



ETS NORD SILENCERiQ MagiCAD Plugin for Revit

User guide

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General

About this document

This document contains instructions on using ETS NORD SILENCERiQ MagiCAD plugin with Revit.

ETS NORD SILENCERiQ MagiCAD plugin for Revit allows user to insert silencers from the SILENCERiQ selection web application into MagiCAD for Revit or Revit.

Installing the software

Required third-party software

ETS NORD SILENCERiQ MagiCAD plugin works with the following MagiCAD and Revit versions:

Revit

- Revit 2021-2024

MagiCAD (optional)

- MagiCAD for Revit 2023 with Revit 2021-2023
- MagiCAD for Revit 2024 with Revit 2021-2024

Before installation

1. Workstation administrator privileges are recommended for installation.

Installation

1. Download the installer file from MagiCAD portal to your workstation:

<https://portal.magicad.com/download/ProductSearch?searchStr=ETS&categoryId=3>

2. Run the ETS NORD SILENCERiQ MagiCAD plug-in for Revit installer on your workstation.

Starting the program

The plugin is automatically loaded and is ready to be used once Revit is started next time after the plugin is installed.

Locate the Add-Ins tab from the Revit ribbon. Once the ETS NORD SILENCERiQ MagiCAD plugin is loaded its ribbon panel can be found from the Add-Ins tab.



Figure 1 Plugin ribbon panel and button

Functions

ETS NORD SILENCERiQ MagiCAD plugin for Revit UI overview

Plugin contains the following operations:

Insert operation



This command inserts a new silencer to MagiCAD with ETS NORD SILENCERiQ selection application software.

Insert in Revit when MagiCAD is installed

In Revit follow these steps to insert ETS NORD silencer to MagiCAD drawing:

1. Draw and balance the duct in Revit. This is important because ETS NORD SILENCERiQ MagiCAD plugin sends the duct dimension, airflow, and sound data to the SILENCERiQ web application. These values will help SILENCERiQ web application to show compatible silencers.
2. Click the “SILENCERiQ” button from ETS NORD SILENCERiQ MagiCAD plugin ribbon panel.
3. Once the operation is started, user is first prompted to select a duct or bend where the silencer will be connected into. The user can also cancel this selection by pressing the Esc button and the duct data will not be sent and so the user must make these selections in the web application.
4. After this the SILENCERiQ selection web application is opened.

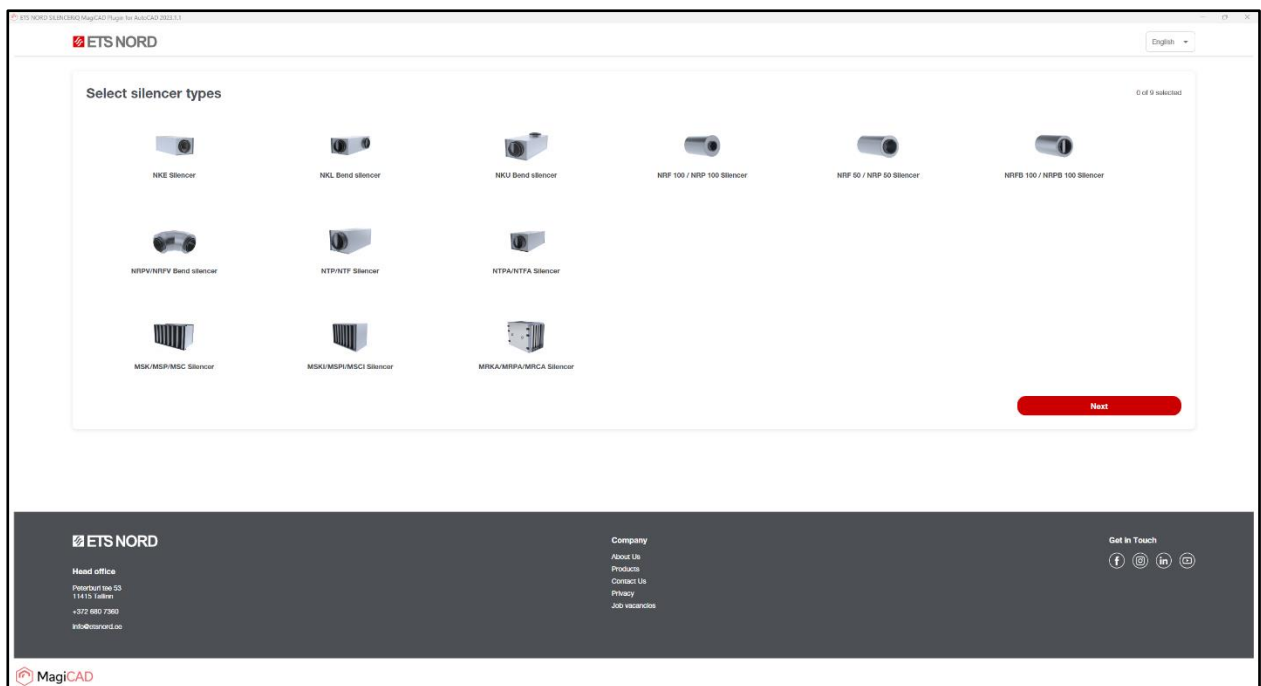
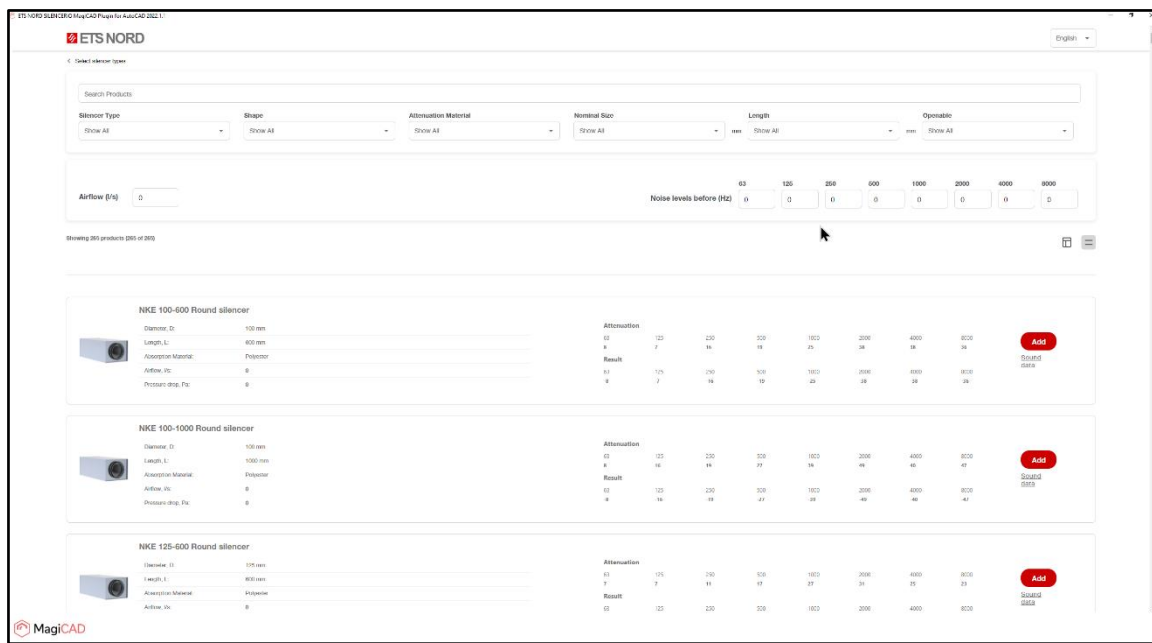


Figure 2 SILENCERiQ selection application window

5. After the web application gets the right parameters, it will show the list of compatible silencers:



The screenshot displays the ETS NORD SILENCERiQ web application interface. At the top, there is a search bar and a filter section with dropdown menus for Silencer Type, Shape, Attenuation Material, Nominal Size, Length, and Operation. Below these, there are input fields for Airflow (l/s) and Noise levels before (Hz) with a range from 63 to 8000 Hz. The main content area shows a list of compatible silencers, each with a small image, a table of attenuation data, and an 'Add' button.

Compatible Silencers:

- NIKE 100-600 Round silencer**
 - Diameter, D: 100 mm
 - Length, L: 600 mm
 - Attenuation Material: Polyester
 - Airflow, Qv: 8
 - Pressure drop, Pz: 8
- NIKE 100-1000 Round silencer**
 - Diameter, D: 100 mm
 - Length, L: 1000 mm
 - Attenuation Material: Polyester
 - Airflow, Qv: 8
 - Pressure drop, Pz: 8
- NIKE 125-600 Round silencer**
 - Diameter, D: 125 mm
 - Length, L: 600 mm
 - Attenuation Material: Polyester
 - Airflow, Qv: 8
 - Pressure drop, Pz: 8

Each silencer entry includes a table of attenuation data (dB) for various noise levels (63, 125, 250, 500, 1000, 2000, 4000, 8000 Hz) and a 'Result' column. An 'Add' button is present next to each table.

Figure 3 Compatible silencers from the SILENCERiQ

6. In Revit the MagiCAD Dataset Properties window is opened. Here the user can adjust and set some of the silencer properties/parameters. The 2D symbol must be selected. When the selections have been adjusted the user continues by pressing the ok button.

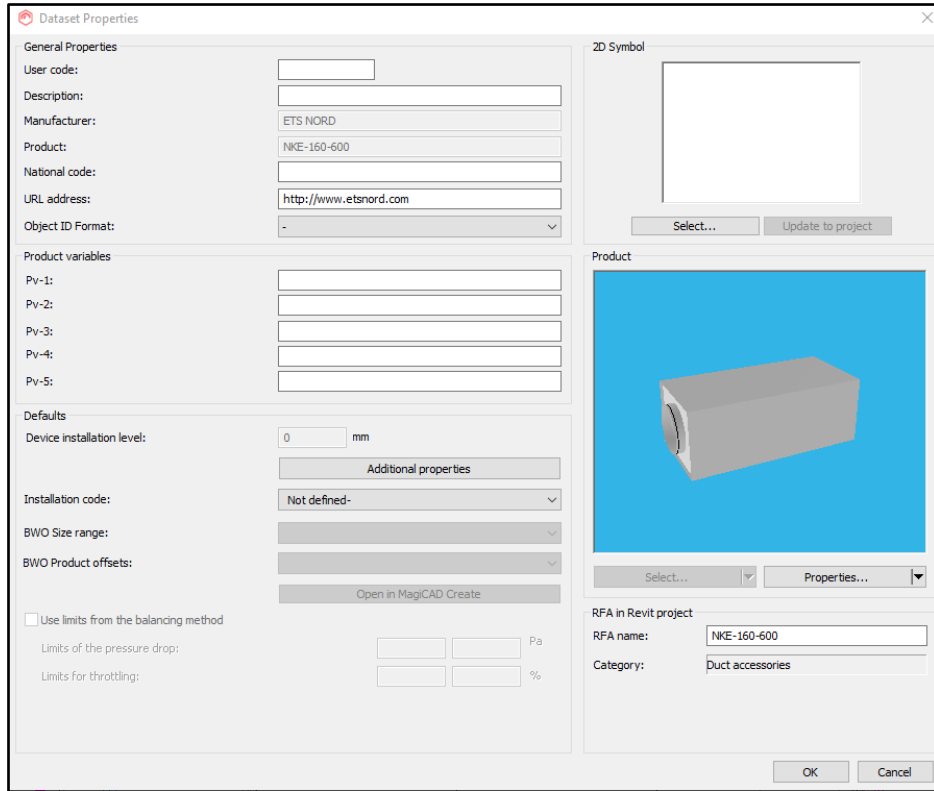


Figure 4 Dataset Properties window in MagiCAD for Revit

7. Product selection dialog is opened. Here the user can for example see the curve data diagram and silencer properties. Continue by selecting the product and pressing the select button.

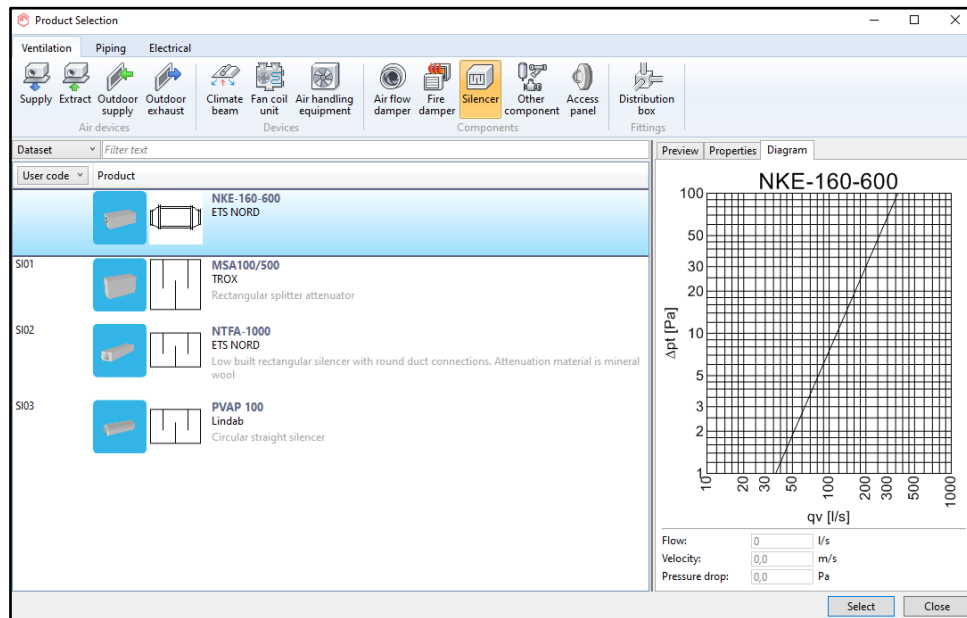


Figure 8 Product selections window

8. MagiCAD product installation dialog is opened. Here the user can select the method of installation. By default, the method is "Smart". The user continues by clicking the point in duct where the silencer is desired to be installed.

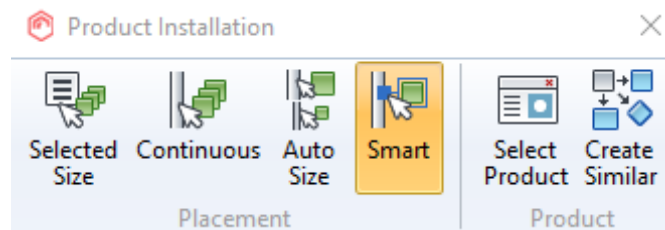


Figure 9 Product installation window

9. After clicking the point in duct, the silencer is successfully installed. The user can insert more copies of the similar silencer or finally exit the insert function by pressing the Esc button.

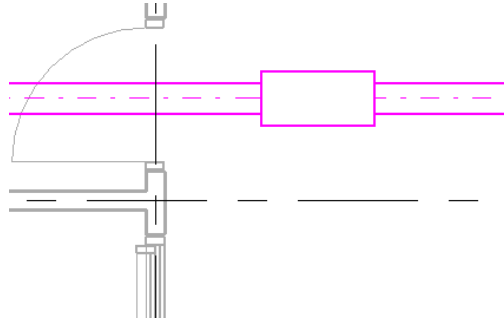


Figure 9 Silencer successfully connected into a duct in Revit

10. Demonstrated below is an example how adding a silencer might affect the MagiCAD sound calculation report from the drawing:

May/CAD - Sound Calculations Report

(16)

☒ Supply

☐ Outdoor supply

☐ General results

☐ Extract

☐ Outdoor exhaust

Location	Level	Node	System	Type	Product	Size	$\frac{1}{4}$ [m]	$\frac{1}{8}$ [m]	$\frac{1}{2}$ [m]	$\frac{1}{4}$ [m]	$\frac{1}{8}$ [m]	$\frac{1}{2}$ [m]	$\frac{1}{4}$ [m]	$\frac{1}{8}$ [m]	$\frac{1}{2}$ [m]	$\frac{1}{4}$ [m]	$\frac{1}{8}$ [m]	$\frac{1}{2}$ [m]	$\frac{1}{4}$ [m]	$\frac{1}{8}$ [m]	$\frac{1}{2}$ [m]	Warnings	
Floor 1	S1	DUCT	SR-400	400	400	400	0.2	400.0	3.8	0.1	Sound in Reflection Absorption	67.4	45.7	40.0	30.7	43.2	44.3	44.1	44.0	44.0	44.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.2	-0.2	-0.1	-0.0	-0.1	-0.1	-0.1	-0.1		
Floor 1	S0	TAP	P310-400-400	400-400	400	400	3.8	400.0	3.8	Sound in	67.4	45.7	41.0	38.8	43.2	44.3	44.1	44.0	44.0	44.0			
											67.4	45.7	41.0	38.8	43.2	44.3	44.1	44.0	44.0	44.0			
											Reflection	-0.0	-0.1	-1.6	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0		
Floor 1	S1	DUCT	SR-400	400	400	400	0.5	400.0	3.8	10.5	Sound in Reflection Absorption	-0.0	-0.0	-0.2	-1.6	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1		
												Choking	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
												Choking	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Floor 1	S1	DUCT	SR-400	400	400	400	0.4	360.0	2.9	0.1	Sound in Reflection Absorption	44.3	42.0	36.5	32.8	37.2	38.1	38.0	37.9	37.8	37.8		
												-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
Floor 1	S1	REDUCER	RC10-400-315	400-315	400-315	400-315	2.9	360.0	2.9	0.4	Sound in	44.3	42.6	36.5	32.9	37.1	38.2	38.0	37.9	37.8	37.8		
												Reflection	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
												Choking	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
Floor 1	S1	DUCT	SR-315	315	315	315	1.1	360.0	4.6	0.9	Sound in Reflection Absorption	44.3	42.6	36.5	32.9	37.1	38.2	38.0	37.9	37.8	37.8		
												-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
												-0.7	-0.3	-0.3	-0.4	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1		
Floor 1	S1	DUCT	SR-315	315	315	315	0.2	360.0	4.6	0.6	Sound in Reflection Absorption	44.3	42.6	36.7	33.3	37.1	38.1	37.8	37.7	37.7	37.7		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
Floor 1	S1	DUCT	SR-315	315	315	315	2.2	330.0	4.1	1.5	Sound in Reflection Absorption	44.0	42.1	36.1	32.8	36.5	37.4	37.2	37.1	37.1	37.1		
												-0.2	-0.2	-0.2	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
												-0.8	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		
Floor 1	S1	DUCT	SR-315	315	315	315	0.2	330.0	4.1	0.4	Sound in Reflection Absorption	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
Floor 1	S1	DUCT	SR-315	315	315	315	2.2	280.0	3.6	1.1	Sound in Reflection Absorption	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
												Choking	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
												Choking	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
Floor 1	S1	DUCT	SR-315	315	315	315	0.2	280.0	3.6	0.3	Sound in Reflection Absorption	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
												-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0		
Floor 1	S1	REDUCER	RC10-315-250	315-250	315-250	240.0	3.1	50.0	0.1	Sound in	42.0	40.4	34.9	31.3	34.1	35.0	34.6	34.5	34.5	34.5			
											Reflection	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0			
											Choking	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0			
Floor 1	S1	DUCT	SR-250	250	250	250	2.2	240.0	4.9	2.7	Sound in Reflection Absorption	42.0	40.4	34.6	31.3	34.1	35.0	34.6	34.5	34.5	34.5		
												-0.2	-0.2	-0.2	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
												-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		
Floor 1	S1	DUCT	SR-250	250	250	250	0.2	240.0	4.9	0.3	Sound in Reflection Absorption	42.0	40.4	34.1	31.7	33.9	34.7	34.3	34.2	34.1	34.1		
												-0.0	-0.0	-0.4	-0.2	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5		
												-0.0	-0.0	-0.4	-0.2	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5		
Floor 1	S0	TAP	P310-250-125	250-125	250	40.0	3.3	19.0	Sound in	39.6	33.6	28.1	24.1	25.5	26.2	26.7	26.5	26.5	26.5	26.5			
										Reflection	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0				
										Choking	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0				
Floor 1	S1	DUCT	SR-125	125	125	8.7	40.0	3.3	0.1	Sound in Reflection Absorption	39.6	33.6	28.1	24.1	25.5	26.2	26.7	26.5	26.5	26.5	26.5		
											-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0			
											-11.7	-10.7	-9.7	-8.6	-7.6	-6.6	-5.6	-4.5	-4.0	-4.0			

Figure 10 The MagiCAD sound calculation report before adding the silencer

[illegible]

Figure 11 The MagiCAD sound calculation report after adding the silencer

Insert in Revit when MagiCAD is not installed

In Revit follow these steps to insert ETS NORD silencer into the drawing:

1. Draw the duct in Revit. This is important because ETS NORD SILENCERiQ MagiCAD plugin sends the duct dimension, airflow, and sound data to the SILENCERiQ web application. These values will help SILENCERiQ web application to show compatible silencers.
2. Click the “SILENCERiQ” button from ETS NORD SILENCERiQ MagiCAD plugin ribbon panel.
3. Once the operation is started, user is first prompted to select a duct or bend where the silencer will be connected into. The user can also cancel this selection by pressing the Esc button.
4. After the user has selected the pipe or duct or cancelled the selection by pressing the Esc button the SILENCERiQ web application window is opened.

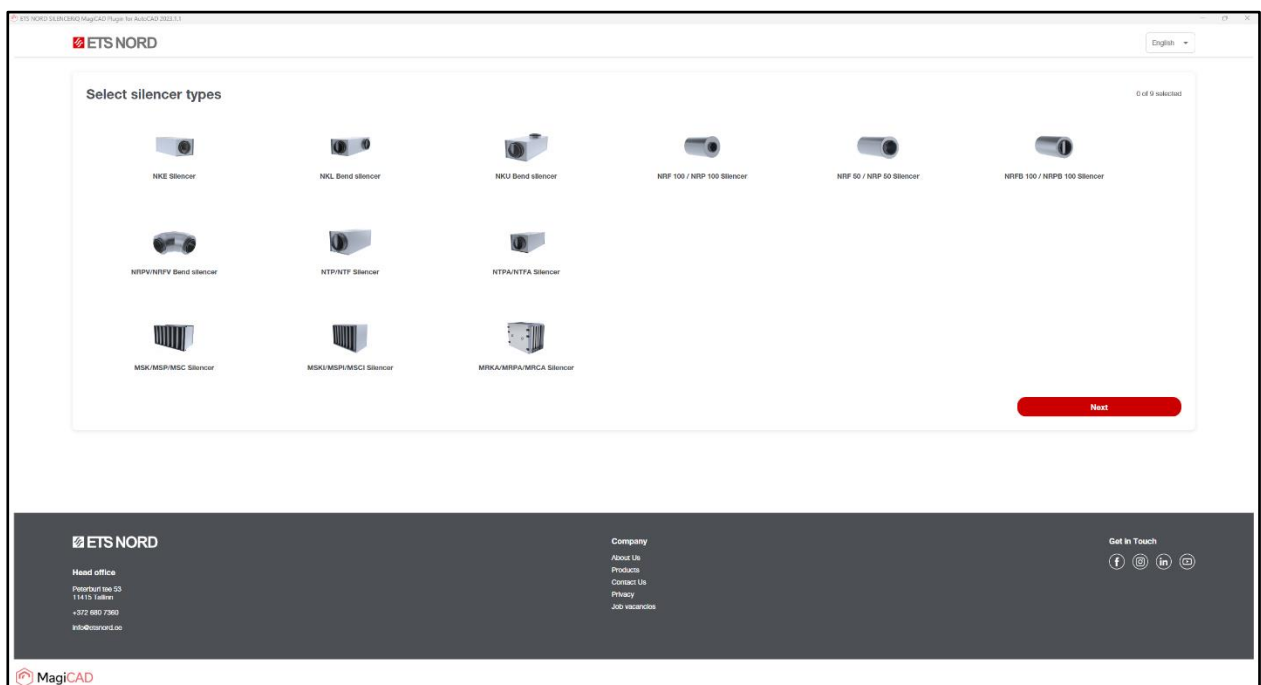


Figure 5 SILENCERiQ selection application window

5. After the web application gets the right parameters, it will show the list of compatible silencers:

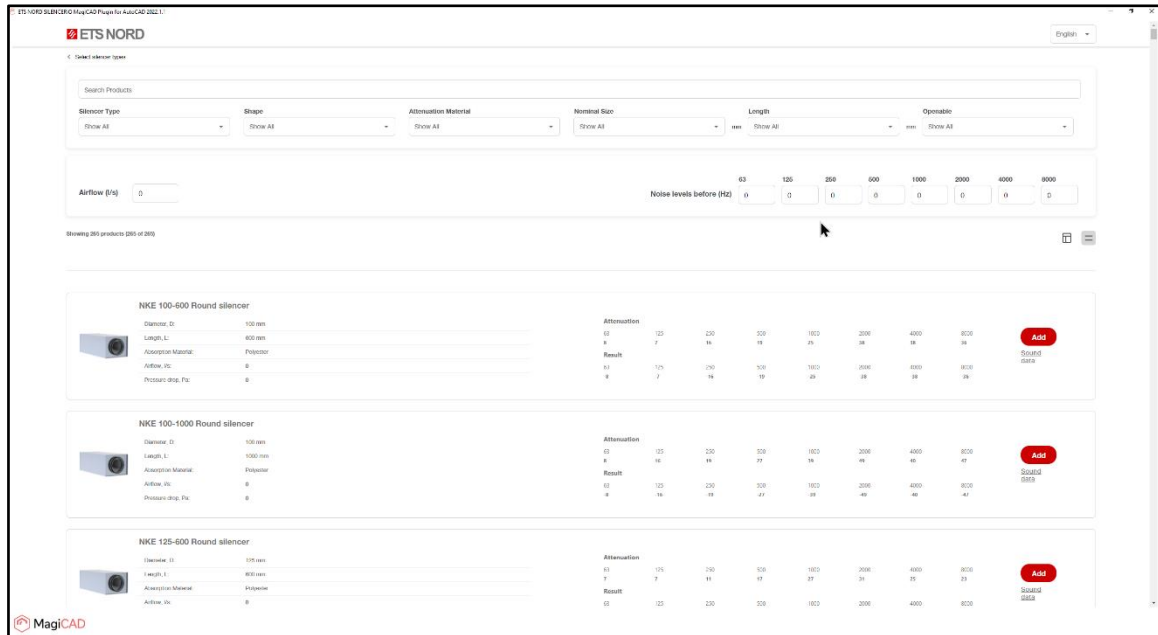


Figure 6 Compatible silencers from the SILENCERiQ

6. The plugin insert window is opened in Revit. Here the user can set the user code, height and 2D symbol. When the selections have been adjusted the user continues by pressing the insert button.

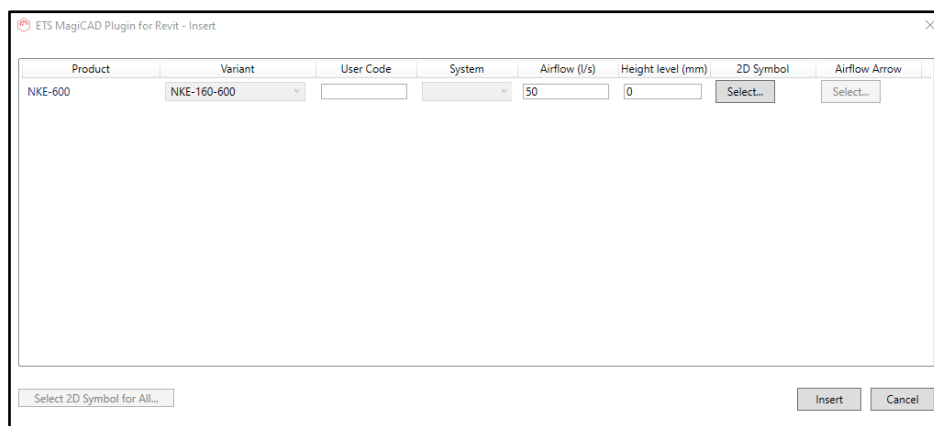


Figure 7 The plugin insert dialog

7. The chooses the position for the silencer to be inserted. The position can be a duct or free space.

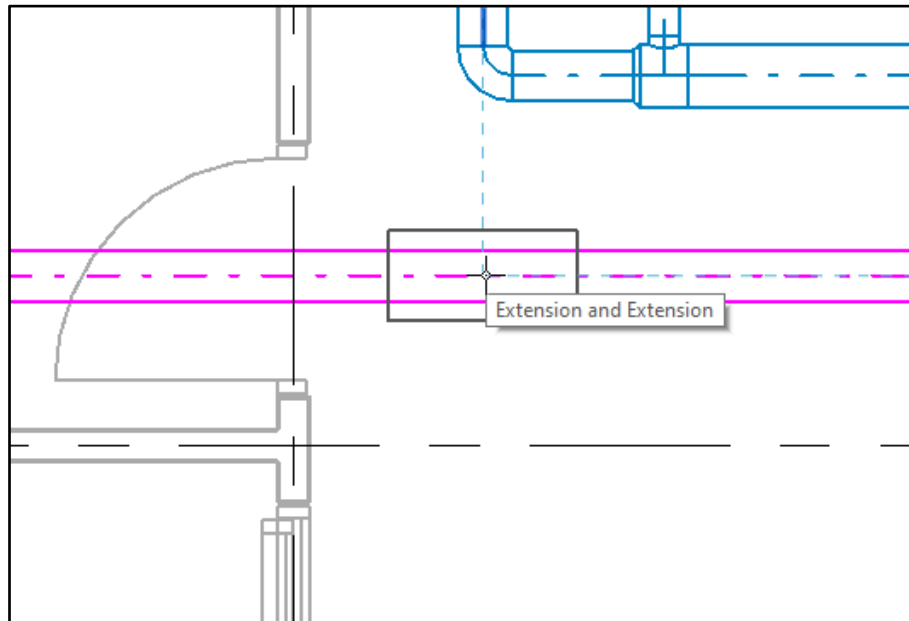


Figure 8 Insertion in the Revit drawing

8. After silencer insertion the user can insert more copies of similar silencer or finally exit the insert function by pressing the Esc button.

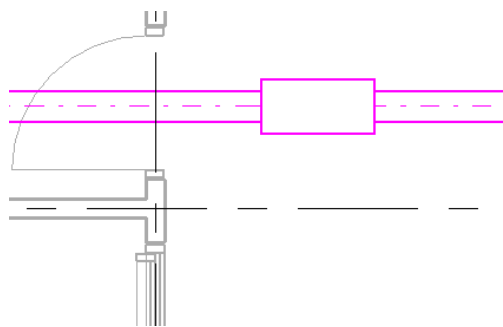


Figure 9 Silencer successfully connected into a duct in Revit