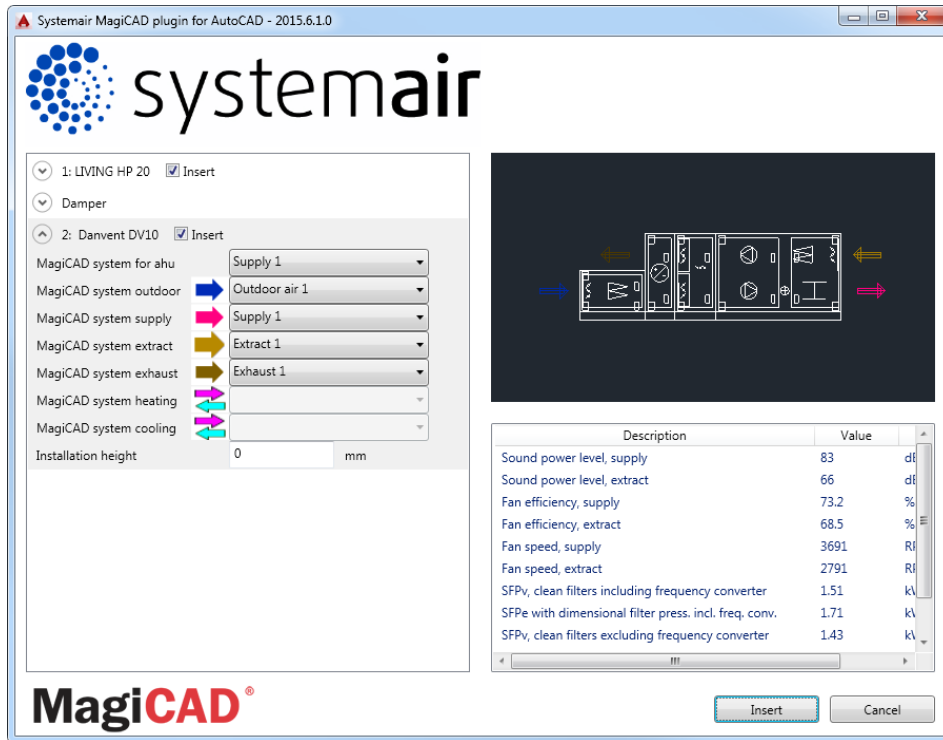
Follow these steps for Importing Systemair's air handling unit into MagiCAD drawing:

1. Before Import Systemair AHU -operation from the plugin is used, air handling unit(s) needs to be first exported from SystemairCAD. This part is often be done by Systemair sales person who then delivers the exported file to designer. Thus, designers do not necessarily need to have SystemairCAD installed in order to use this functionality.
2. Click *Import Systemair AHU* button from plugin's ribbon panel in AutoCAD/Revit.

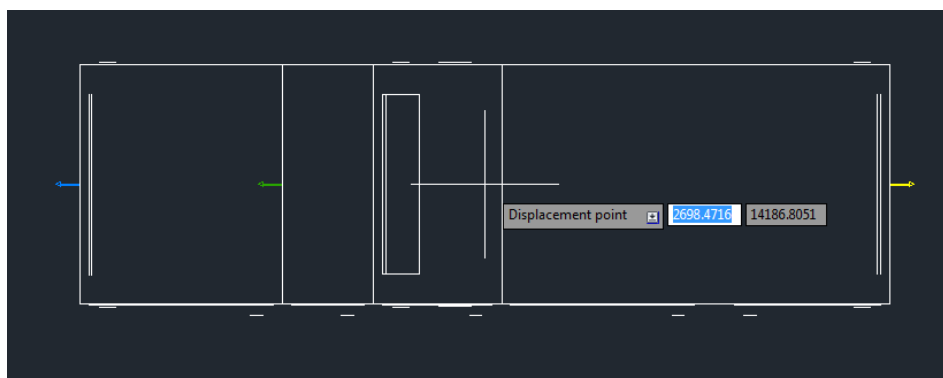




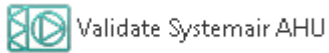
3. User should browse to the folder where export file is located. SystemairCAD generates .mah-files which are supported by this plugin.
4. Once user has chosen the file and clicked open button, available products are loaded into installation dialog:



5. Available products are shown in list view on the left side of the dialog. Geometry of the product is displayed on the top right side. Before installing product to drawing, user needs to first select MagiCAD system (if MagiCAD drawing is opened) for each duct connection (for each product installed to the drawing). Also installation height of the product can be defined here.
6. Once MagiCAD systems have been defined for all products, installation can be started by clicking insert button.
7. Products can be placed to the drawing one by one by dragging them to wanted position in the drawing.



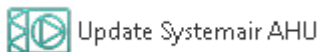
## 2.1.4 Validate Systemair AHU



Follow these steps for Validating Systemair's air handling unit into MagiCAD drawing:

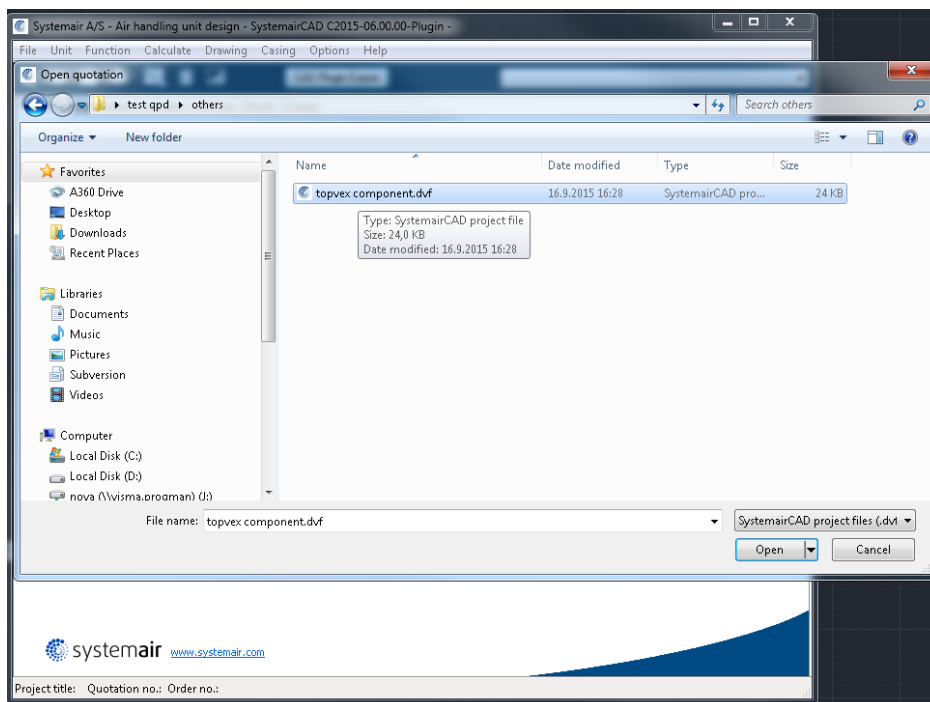
1. Click Validate Systemair AHU button from plugin's ribbon panel in AutoCAD/Revit.
2. Select air handling unit from drawing which will be validated.
3. Plugins shows if validating is successfully passed or if it needs to be updated. If updating is needed user can continue to update or cancel the validation. Validation check if air flows and pressure drops matches still to the dimensioned air flow in the SystemairCAD. There is 5% tolerance before the warning message is displayed.

## 2.1.5 Update Systemair AHU

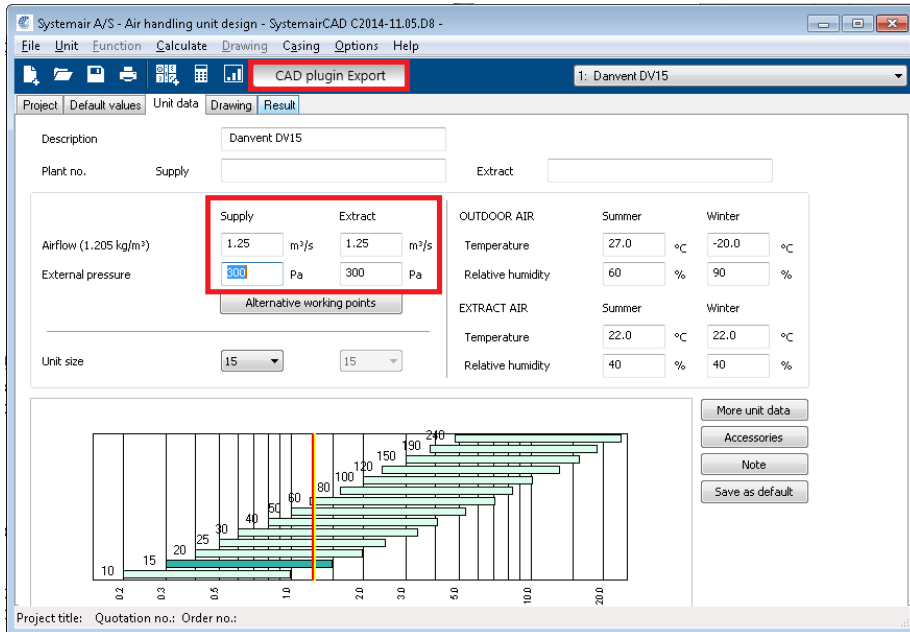


Follow these steps for Updating Systemair's air handling unit into MagiCAD drawing:

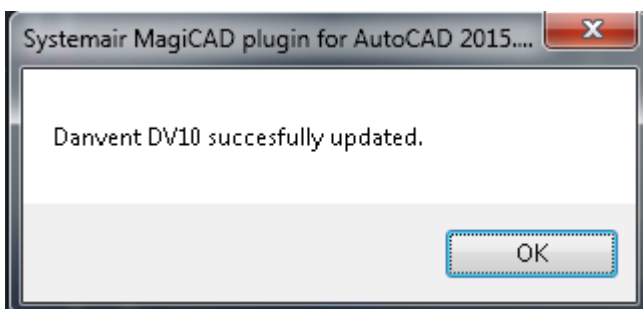
1. Click Update Systemair AHU button from plugin's ribbon panel in AutoCAD/Revit.
2. Select air handling unit from drawing which will be updated.
3. SystemairCAD starts and open file dialog is automatically displayed:



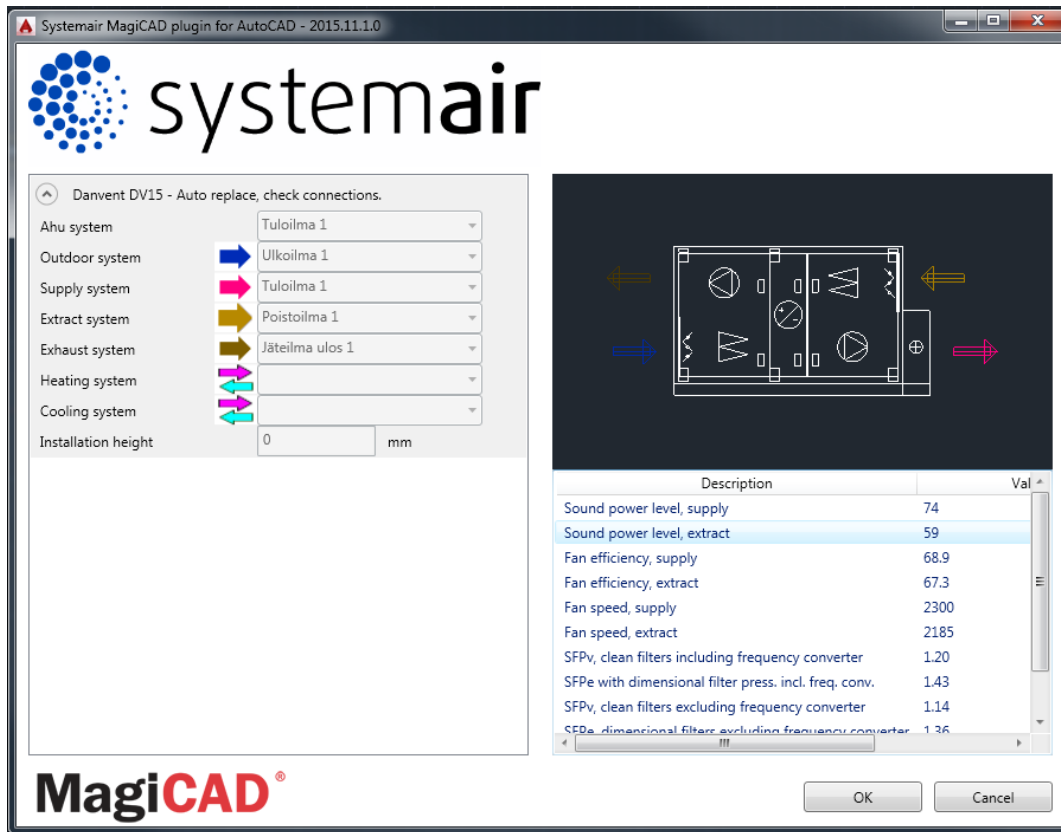
- Selected ahu will be opened if user opens the same project file as originally. Plugin automatically passes updated airflow and pressure rise requirements to SystemairCAD:



- After user has finished dimensioning the AHU, he proceeds by clicking CAD plugin export - button.
- Plugin will perform complete operation in order to validate whether the original air handling unit have been changed into different kind of air handling unit during update in SystemairCAD. If air handling unit is still exactly the same, only technical data (such as sound data) is updated to existing air handling unit in the drawing. Following message will be displayed:

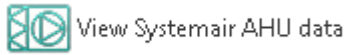


In case the air handling unit has been changed somehow (or switched to a completely another one), plugin performs replace operation. In replace operation plugin deletes the original air handling unit from the drawing and places new unit to same position with same MagiCAD system selections. Following dialog is displayed to user:



The dialog is purely informative, no actions are required. But if user has added new duct components during update, those will be inserted to the drawing at this point. From dialog user can see the MagiCAD systems automatically selected for new air handling unit. User can exit the dialog by clicking OK button.

## 2.1.6 View Systemair AHU data



Follow these steps for Viewing Systemair's air handling unit's data:

1. Click View Systemair AHU data button from plugin's ribbon panel in AutoCAD/Revit.
2. Install dialog will be shown. This dialog is same as in Insert/Import Systemair AHU procedure. Only difference is that MagiCAD systems and installation height are not enabled.

