



# **LindQST plugin for MagiCAD for AutoCAD User guide**

12/06/2023

## Content

<b>1</b>	<b>GENERAL</b> .....	<b>2</b>
1.1	How to install plugin .....	2
1.1.1	Required third-party software .....	2
1.1.2	Installation .....	2
<b>2</b>	<b>STARTING THE PROGRAM</b> .....	<b>3</b>
<b>3</b>	<b>HOW TO USE THE PLUGIN</b> .....	<b>4</b>
3.1	LindQST Selection tool.....	4
3.2	LindQST for silencers.....	7
3.3	LindQST for dampers .....	13
3.4	Open rooms.....	17
<b>1</b>	<b>General</b>	

This document contains instructions on using LindQST plugin for MagiCAD for AutoCAD. The purpose of the plugin is to integrate selection- and indoor climate designer tool LindQST into MagiCAD for AutoCAD. It allows users to find and insert Lindab airborne, waterborne, silencer and damper products into MagiCAD project. In addition, plugin integrates LindQST indoor climate designer features into MagiCAD allowing users to design the air distribution in rooms.

### 1.1 How to install plugin

#### 1.1.1 Required third-party software

LindQST MagiCAD plugin works with the following AutoCAD and MagiCAD versions:

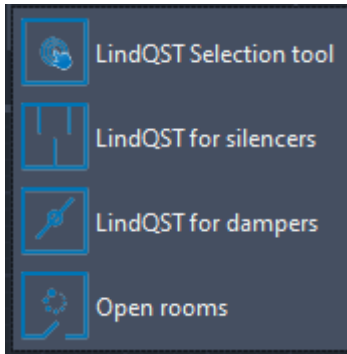
- MagiCAD for AutoCAD 2023 (with AutoCAD 2019-2023)
- MagiCAD for MagiCAD 2024 (with AutoCAD 2021-2023)

#### 1.1.2 Installation

1. Download setup file from  
<https://portal.magicad.com/download/ProductSearch?searchStr=Lindab&categoryId=3>
2. Install the plugin by running the downloaded installer

## 2 Starting the program

You will find LindQST MagiCAD plugin ribbon panel under MagiCAD plugins tab in AutoCAD.



### 3 How to use the plugin

LindQST MagiCAD plugin contains 4 commands:

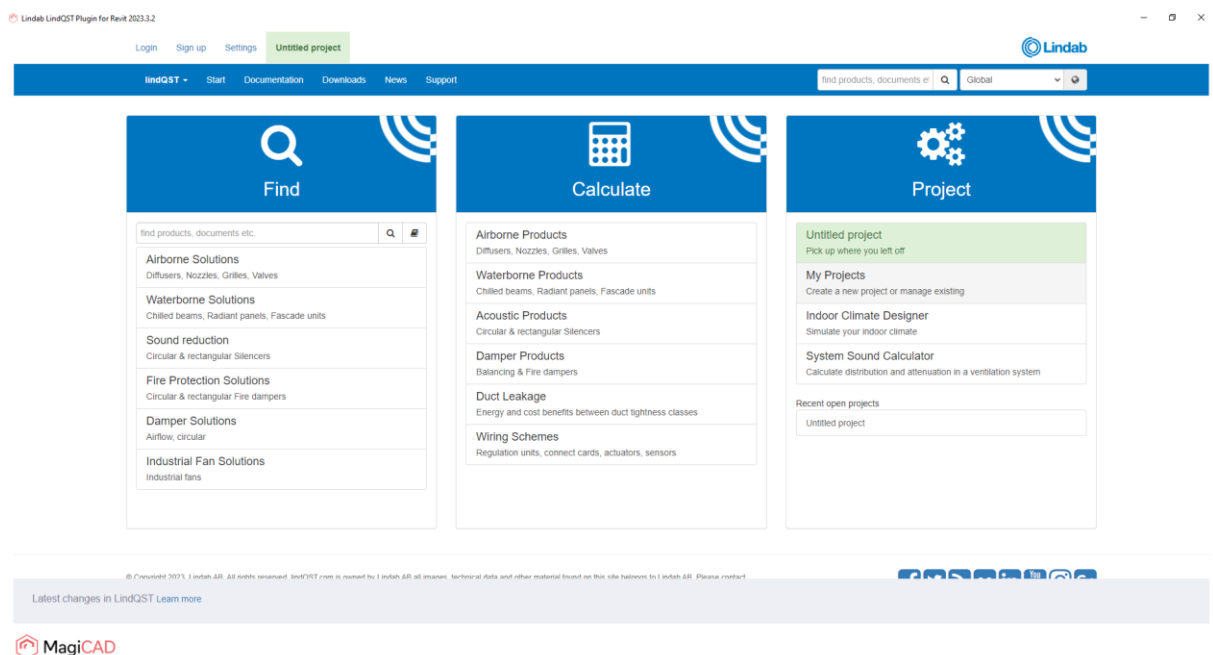
- LindQST Selection tool
- LindQST for silencers
- LindQST for dampers
- Opens rooms

#### 3.1 LindQST Selection tool

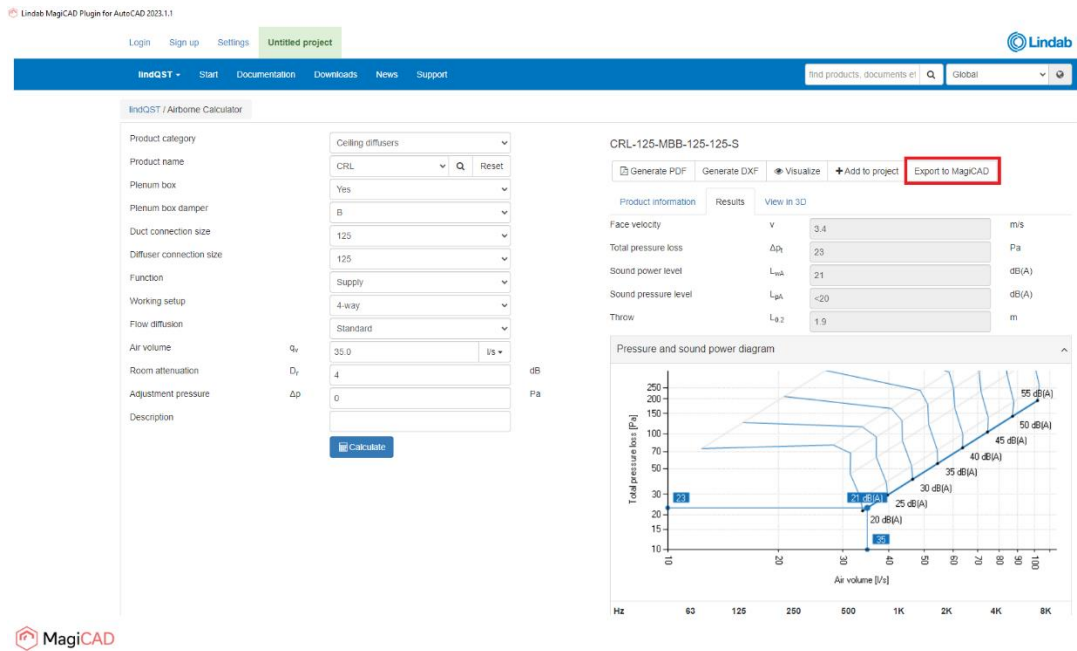
This command opens LindQST for selecting suitable airborne or waterborne products into MagiCAD project.

Follow these steps to insert products from LindQST to MagiCAD project:

1. Click the “LindQST selection tool” -button from LindQST plugin ribbon panel. Plugin opens LindQST in browser control window:

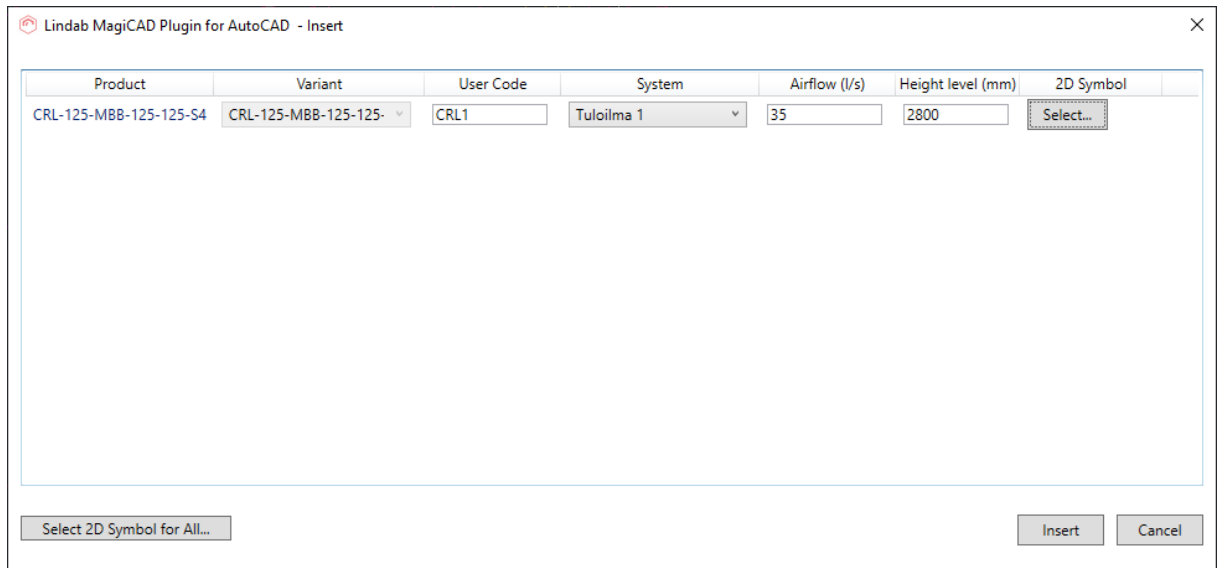


2. Proceed by selecting either Airborne products or waterborne products. Here we proceed to Airborne product calculator (optionally you can also find suitable airborne products by clicking the Airborne Solutions from the main page):



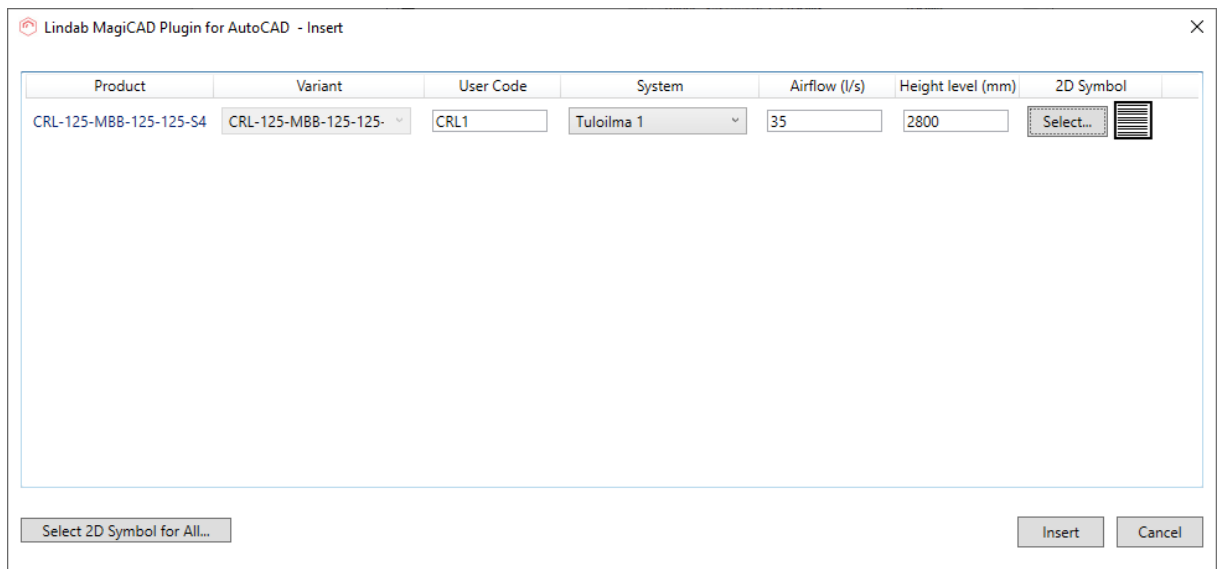
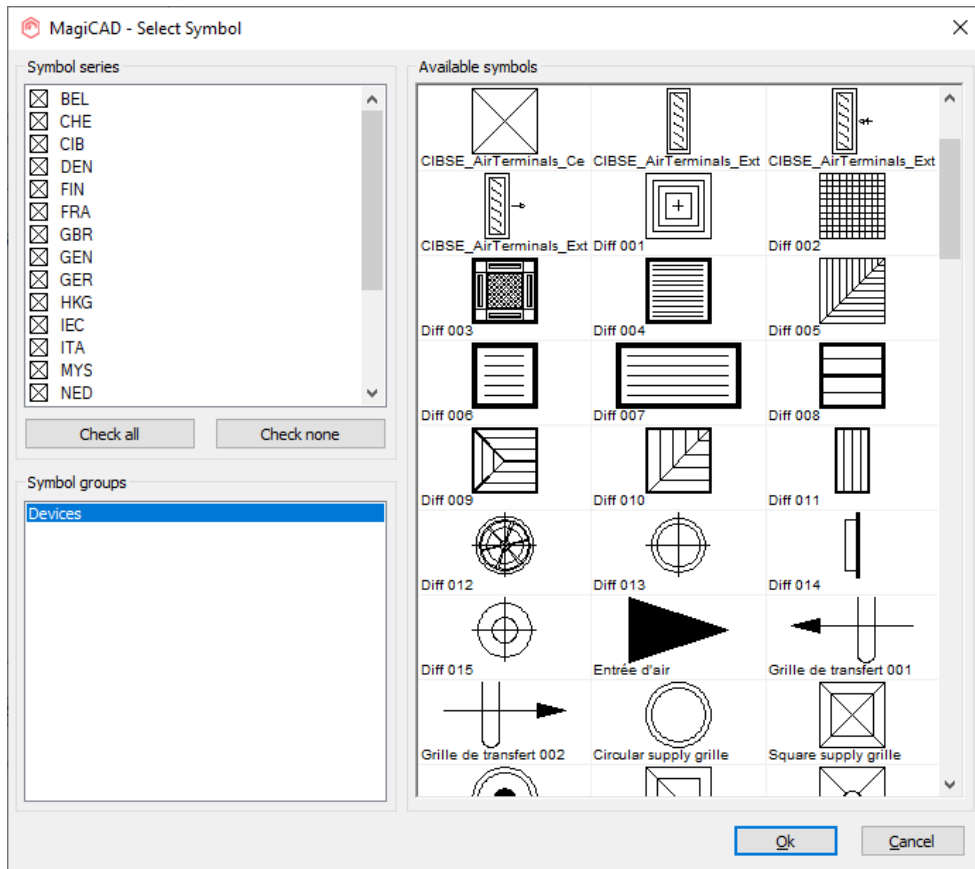
In Airborne calculator proceed by making the required input and selections and then calculate the product. After that proceed by clicking the Export to MagiCAD -button in order to insert the product to MagiCAD.

3. LindQST view is closed and plugin Insert Products view is opened:



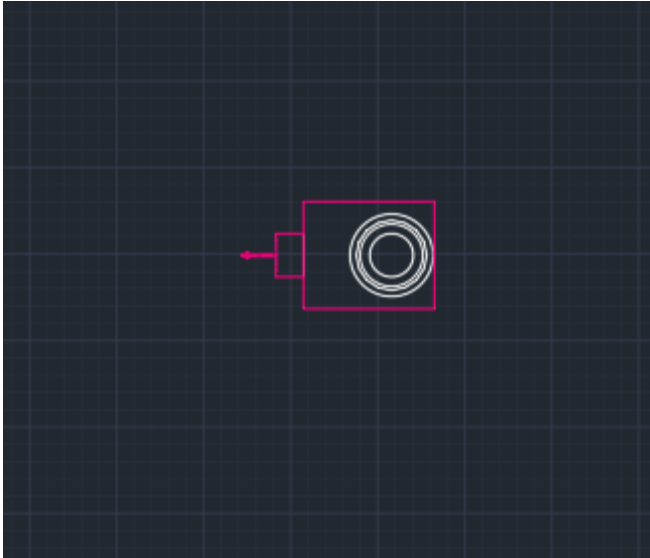
Proceed by making required system selections, set height level and select suitable 2D symbol and airflow arrow for the product.

2D symbol can be selected by clicking the select... -button from 2D symbol column. Select Symbol view is opened. Select 2D symbol and then click the OK -button.



Once all selections have been made proceed by clicking the Insert -button.

- Next product can be placed to MagiCAD drawing into wanted position:

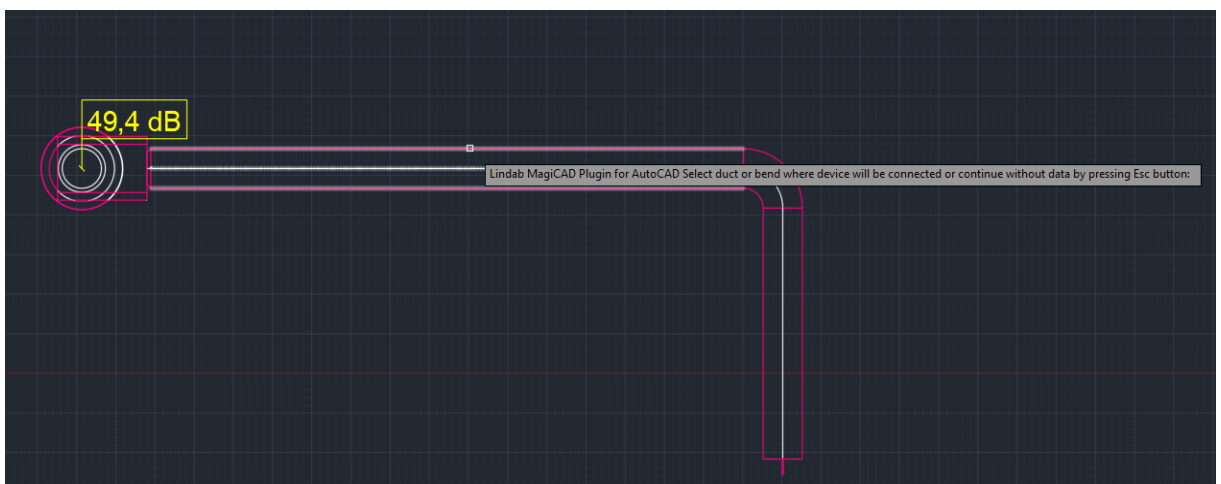


### 3.2 LindQST for silencers

This command opens LindQST for selecting suitable silencer products into MagiCAD project.

Follow these steps to insert silencer from LindQST to MagiCAD project:

1. Click the “LindQST for silencers” -button from LindQST plugin ribbon panel.
2. Select the duct where you want to add silencer to (this step can be skipped by clicking esc - button):



3. LindQST silencer selector is opened. If you selected the duct in MagiCAD, information read from it is now populated automatically into corresponding fields in LindQST (fields highlighted in red):

Lindab MagiCAD Plugin for AutoCAD 2023.1.1

### 2 Silencer performance

State requirement in octave

Hz	63	125	250	500	1k	2k	4k	8k	63
$L_{wi}$	59	59	59	57	56	56	56	56	
IL (Required)									
$L_{wv}$ (Required)	99	99	99	99	99	99	99	99	
$L_{wo}$									45

dB dB dB dB dB dB dB dB dB(A)

### 3 Technical requirements

Duct type: Circular  
 Silencer type: Straight  
 Product name: All  
 Duct connection size: 250

Air volume: 77 m³/s  
 Max. total pressure loss: 50 Pa  
 Max. outer diameter: mm  
 Sound tolerance: dB

Update search SEARCH RESULTS: 10 Number of products selected: 0 Compare Add to project

	<input type="checkbox"/>	Order code	L [mm]	$\Delta p_1$ [Pa]	$L_{wa}$ [dB(A)]	v [m/s]
	<input type="checkbox"/>	PVA-250-1200-100	1200	0	45	1.6
	<input type="checkbox"/>	PVAP-250-1200-50	1200	1	44	1.6
	<input type="checkbox"/>	PVD-250-1200-100	1200	0	44	1.6

Soud values are available only in case sound calculations have been performed in MagiCAD.

- Proceed by clicking the wanted product from the search results. Silencer calculator is opened.

Lindab MagiCAD Plugin for AutoCAD 2023.1.1

lindQST / Silencer Selector

Lindab MagiCAD Plugin for AutoCAD 2023.1.1

lindQST - Start Documentation Downloads News Support Find products, documents or Global

lindQST / Silencer Calculator

System: Supply  
 Placement: After fan  
 Fan: Not selected

$L_{wi}$	63	125	250	500	1K	2K	4K	8K
	59	59	59	57	56	56	56	56

Duct type: Circular  
 Silencer type: Straight  
 Product name: PVA  
 Duct connection size: 250 mm  
 Insulation thickness: 50 mm  
 Length: 1200 mm  
 Air volume: 77 m³/s

Calculate

PVA-250-1200-50  
 Generate PDF Generate DXF Add to project Export to MagiCAD

Product information Results View in 3D

Total pressure loss: 0 Pa  
 Face velocity: 1.6 m/s

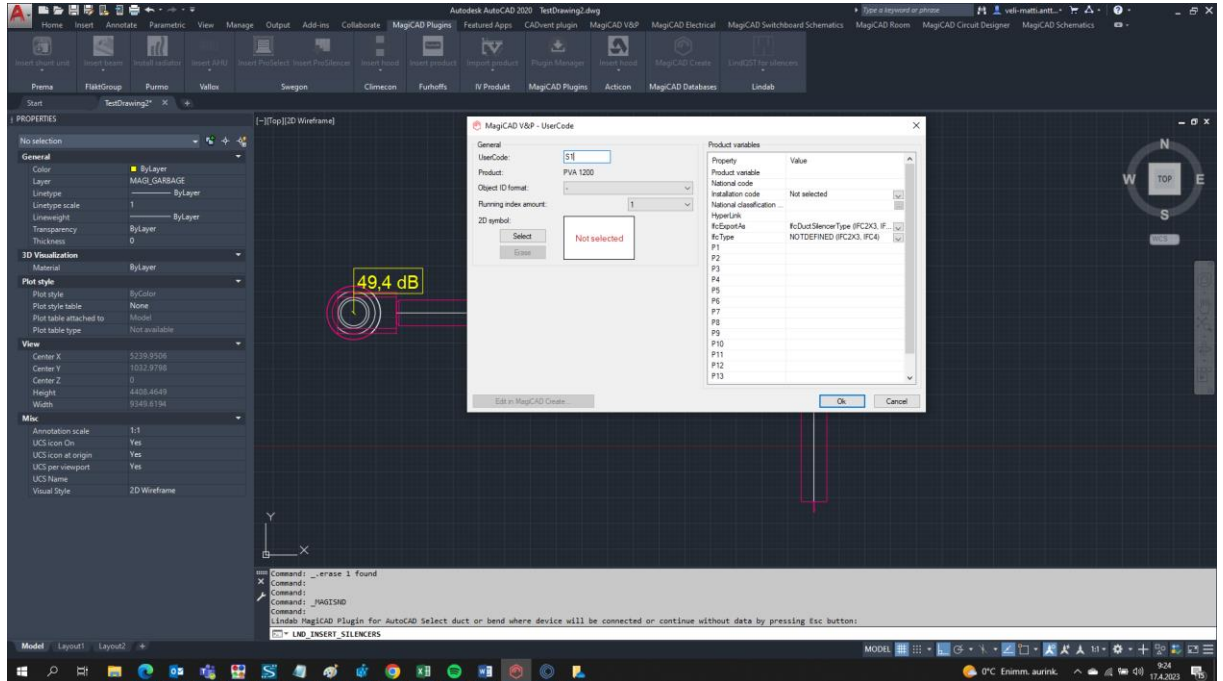
	63	125	250	500	1K	2K	4K	8K	dB(A)	NR
$L_{wi}$	59	59	59	57	56	56	56	56	63	62
IL	3	6	12	21	38	26	18	11		
$L_{wv}$	10	10	10	10	10	10	10	10	17	17
$L_{wo}$	56	53	47	36	19	30	38	45	47	51

dB dB dB dB dB dB dB dB dB(A) NR

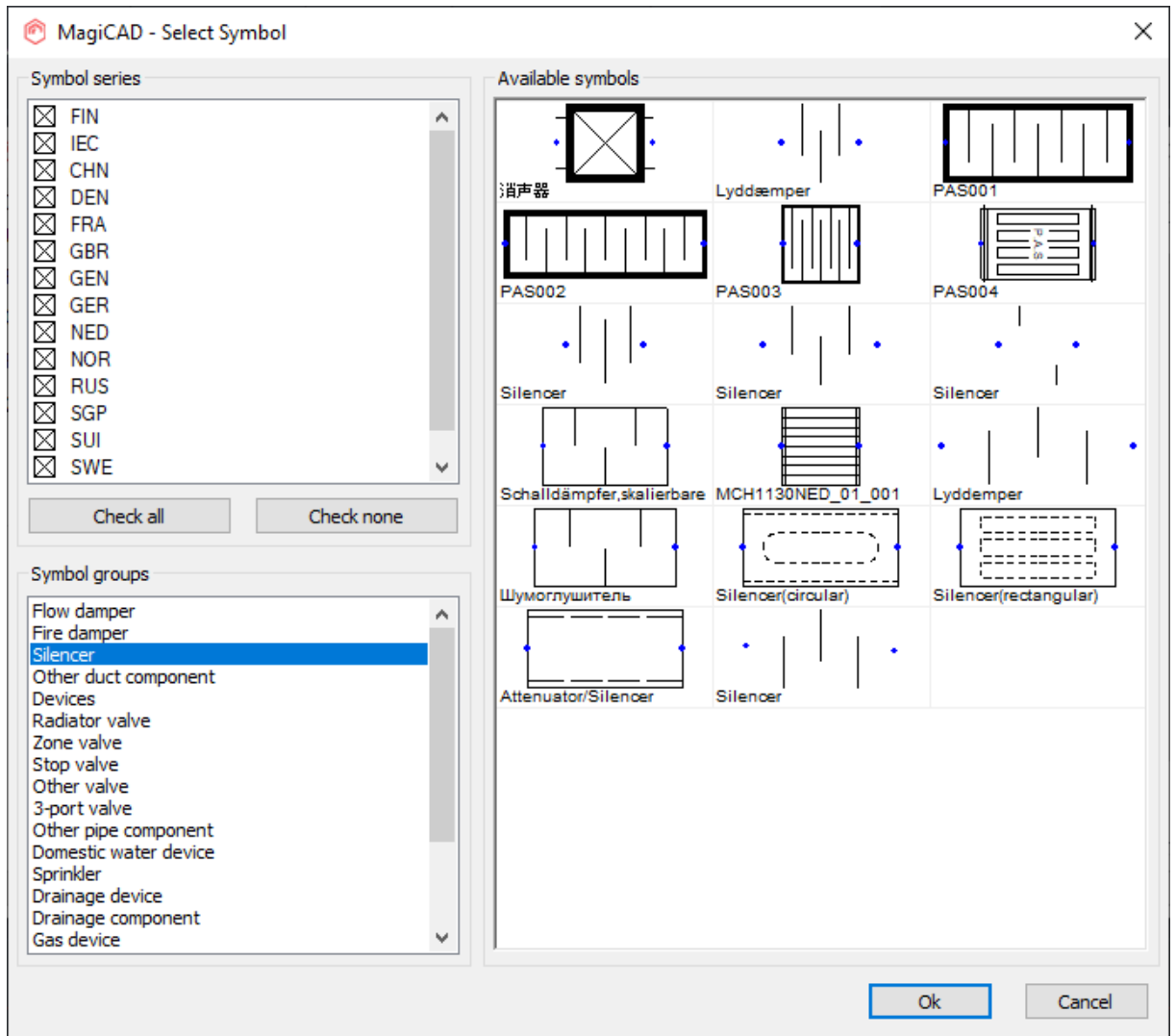
Calculate the product and the click Export to MagiCAD -button in order to insert calculated product into MagiCAD project.

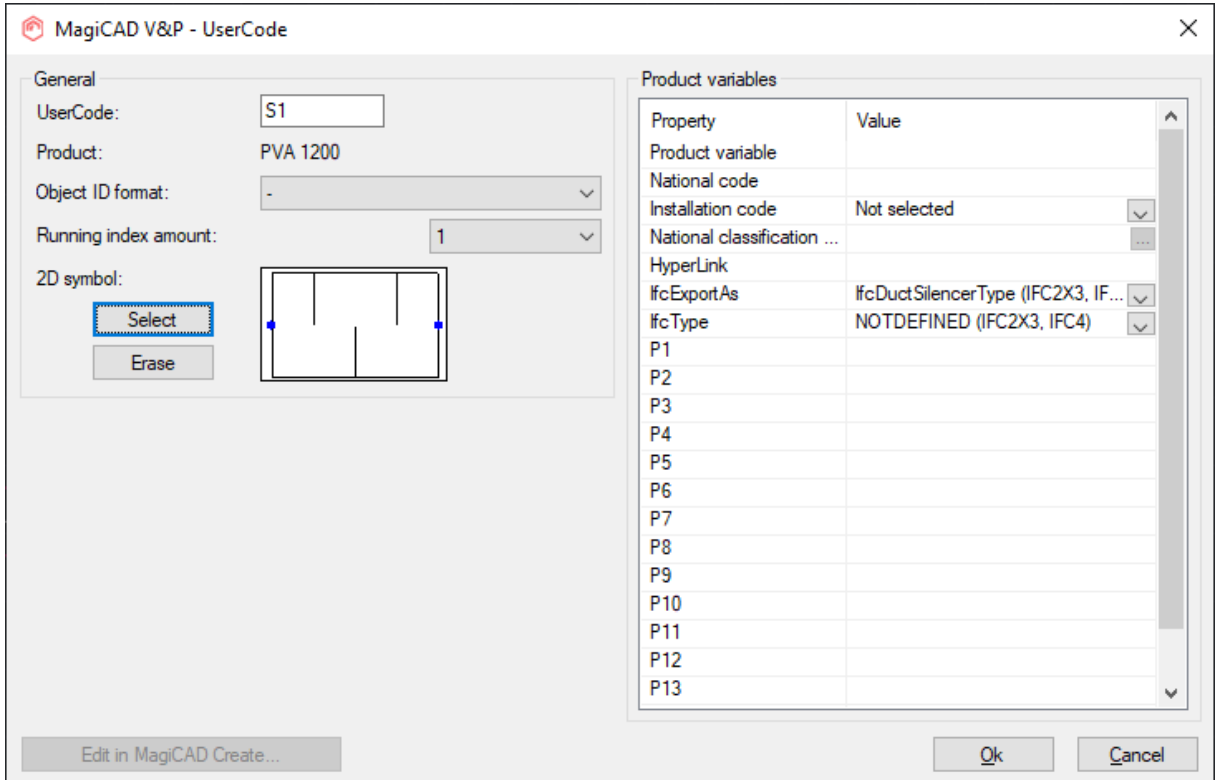
- lindQST view is closed and MagiCAD user code and symbol selection view is opened:





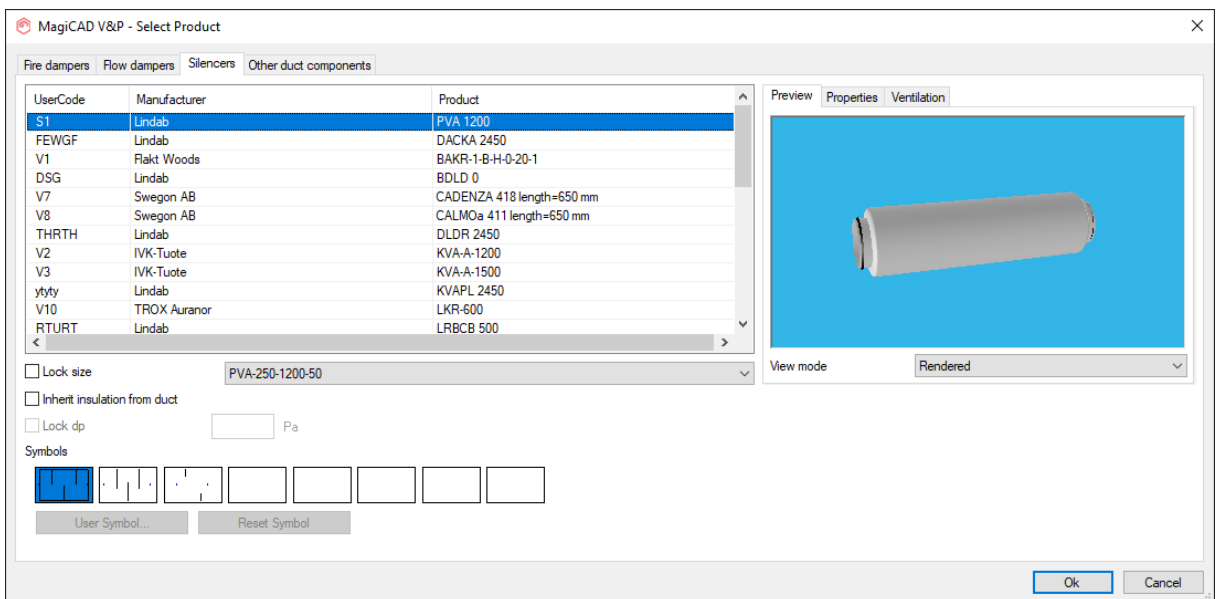
2D symbol can be selected for the silencer by clicking the Select -button:

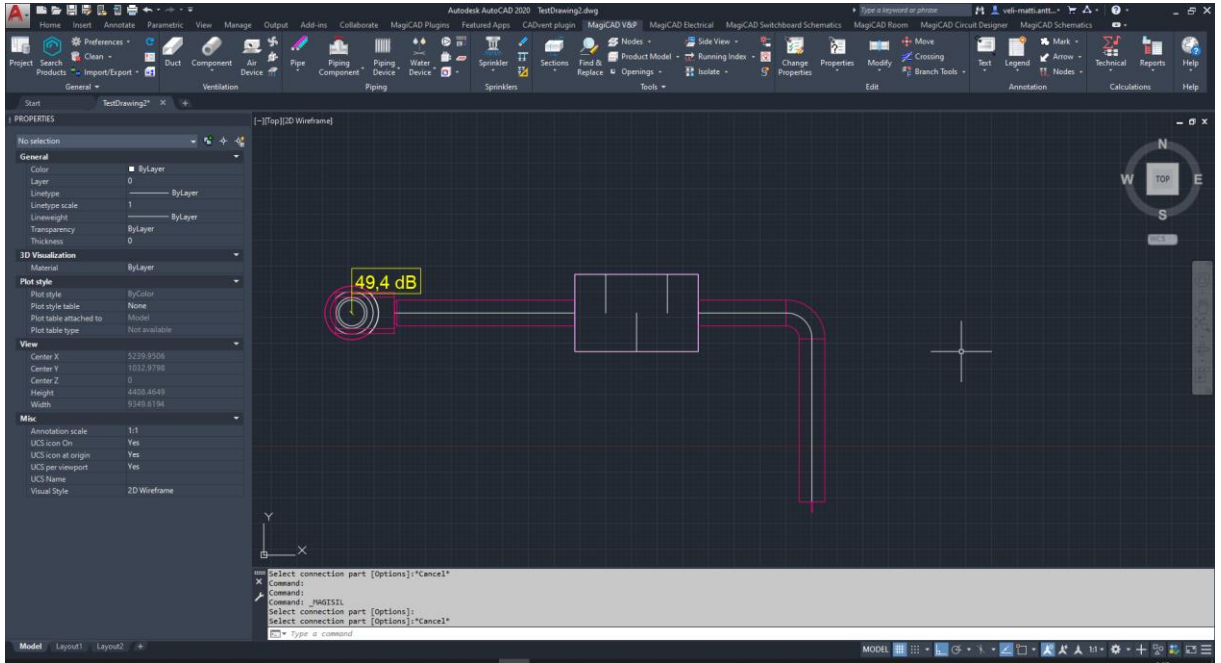




Once all selections have been made proceed by clicking the OK -button.

- Next MagiCAD insert view is opened, proceed by clicking OK -button in order to place the silencer to the duct:



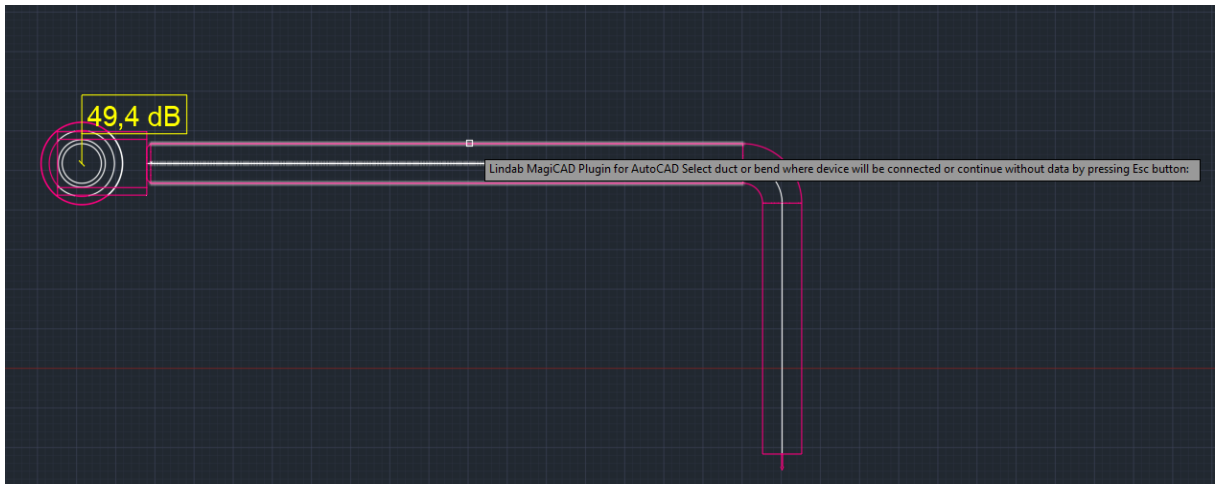


### 3.3 LindQST for dampers

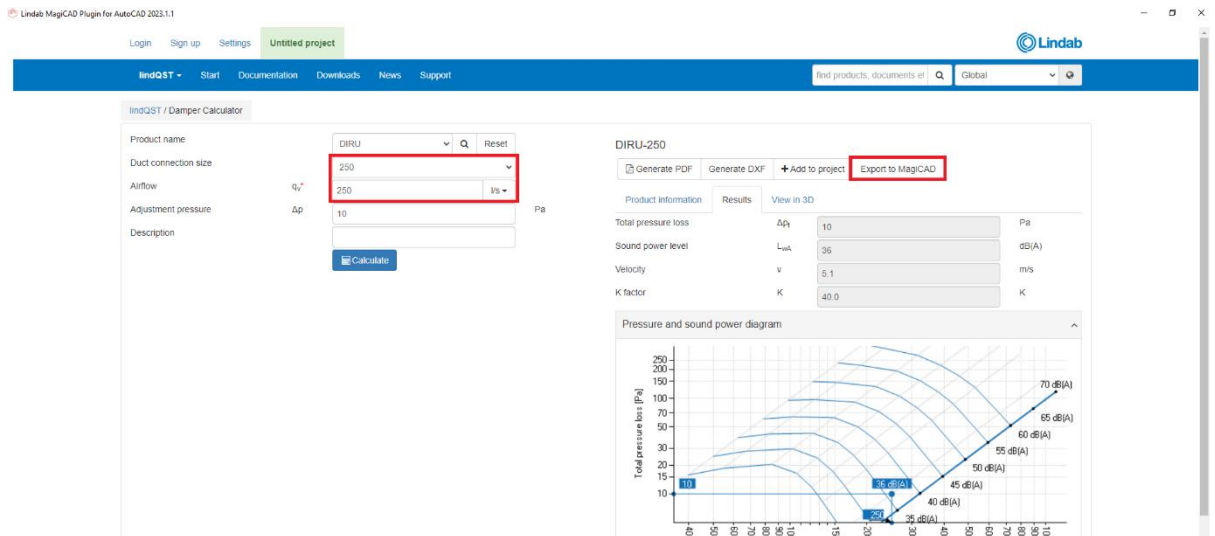
This command opens LindQST for selecting suitable damper products into MagiCAD project.

Follow these steps to insert damper from LindQST to MagiCAD project:

1. Click the “LindQST for dampers” -button from LindQST plugin ribbon panel.
2. Select the duct where you want to add damper to (this step can be skipped by clicking esc - button):



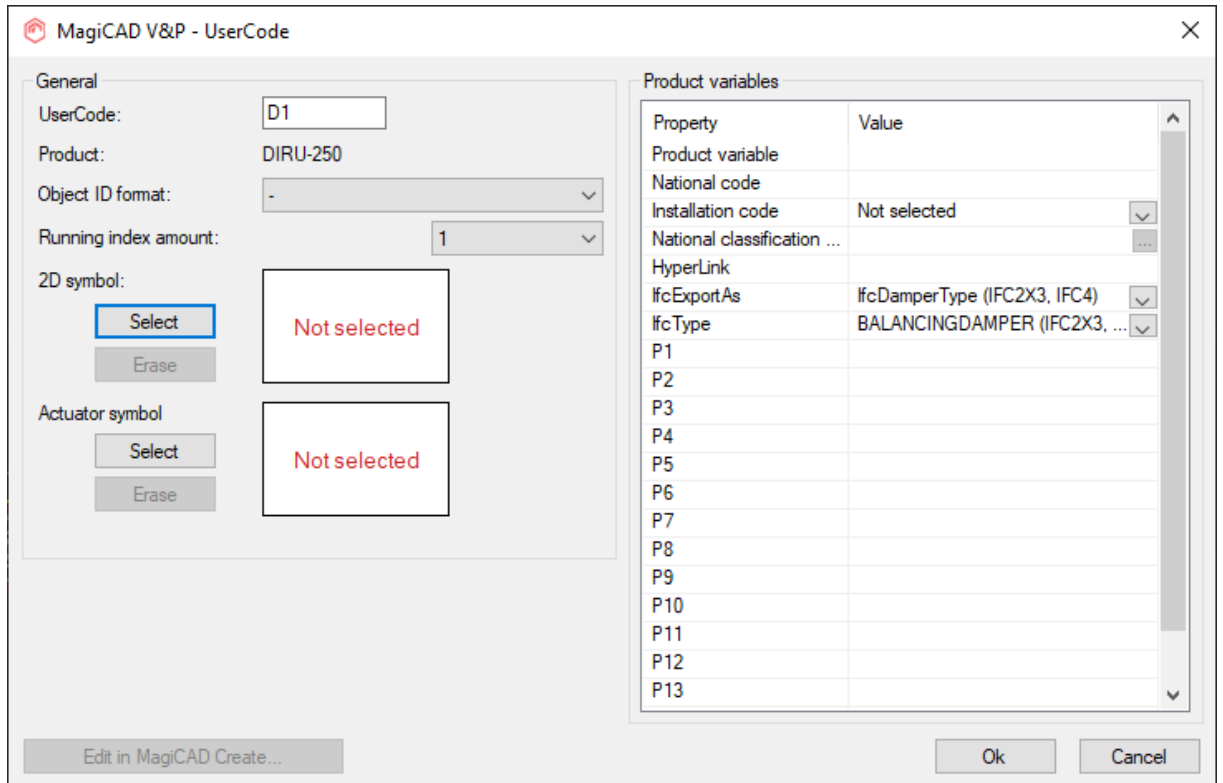
3. LindQST damper calculator is opened. If you selected the duct in MagiCAD, information read from it is now populated automatically into corresponding fields in LindQST (fields highlighted in red):



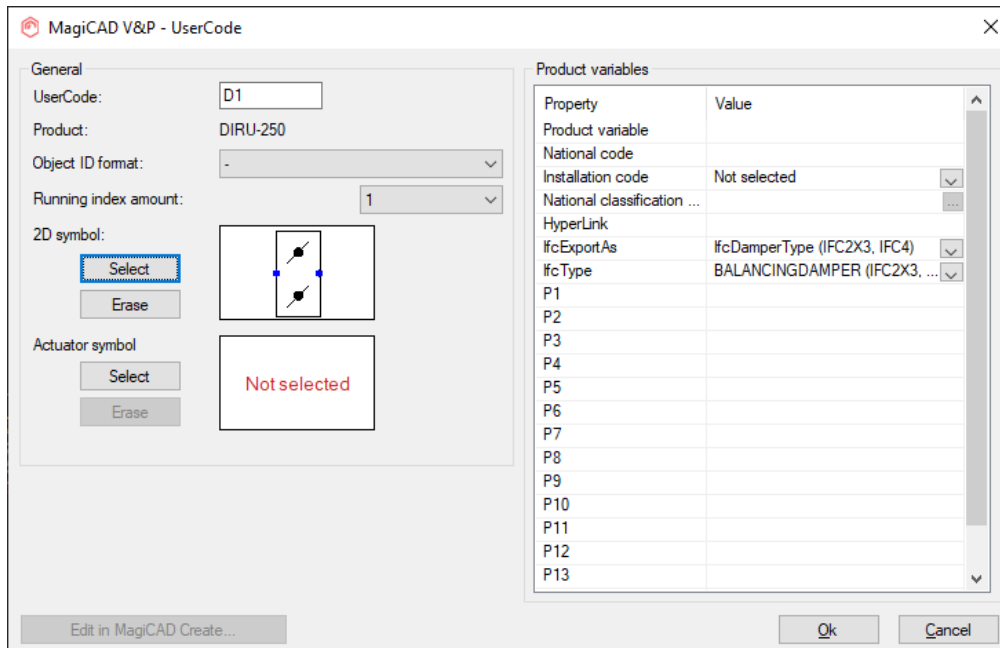
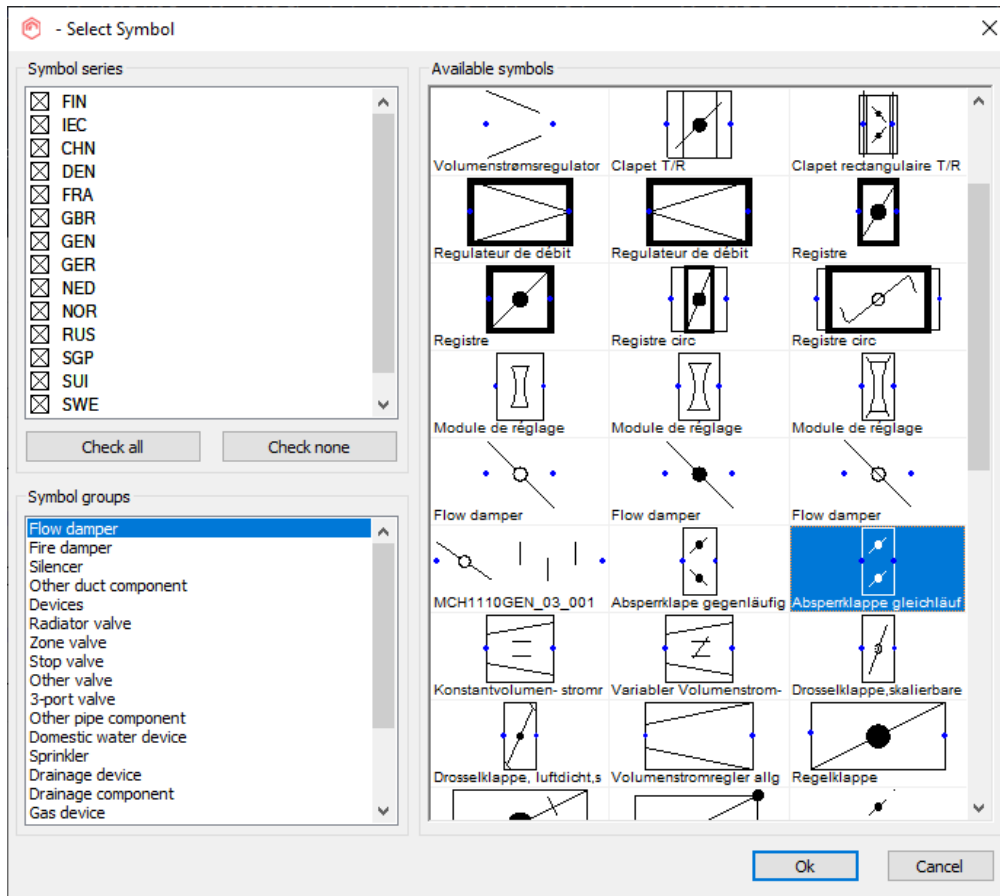
The screenshot shows the LindQST / Damper Calculator interface. The 'Product name' is set to 'DIRU-250'. The 'Duct connection size' is '250', 'Airflow' is '250', and 'Adjustment pressure' is '10'. The 'Export to MagiCAD' button is highlighted in red. A 'Pressure and sound power diagram' is shown at the bottom right, plotting Total pressure loss (Pa) against sound power level (dB(A)).

4. Proceed by selecting the wanted product and calculate it. Then click Export to MagiCAD - button in order to insert selected damper into MagiCAD project.

- LindQST view is closed and MagiCAD user code and symbol selection view is opened:

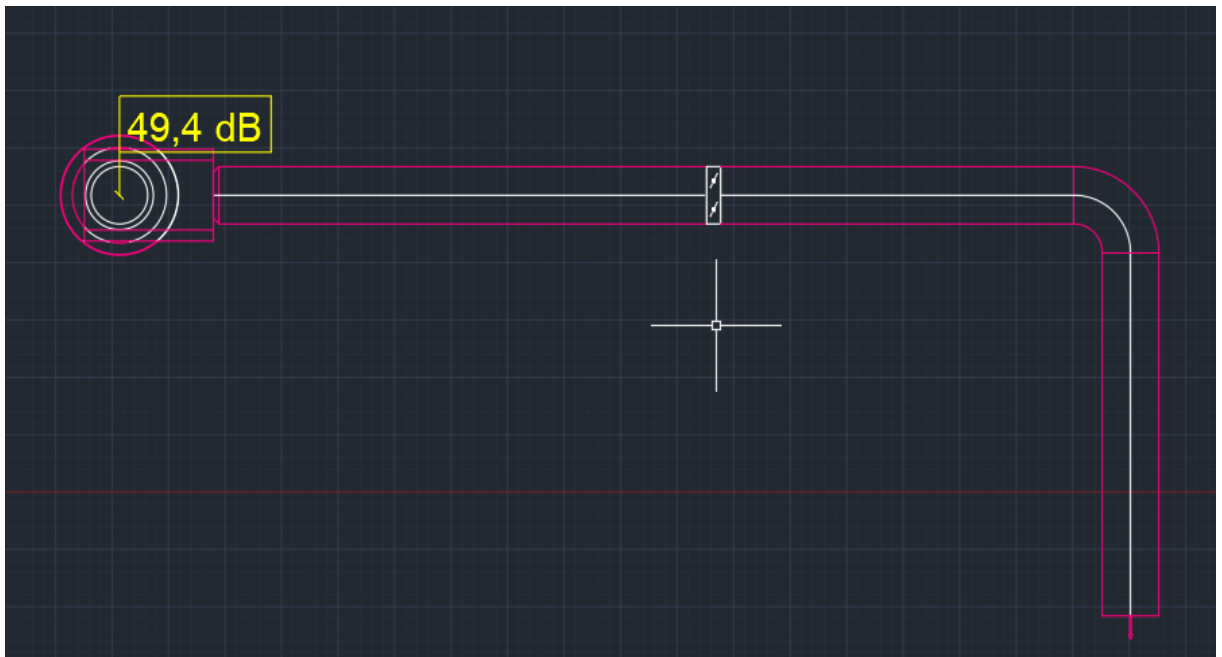
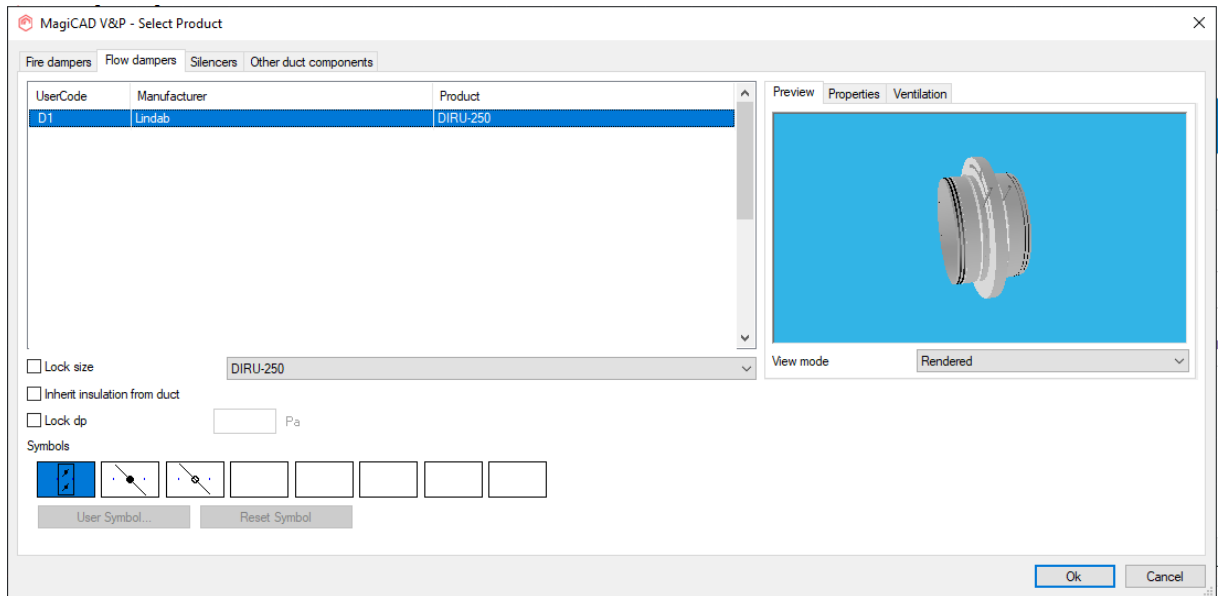


2D symbol can be selected for the damper by clicking the Select -button.



Once all selections have been made proceed by clicking the OK -button.

- Next MagiCAD insert view is opened, proceed by clicking OK -button in order to place the damper to the duct:



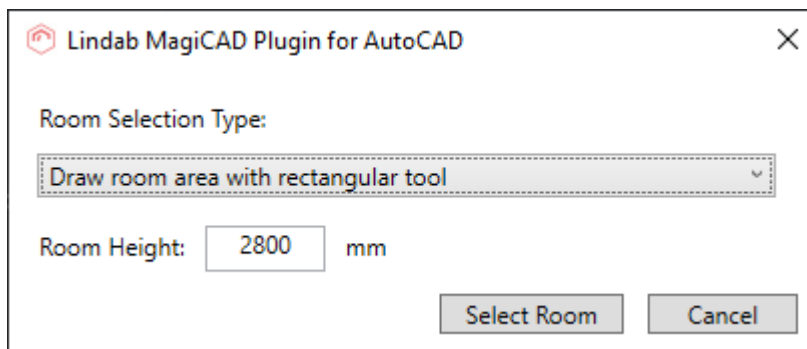


### 3.4 Open rooms

Open Rooms command allows user to select the room area(s) from MagiCAD drawing and export the room geometries to LindQST. User can add products to the rooms in LindQST Indoor climate designer and take advantage of the room functionalities in LindQST. Once the ventilation design for the rooms is ready, user can insert products to MagiCAD drawing.

Follow these steps to use the Open rooms command:

1. Click Open Rooms -command from the plugin ribbon panel.
2. Room selection type dialog is opened.

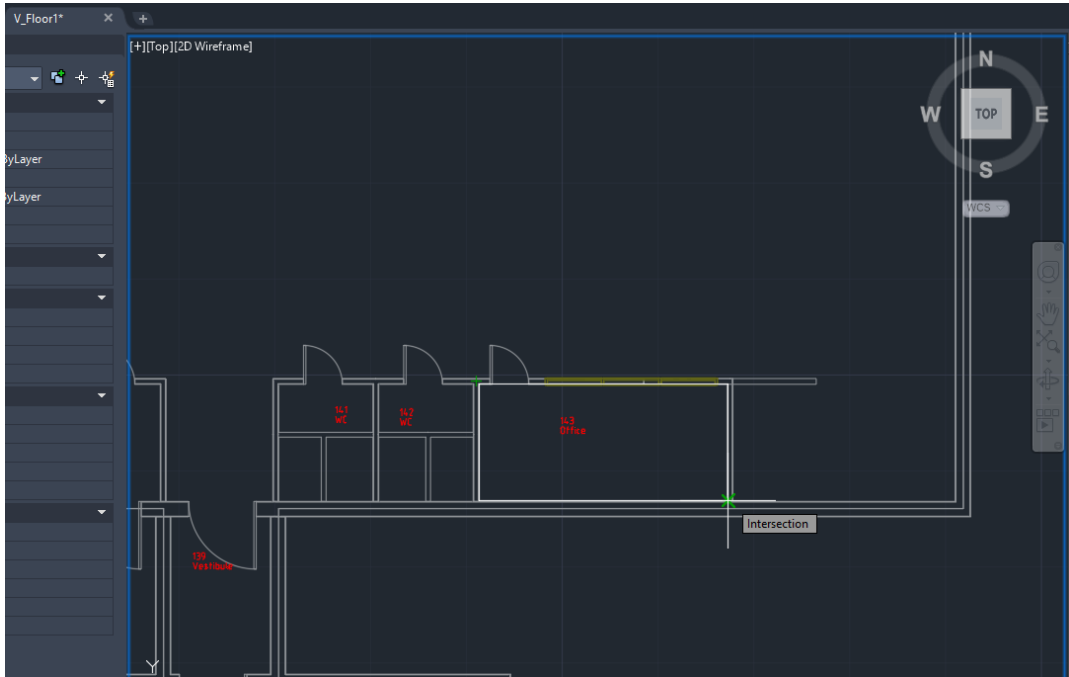


From this view user can choose the way to show the room area. Following options are available:

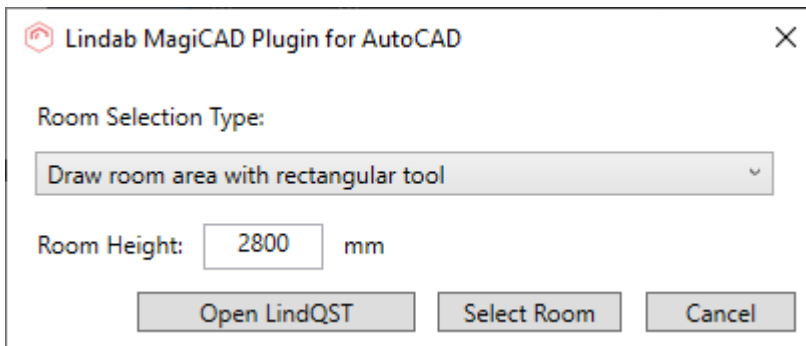
- Draw room area with rectangular tool
- Draw room area with line tool

In this example case we choose to use rectangular tool as the room we are going to select has rectangular shape. Notice that also the room height is defined in the dialog above. By default it has the height level defined in MagiCAD floor settings. Once the selections have been made click Select Room -button.

3. Proceed by showing the room area with rectangular tool:

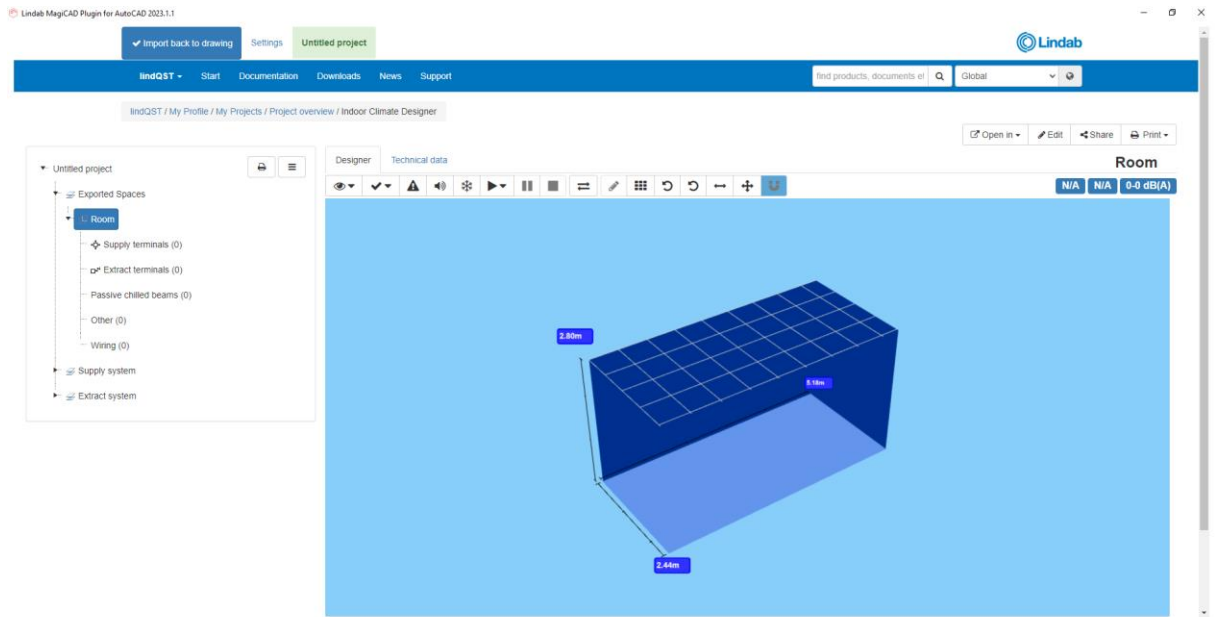


- Once the area has been selected, the room selection type dialog is opened again allowing you to either select another room or continue to LindQST with already selected rooms.

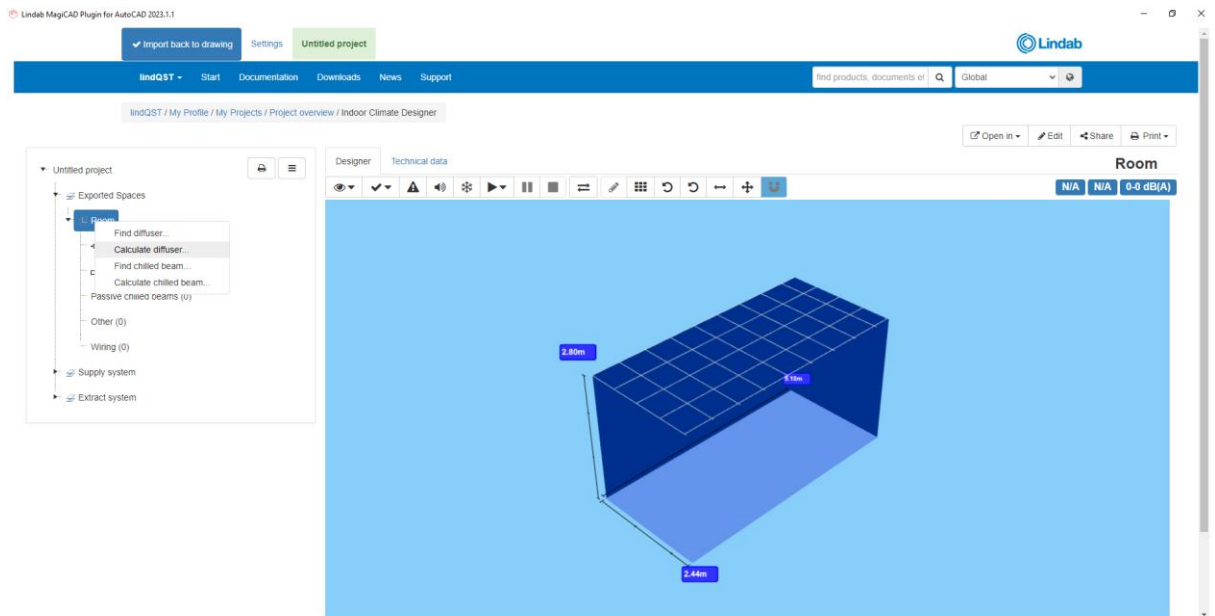


In this example case we click now Open LindQST -button in order to open selected room in LindQST Indoor climate designer. Optionally user could select another room first by clicking Select Room button.

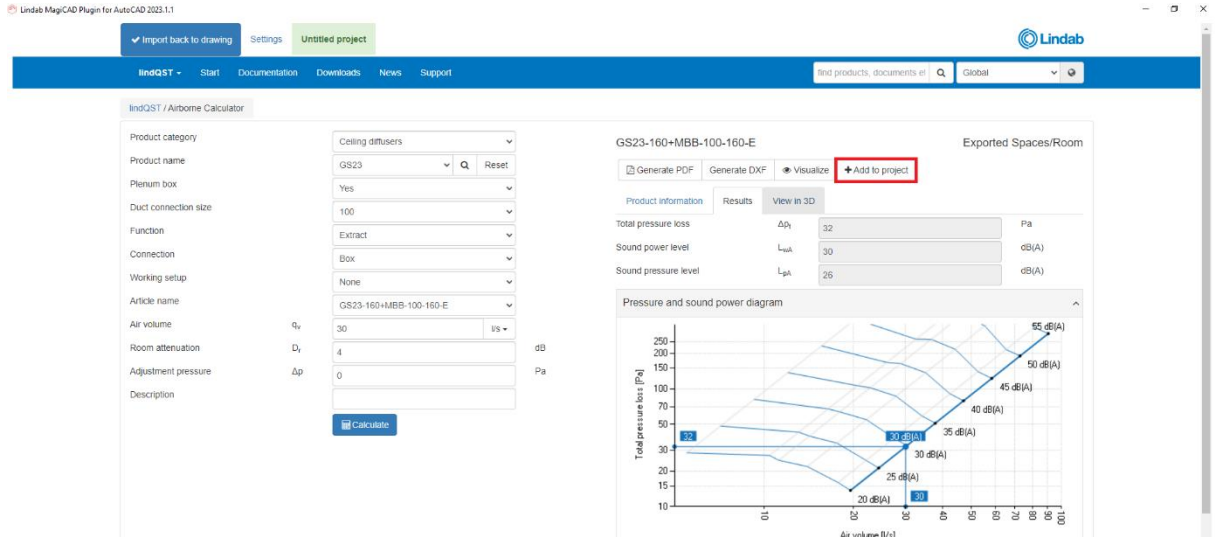
- LindQST Indoor climate designer is opened, and the selected room area is loaded:



6. Proceed for example by adding wanted products to the room(s):

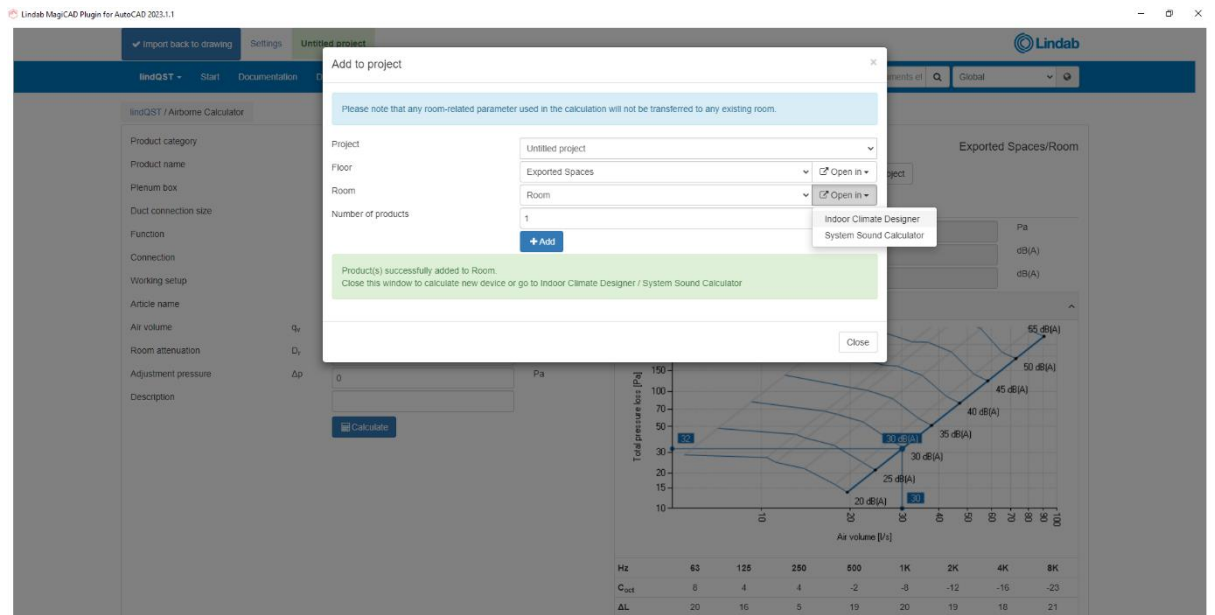


### 7. Select product and click Add to project.



The screenshot shows the 'Airborne Calculator' interface for the product GS23-160+MBB-100-160-E. The left sidebar contains various input fields such as Product category, Product name, Plenum box, Duct connection size, Function, Connection, Working setup, Article name, Air volume, Room attenuation, and Adjustment pressure. The main area displays product information, results, and a 'View in 3D' button. A red box highlights the 'Add to project' button. Below this, a 'Pressure and sound power diagram' is shown, plotting Total pressure loss [Pa] against Air volume [l/s].

Air volume [l/s]	Total pressure loss [Pa]	Sound power level [dB(A)]
0.1	30	20
0.2	30	25
0.5	30	30
1.0	30	35
2.0	30	40
5.0	30	45
10.0	30	50
20.0	30	55

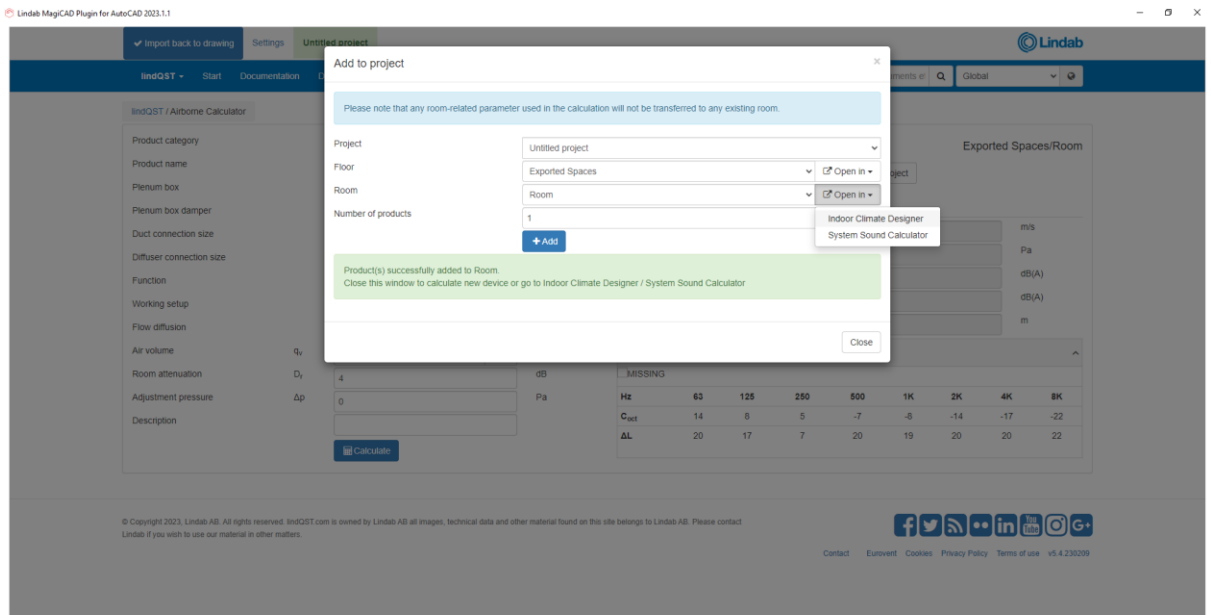


The screenshot shows the 'Add to project' dialog box overlaid on the calculator interface. The dialog contains the following fields and options:

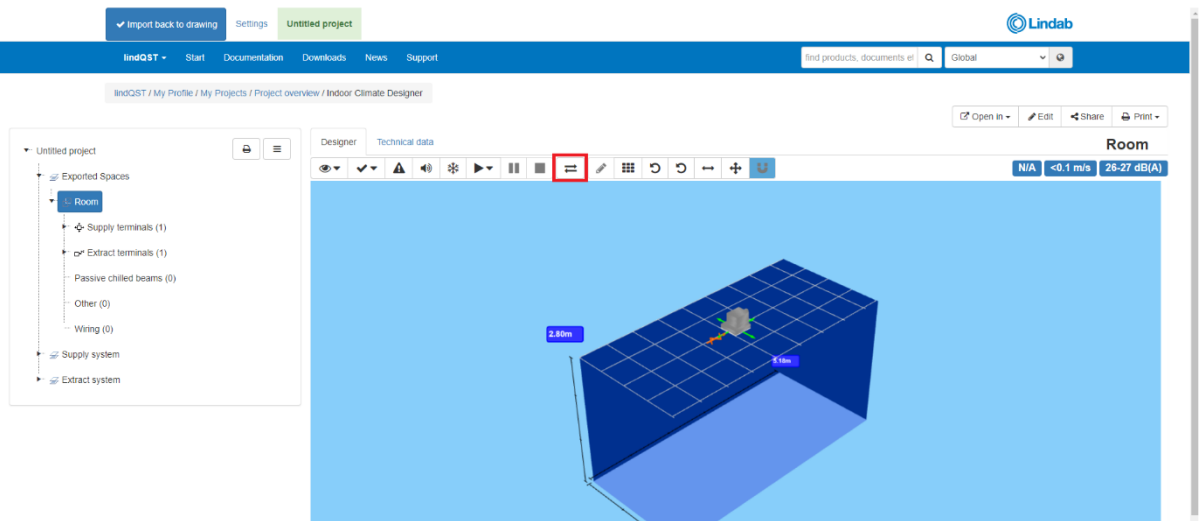
- Project: Untitled project
- Floor: Exported Spaces
- Room: Room
- Number of products: 1

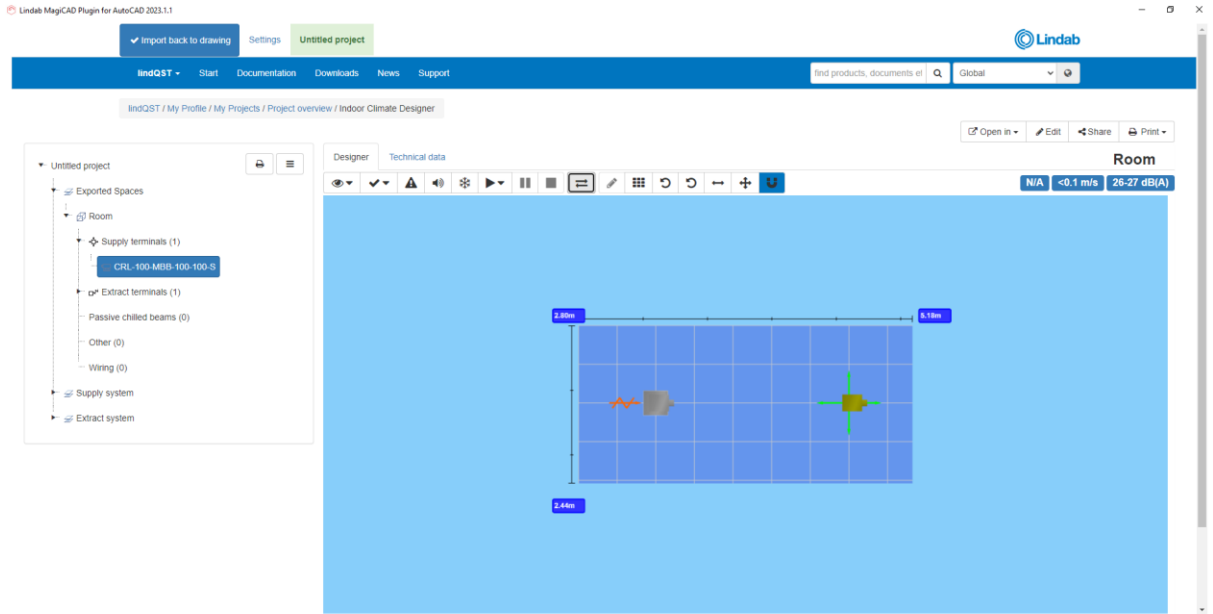
The 'Add' button is highlighted. A green message box at the bottom of the dialog states: "Product(s) successfully added to Room. Close this window to calculate new device or go to Indoor Climate Designer / System Sound Calculator".

### 8. Add another product if needed.



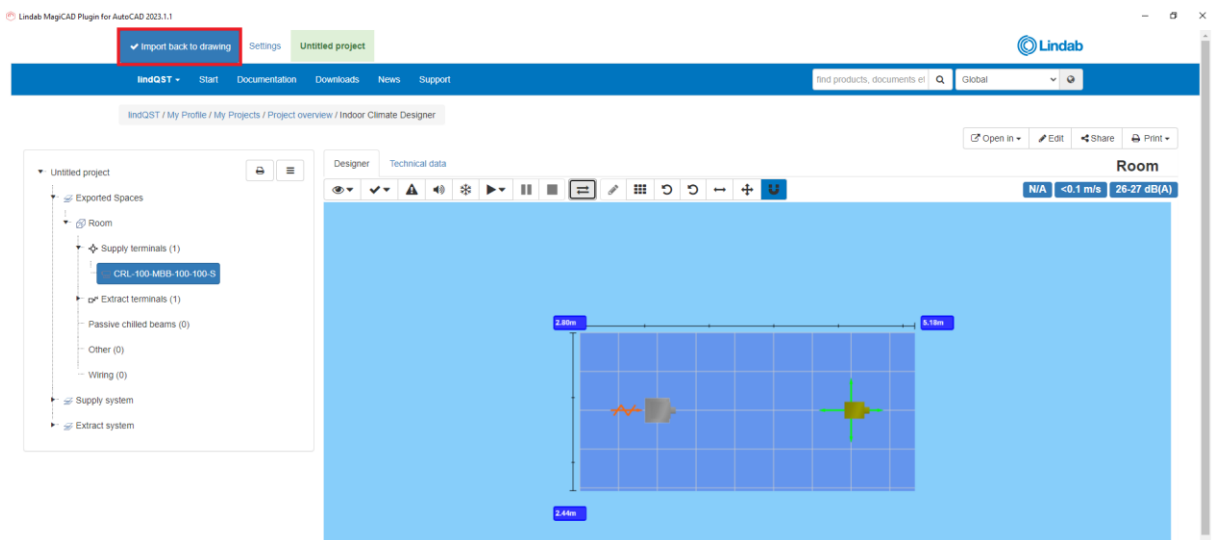
- Added products are loaded to the room, and placed into the default location. Click Edit button in order to position the products.



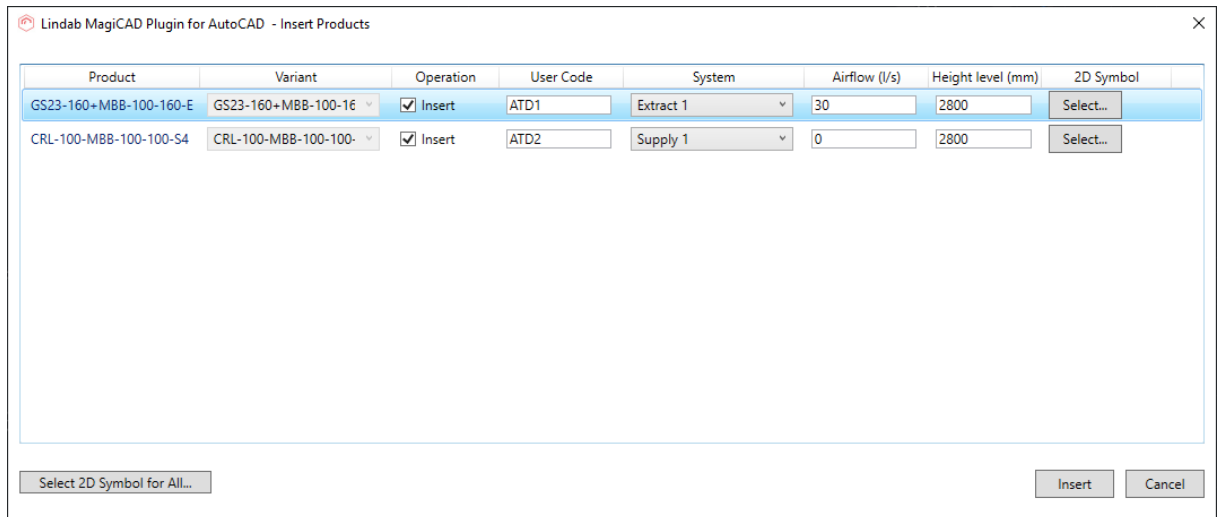


MagiCAD

- Once products are in place and you have finished modifying the room in LindQST, proceed by clicking the Import back to drawing -button in order to send added products to MagiCAD:

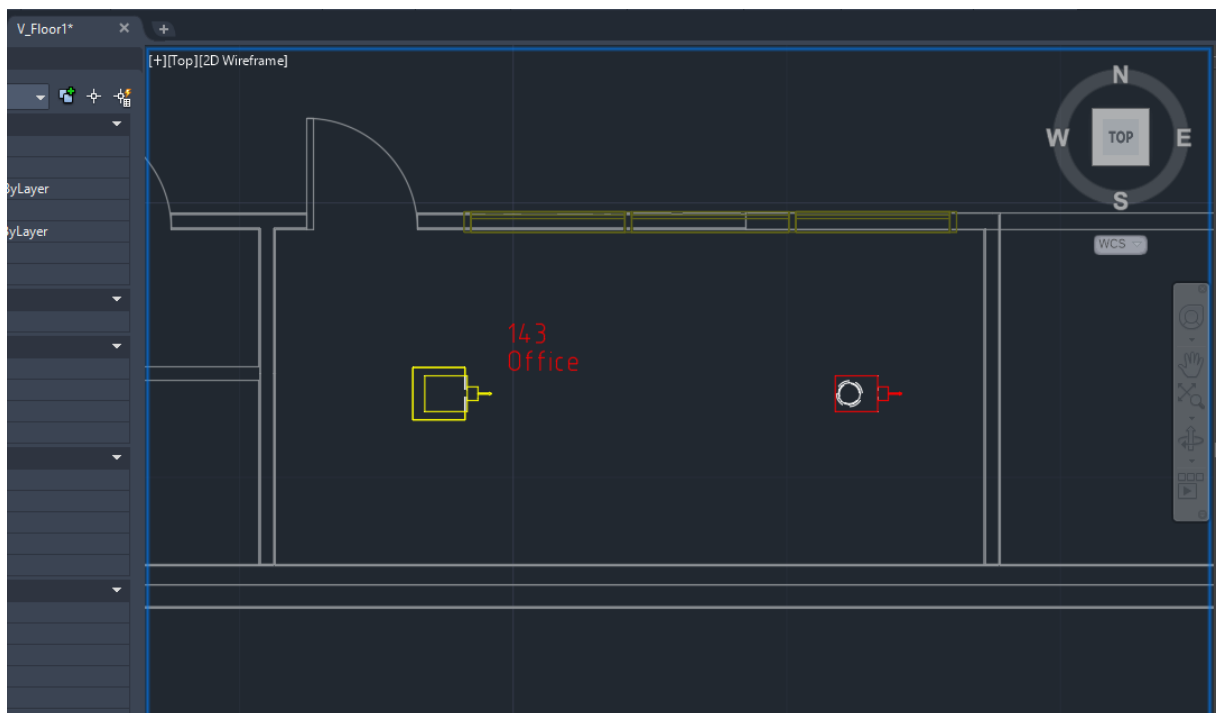


11. LindQST is closed and Insert Products view from the plugin is opened:



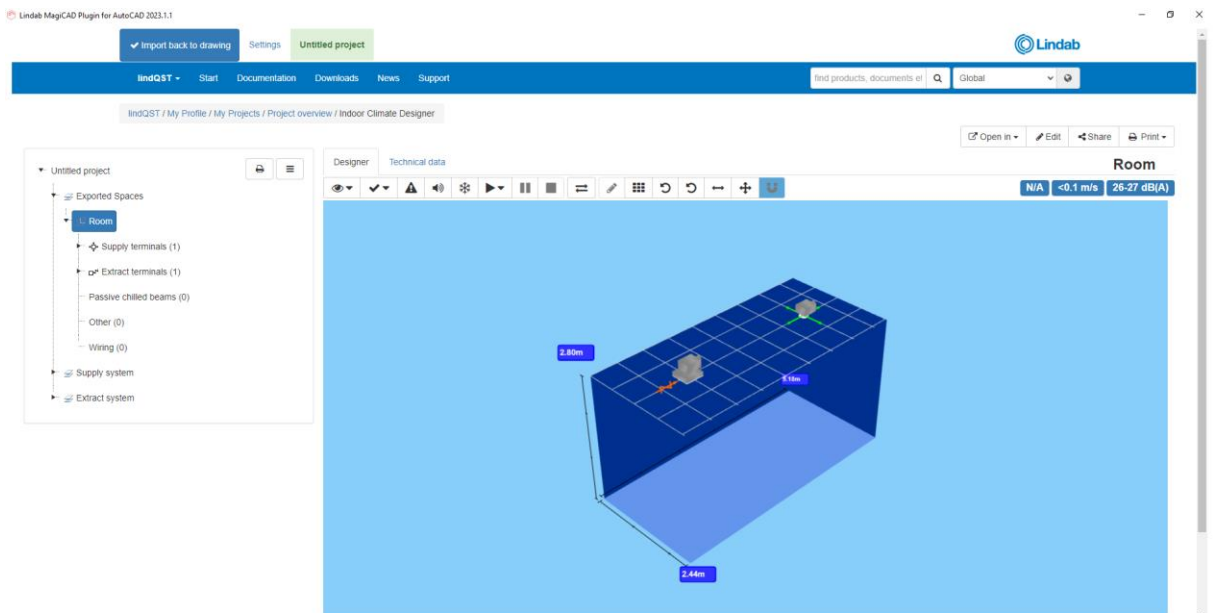
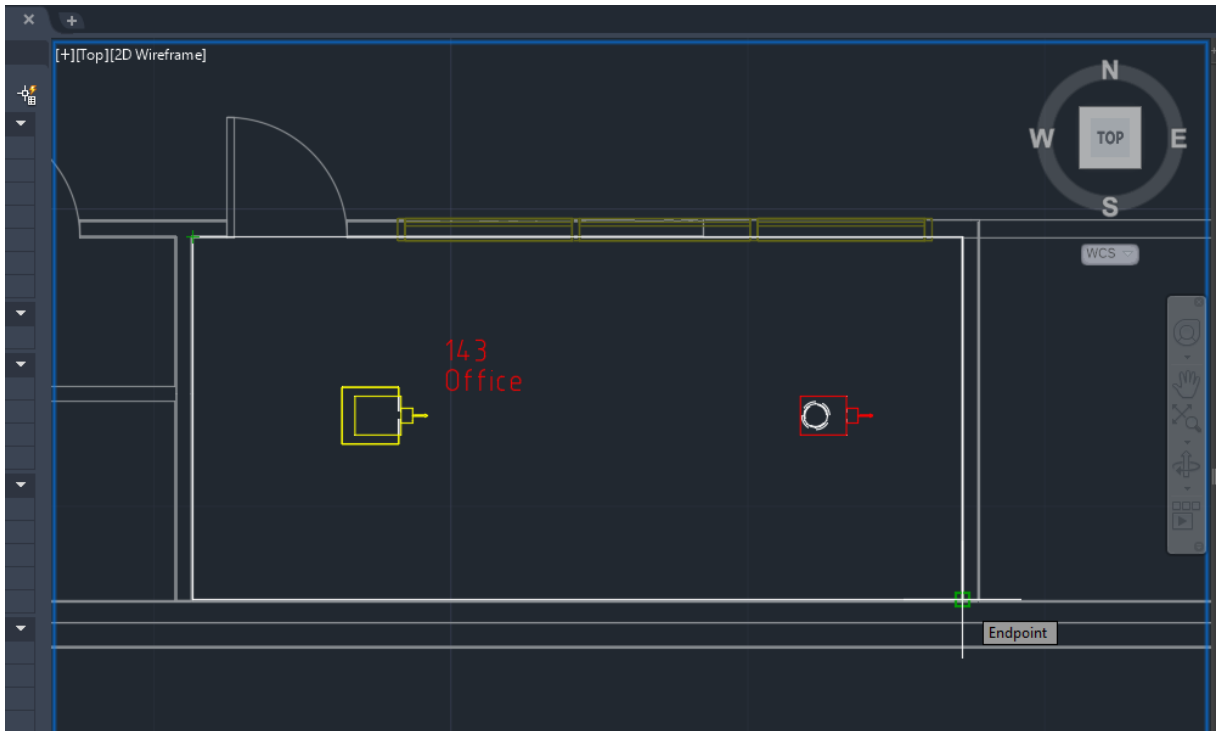
Select required systems for the products. Also 2D symbol can be selected for airborne products. Once selections have been made click Insert -button.

12. Products are now placed to the drawing into locations defined in LindQST Indoor climate designer.



The command is now completed.

- Room can be re-opened with Open rooms command if needed. When the room is opened again, also the existing products in the room are recognized and transferred to LindQST.



- User can add more products to the room or modify the existing ones if needed. Once modifications to the products have been made, updates can be sent back to MagiCAD by clicking the Import back to drawing -button.