Systemair Configurator MagiCAD plugin for Revit

User guide

12/04/2022

MagiCAD

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1 Chapter 1. General

1.1 About this document

This document contains instructions on using *Systemair Configurator MagiCAD plugin for Revit*. The plugin allows inserting Systemair Configurator air handling units into MagiCAD and Revit.

1.2 Installing the software

1.2.1 Required third-party software

Systemair Configurator MagiCAD plugins works with the following MagiCAD for Revit versions:

Revit

• Revit 2018 - 2023

MagiCAD (optional)

- MagiCAD for Revit 2022 (with Revit 2018 - 2022)
- MagiCAD for Revit 2023 (with Revit 2019 - 2023)

1.2.2 Installation

1. Download setup file from https://portal.magicad.com/download/ProductSearch?searchStr=Systemair&categoryId=3

2. Install Systemair MagiCAD plugin for Revit.

Administrator privileges are recommended for the installation.

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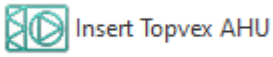
2 Chapter 2. Functions

2.1 Systemair Configurator MagiCAD plugin User Interface

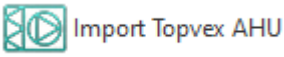
2.1.1 Main functions

The plugin main functions can be found in *Add-Ins* menu in Revit.

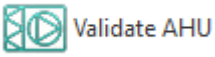
Plugin contains the following functions:



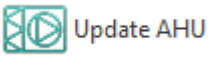
Opens the Systemair Configurator web application from where the air handling units can be created and configured. User can choose products to be inserted to the drawing.



Opens a file dialog from where the user can choose a .mah file and import the air handling unit into the drawing.



Runs a validation on the Systemair Configurator air handling unit. The plugin checks if the user needs to run the update function.



Updates the selected Systemair Configurator air handling unit by opening Systemair Configurator web application. The selected air handling unit will be replaced/updated to the drawing.

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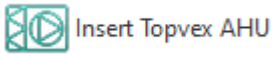
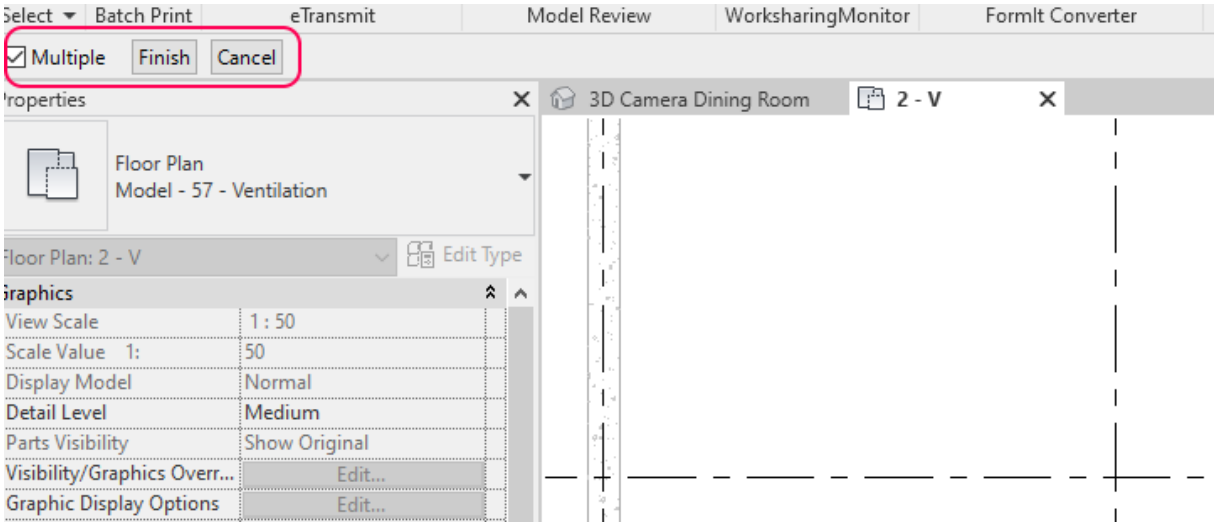
2.2 Insert Topvex AHU



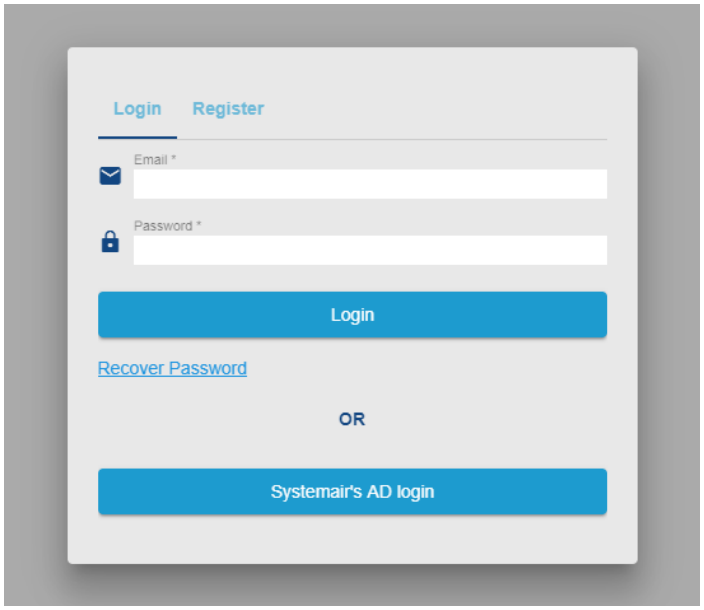
Follow these steps for Inserting Systemair Topvex air handling unit into MagiCAD/Revit drawing:

1. Click *Insert Systemair Topvex AHU* button from Add-Ins ribbon panel in Revit.

2. The plugin asks to point ductworks for getting airflows, pressure drops and MagiCAD systems. This phase can be skipped by pressing Finish button without selecting any ducts.



3. Systemair Configurator web application is started. If the user has not already logged in to the Systemair Configurator Configurator, the user name and password are requested from the user.



Note. If you do not have a user account, you can register for one under the register tab. After registration a confirmation mail is sent to the supplied email address. The confirmation will open in the web browser. At this point, be careful not to start working in your web browser. After the confirmation close it.

4. Once the user has logged in, the project page is displayed. On this page the user can create and modify Projects that then contain air handling units. Projects have a wide variety of defaults that can be set according to the project need.

5. Adding a unit to the project opens the dialog from where the user can search for a suitable unit. If ducts where selected in step 2 the data read from the ducts will be prefilled in corresponding fields in the Systemair Configurator.

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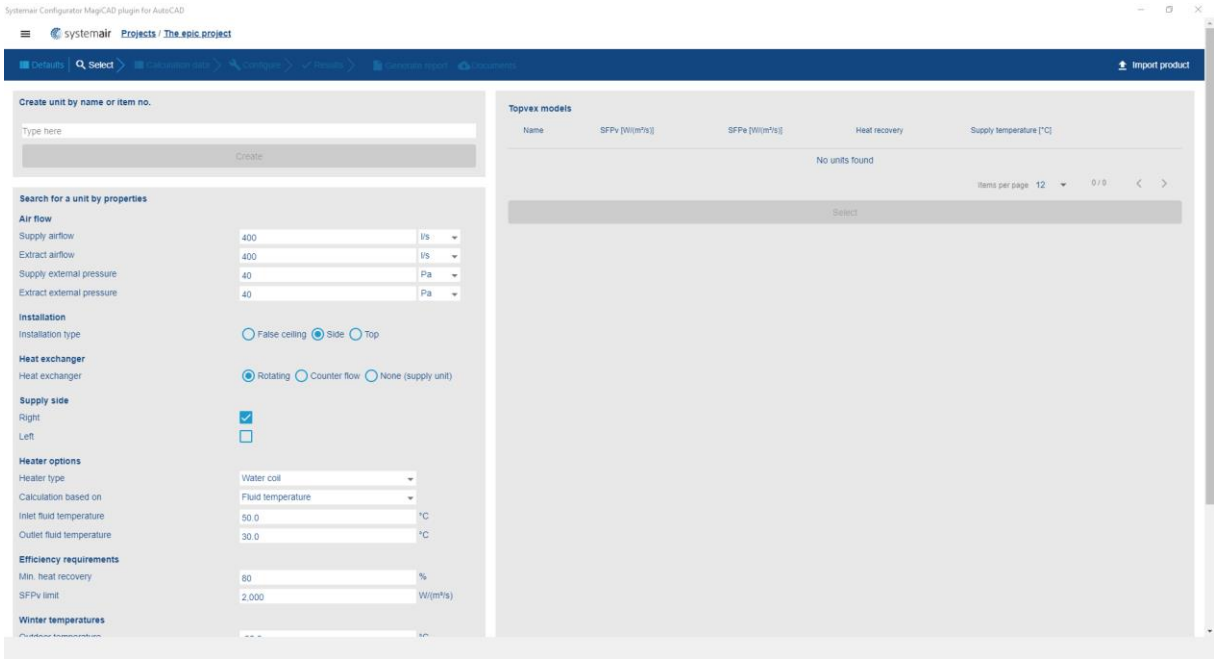
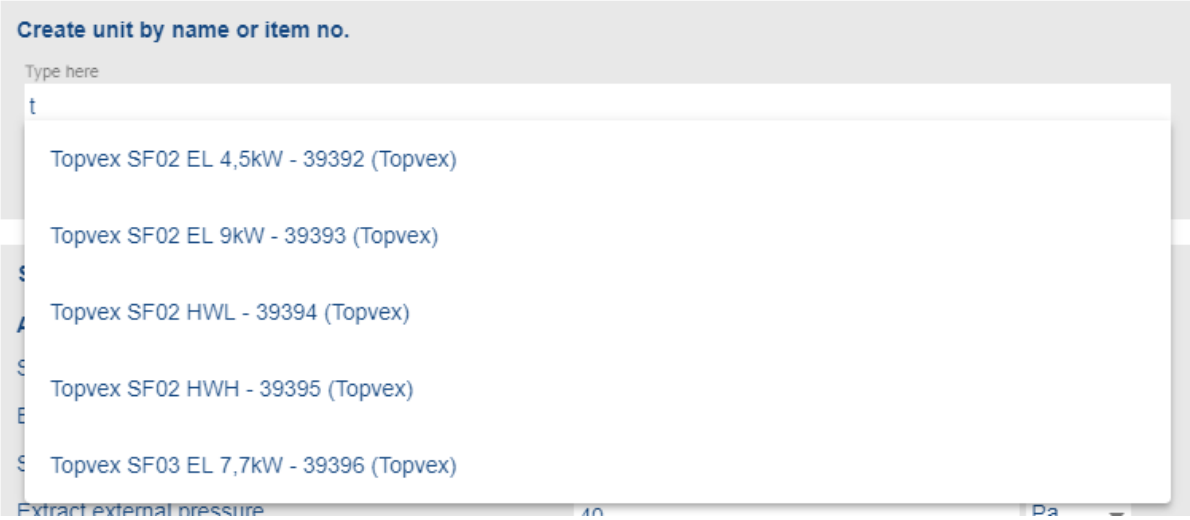


A unit can be created either by searching by name (top left corner)



Or by doing a search using airflow and pressure drop data. The search button is located in the bottom left corner.

6. After a suitable unit has been found the user supplies the unit data. Once the unit is ready press the “Result” button in the ribbon up left to start the calculations.

7. If the air handling unit calculations are successful, the “Export to CAD” button is displayed in the right top corner. Pressing the button will close the browser window and start import into Revit.

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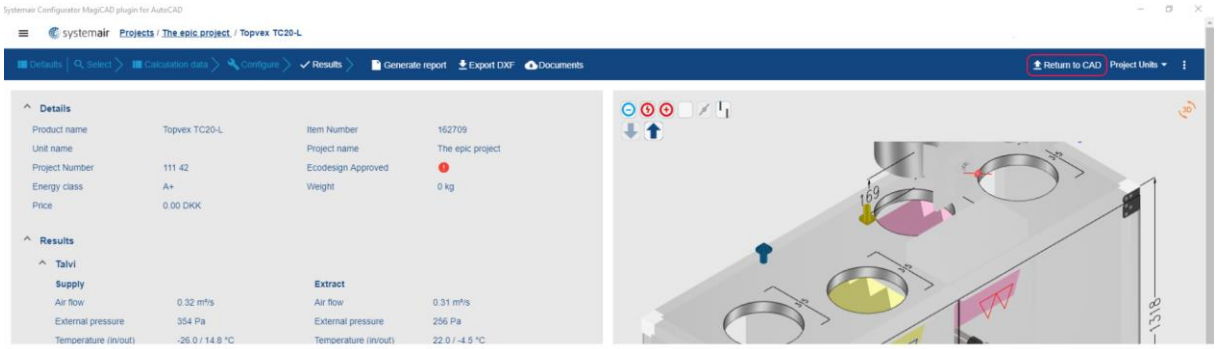
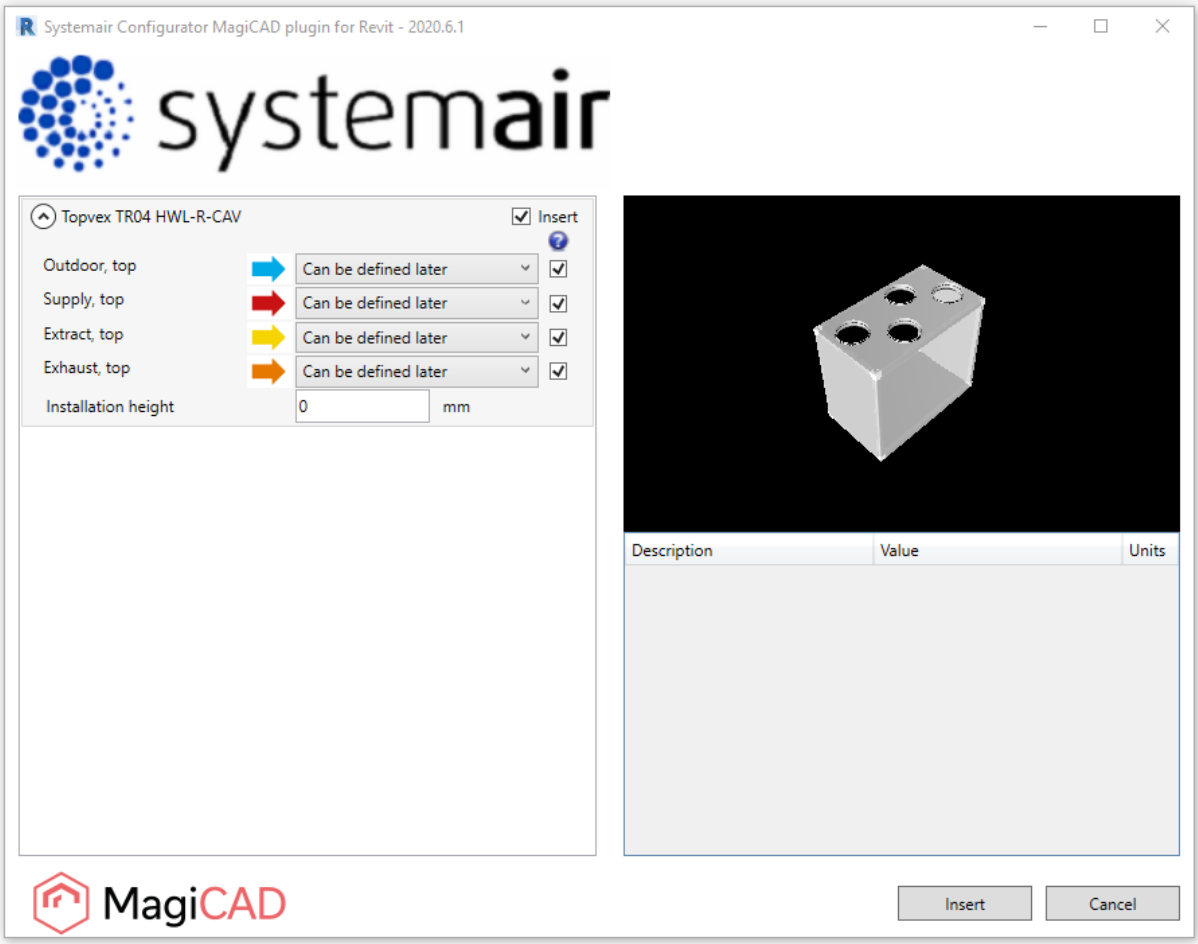


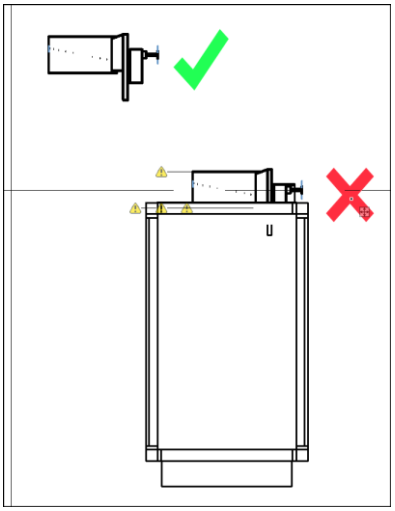
8. When the Systemair Configurator is closed by pressing the “Return to CAD”-button, the Revit installation dialog is displayed. Geometry of the product is displayed on the top right side. The product can be zoomed with the mouse wheel.

   Before installing the product to the drawing, the user needs to 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. The duct components inherit the system selections from the parent air handling unit



9. Once MagiCAD systems have been defined for all products, the installation can be started by clicking the *Insert* button. Please notice that it is possible to uncheck insert checkbox in case you want to exclude some of the units from the insert operation.

   Note! In the case of an air handling unit with vertical connections **do not** snap the duct components to the air handling unit! This will result in that the air handling unit and the duct component are merged together and it will not be possible to draw a duct between them. The duct component installation height will also affect the air handling position.



   In these cases, the duct component must be inserted to the side of the air handling unit and moved into place after the insert operation.

10. The products can be placed to the drawing one by one by dragging them to wanted position in the drawing.

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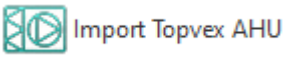
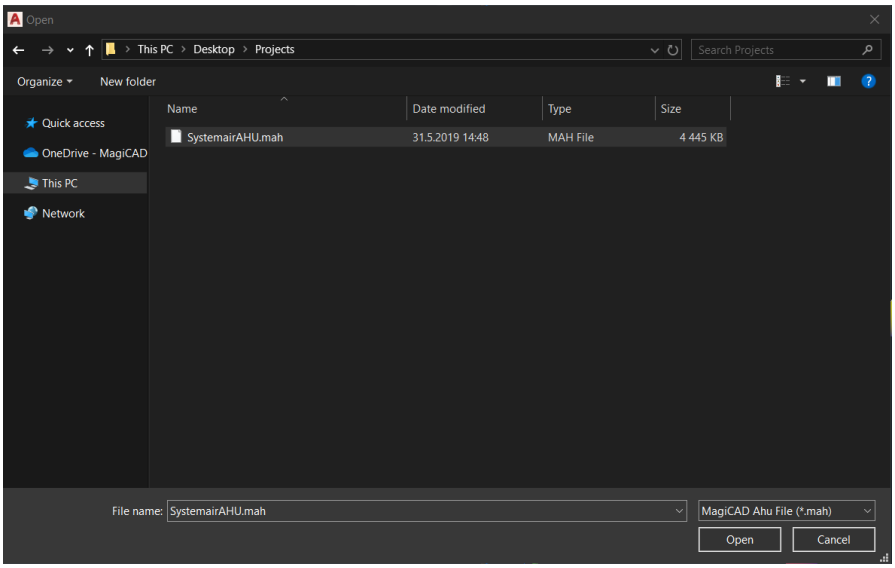
2.3 Import Topvex AHU



Follow these steps for importing a Systemair Topvex air handling unit into MagiCAD/Revit drawing:

1. Click *Insert Systemair Topvex AHU* button from Add-Ins ribbon panel in Revit.

2. Select the .mah file with the file dialog.



3. After clicking the Open button, the air handling unit in the .mah file is inserted into the drawing using the same workflow described in the Insert Topvex AHU chapter step 5.

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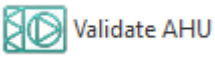
2.4 Validate AHU

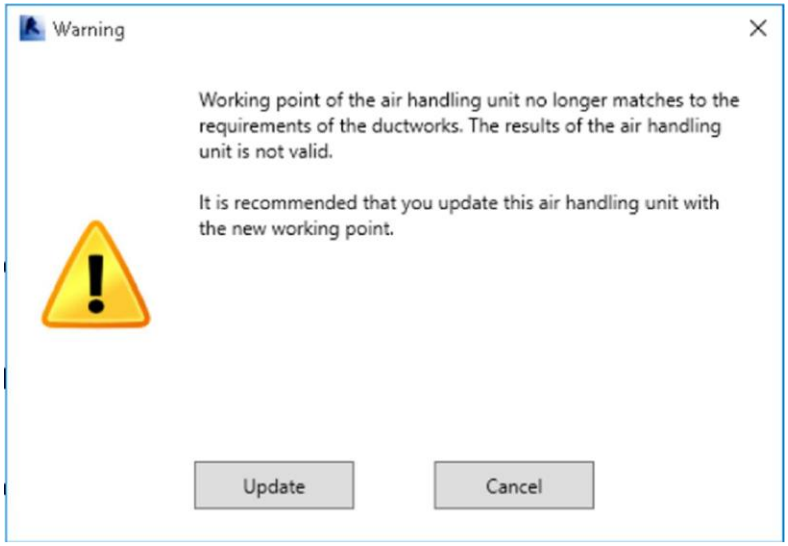


Follow these instructions to validate a Systemair air handling unit.

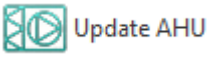
1. Click *Validate AHU* button from Add-Ins ribbon panel in Revit.

2. Select the air handling unit from the drawing that should be validated.

3. Plugins shows if validating is successfully passed or if the air handling unit needs to be updated. If updating is needed, the user can continue to update or cancel the validation. Validation checks if selected air handling unit still meets the requirements of the ductwork (air flow and pressure drop). There is 5% tolerance before the warning message is displayed for airflow and 10% tolerance for pressure drop.



2.5 Update AHU

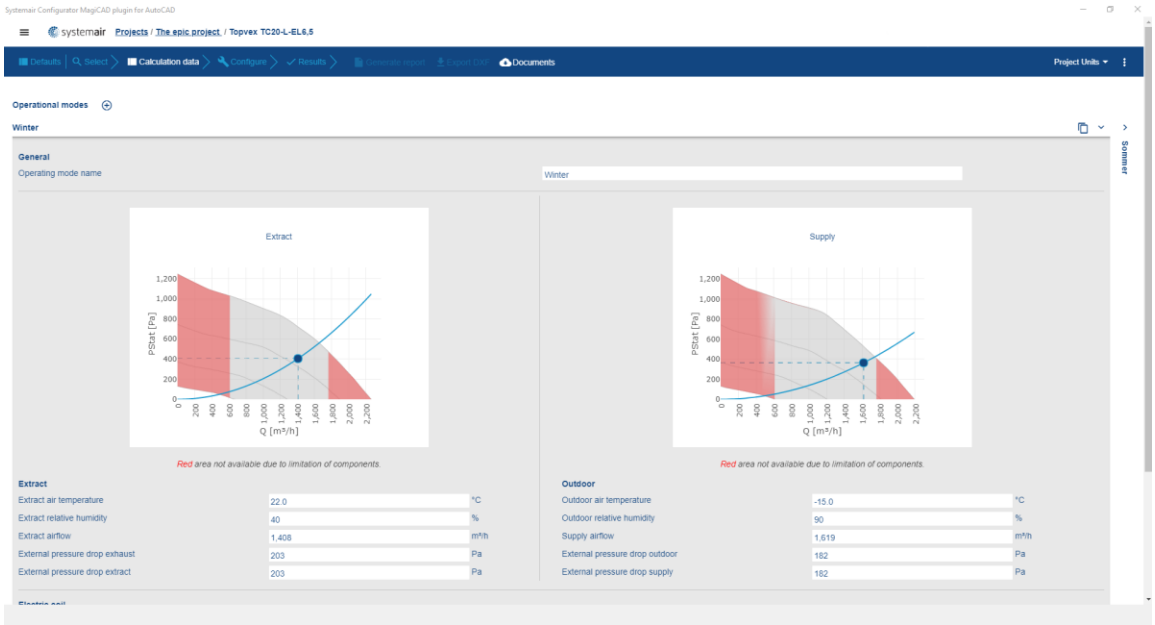


Please follow these steps to update Systemair Configurator air handling unit into MagiCAD drawing:

1. Click *Update AHU* button from Add-Ins ribbon panel in Revit.

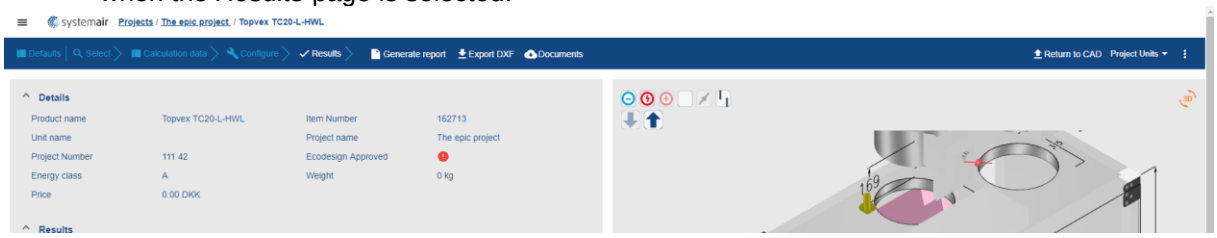
2. Select the air handling unit from the drawing which will be updated.

3. The selected air handling unit is opened from the Systemair Configurator Configurator. The plugin automatically passes the updated airflow and pressure drop requirements from the duct connections in the drawing to the Systemair Configurator Configurator.



The user can change the predefined air handling unit type or edit unit properties from the *Select* page.

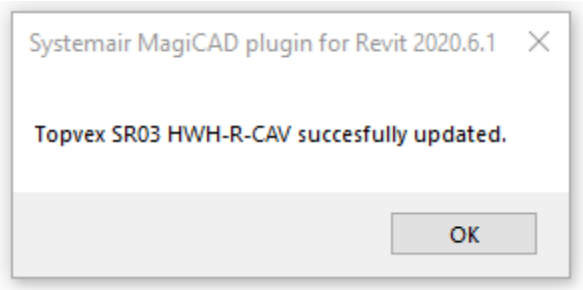
4. When the active air handing unit is configured and recalculated without errors, the user can click *Return to CAD* button at the top right of the plugin. The *Return to CAD* button is enabled when the *Results* page is selected.



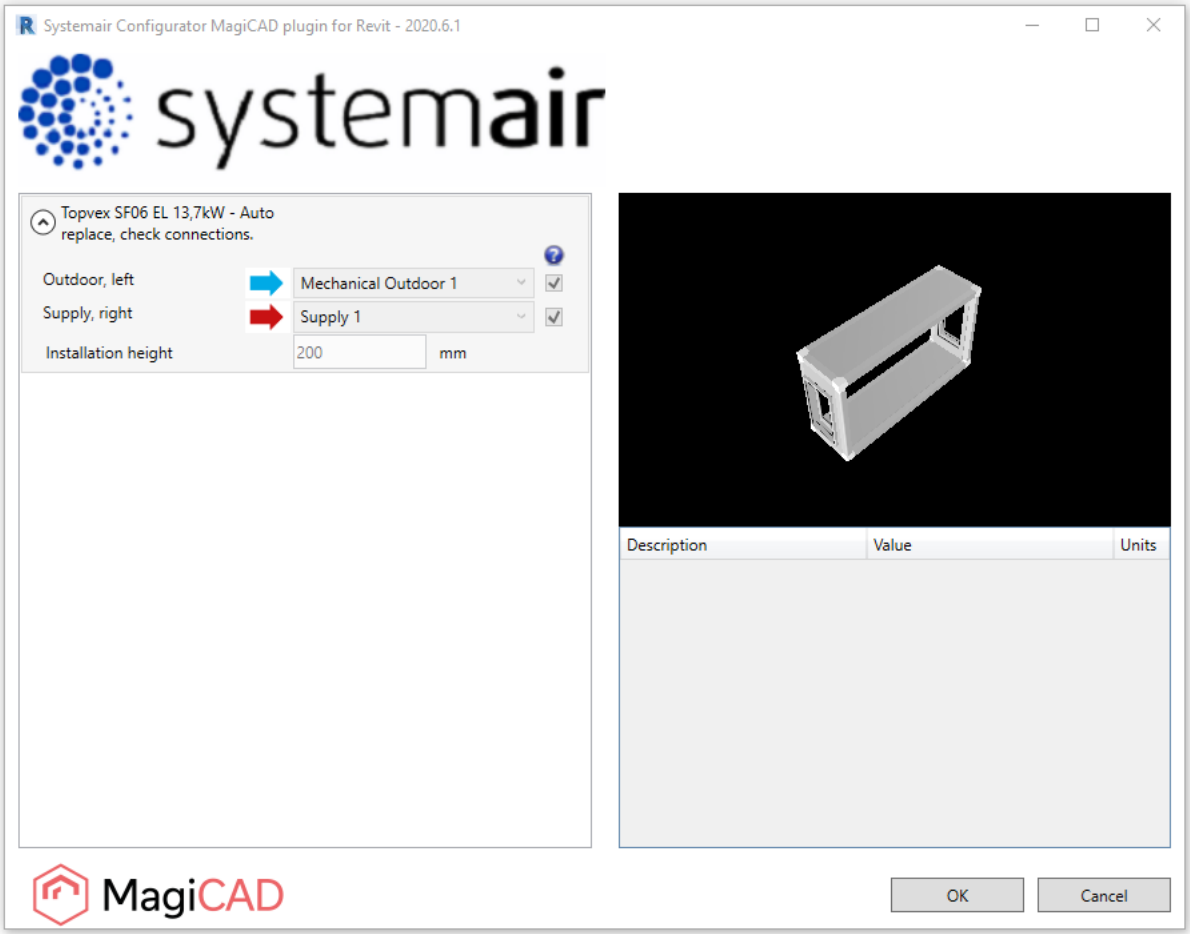
Please note that the selected unit in the Configurator must be the same (same ID) than the selected unit from the MagiCAD.

5. The plugin will perform compere operation in order to validate whether the original air handling unit has been changed to the different kind of the air handling unit during the update operation in Systemair Configurator Configurator.

If the air handling unit is still exactly the same, only technical data (such as sound data) is updated to the existing air handling unit in the drawing. The following message will be displayed:



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



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

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