

The background features a large, red, stylized geometric pattern consisting of nested, thick-lined shapes that resemble a stylized 'M' or a series of interlocking polygons. The pattern is centered and occupies most of the page.

ETS NORD SILENCERiQ MagiCAD Plugin for AutoCAD

User guide

03/06/2024

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General

About this document

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

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

Installing the software

Required third-party software

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

- MagiCAD 2024 and AutoCAD 2021-2024
- MagiCAD 2025 and AutoCAD 2021-2025

Before installation

1. Workstation administrator privileges are recommended for installation.
2. **Notice if you have several AutoCAD versions on your workstation.** Before you run the plugin installer, start MagiCAD to make sure that ETS NORD SILENCERiQ MagiCAD Plugin installs on the same AutoCAD platform as MagiCAD.

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 installer on your workstation.

Starting the program

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

Locate the MagiCAD plugins tab from the AutoCAD ribbon. Once the ETS NORD SILENCERiQ MagiCAD plugin is loaded its ribbon panel can be found from the MagiCAD plugins tab.

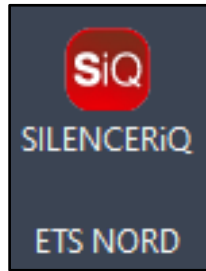


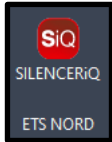
Figure 1 Panel and button

Functions

ETS NORD SILENCERiQ MagiCAD plugin for AutoCAD UI overview

Plugin contains the following operations:

Insert operation



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

Follow these steps to insert ETS NORD silencer to MagiCAD drawing:

1. Draw and balance the duct in MagiCAD. 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 “Insert” button from ETS NORD SILENCERiQ MagiCAD plugin ribbon panel or give the “ETS_INSERT” command.
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.

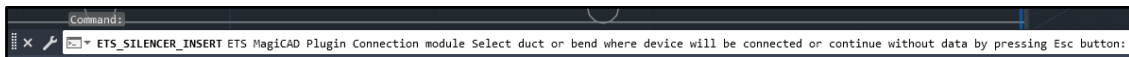


Figure 2 Prompt asking the user to select the duct or bend where the silencer will be connected

4. After this the SILENCERiQ selection web application is opened.

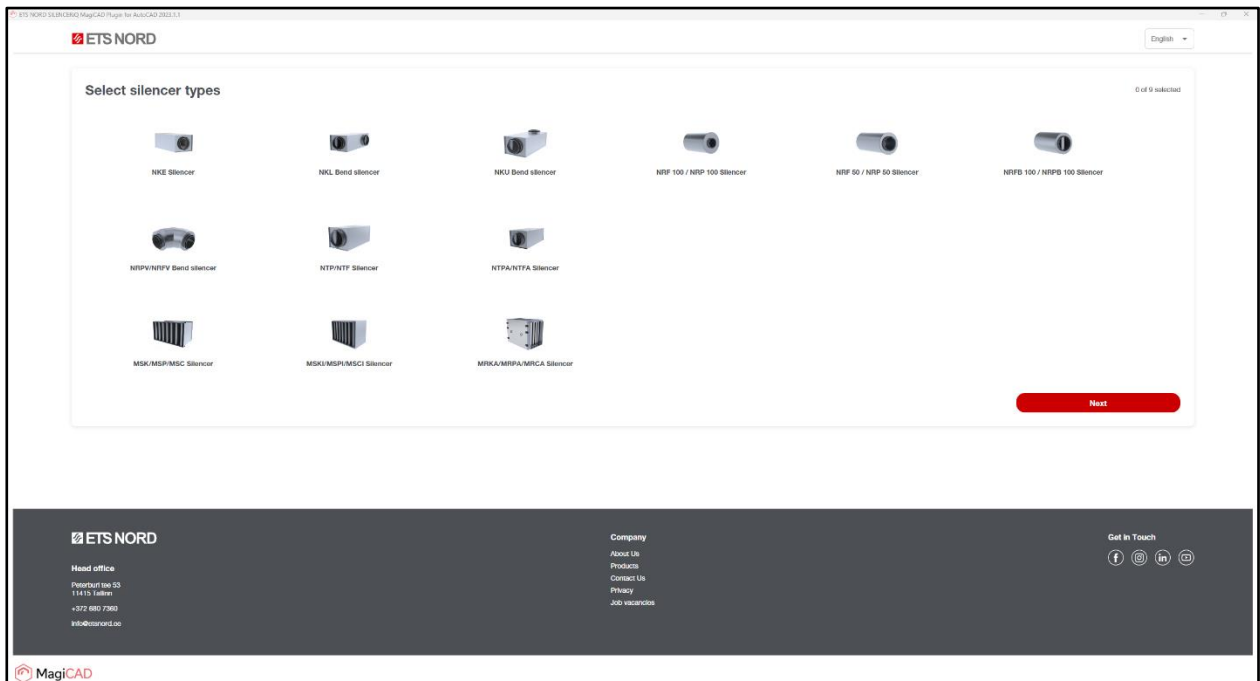


Figure 3 SILENCERiQ selection application window

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

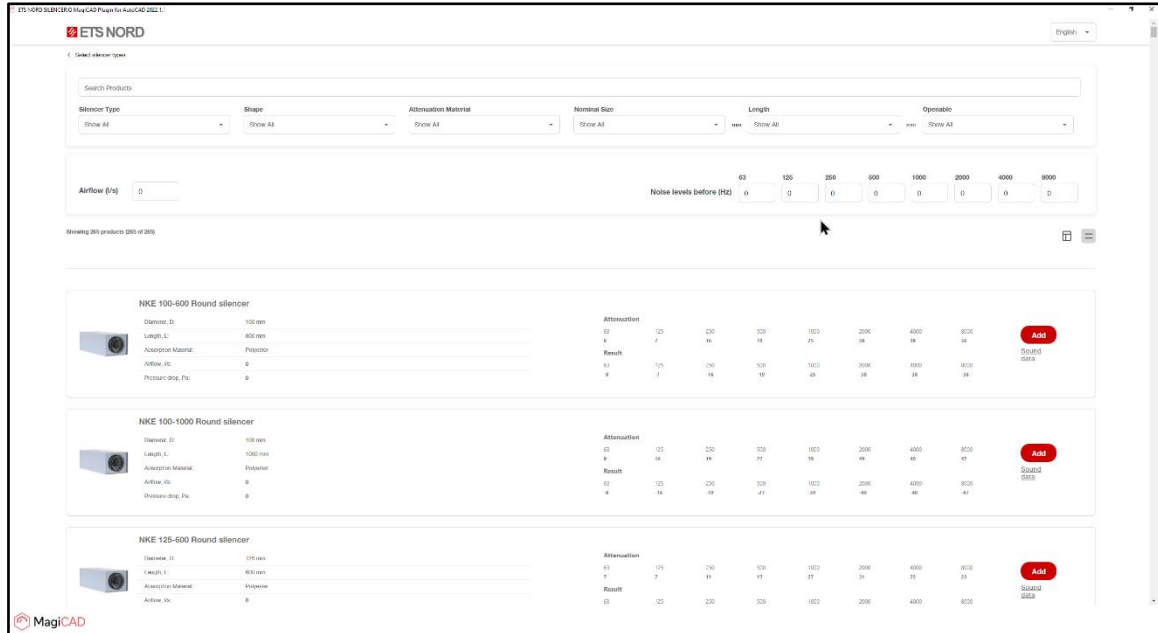


Figure 4 Compatible silencers from the SILENCERiQ

- After clicking “Add” the MagiCAD insert dialog will open. In this dialog the user must specify the user code. The 2D symbol selection is optional.

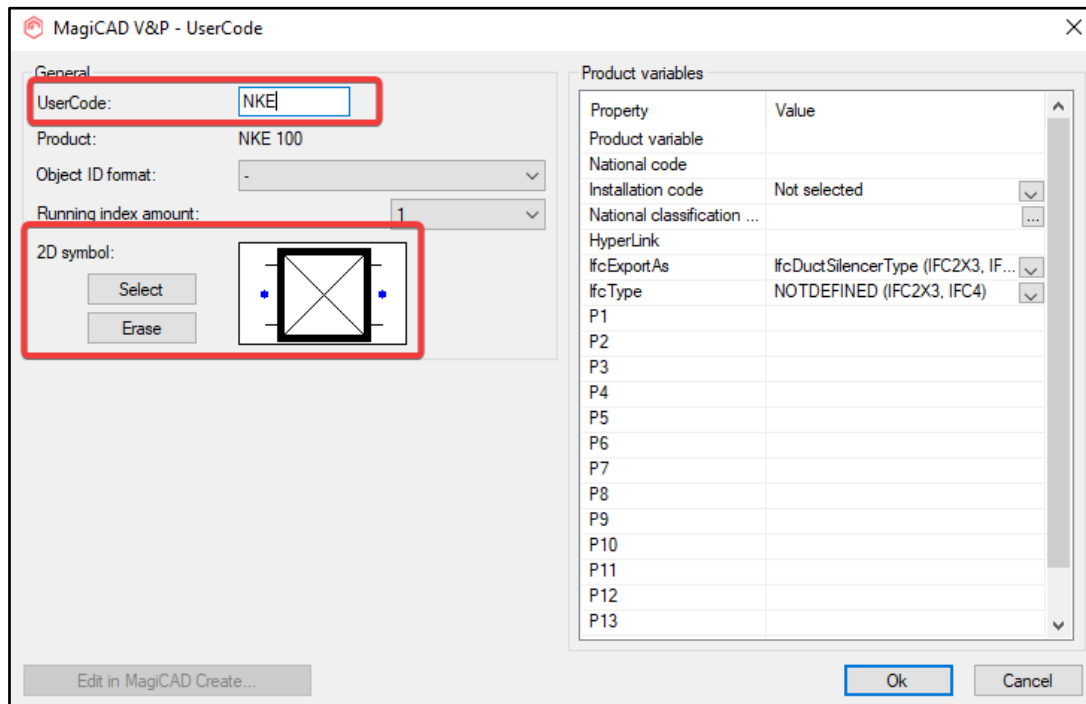


Figure 5 MagiCAD insert dialog

- Next the MagiCAD V&P – Select Product dialog is opened. Here the user can select the device to be inserted into the drawing and the 2D symbol can still be adjusted. In the ventilation tab the curve data can also be inspected. When the selections have been adjusted the user continues by pressing the ok button.

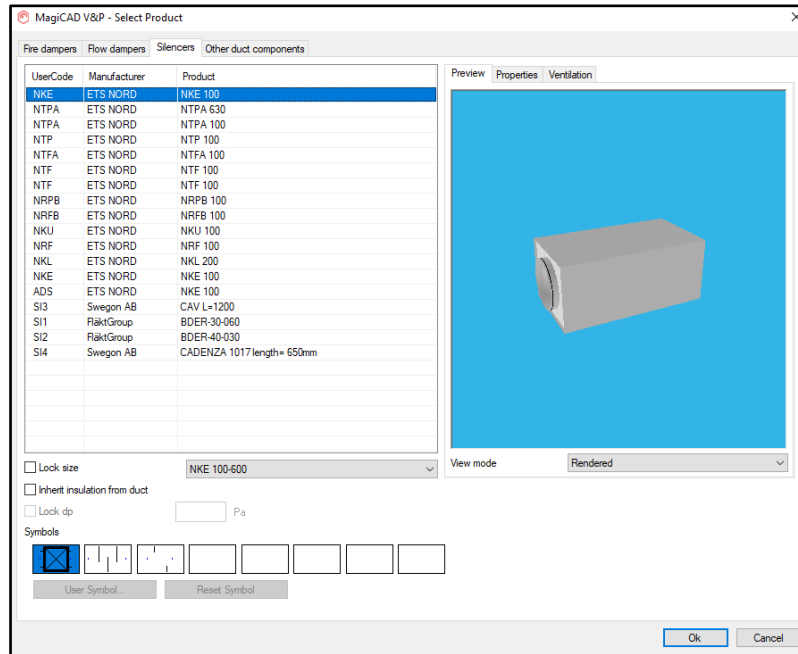


Figure 6 Select Product window in MagiCAD V&P

- The user now inserts the silencer into a spot of their choice. The silencer can be inserted into a duct or into free space.

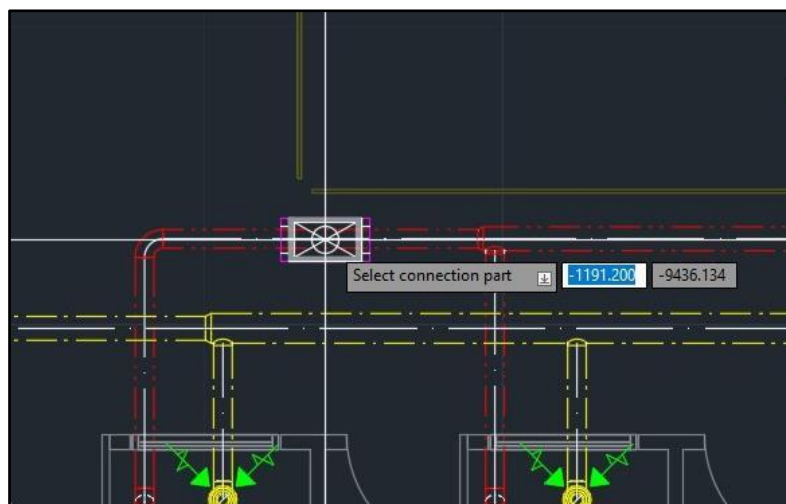


Figure 8 The silencer being inserted in the middle of a duct

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

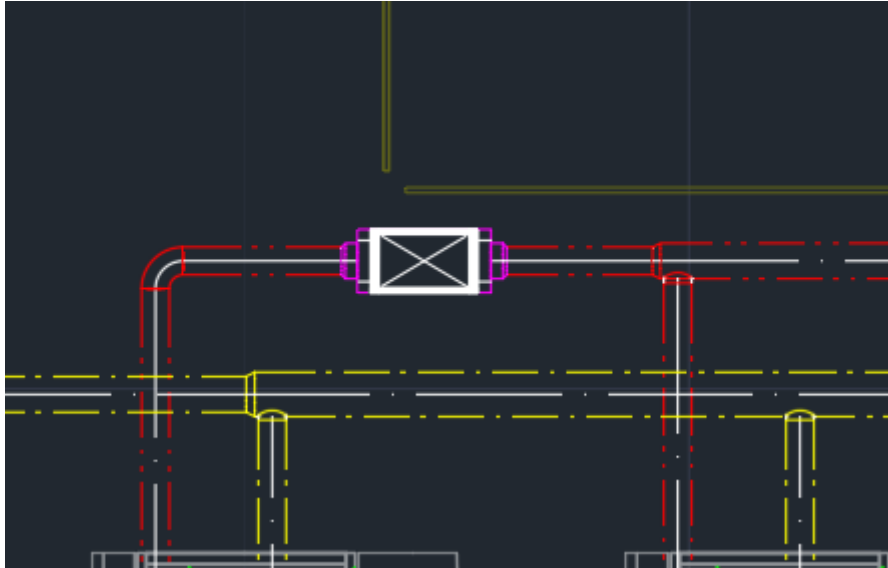


Figure 9 The silencer successfully inserted into a duct

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

Location	Level	Node	System	Type	Product	Size	L [m]	qv [m³/s]	v [m/s]	dB [Pa]	f3 [Hz]	f5 [Hz]	f10 [Hz]	f20 [Hz]	f50 [Hz]	f100 [Hz]	LpA(1/250h) [dB(A)]	Warning
Floor 1	S1	DUCT	SR-400	DUCT	SR-400	400	0.2	400.0	3.8	0.1	Sound in: 47.4 45.7 42.9 38.7 43.2 44.3 44.1 44.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	TAP	FSU-400-400	TAP	FSU-400-400	400-400			3.8	0.1	Sound in: 47.4 45.7 42.9 38.7 43.2 44.3 44.1 44.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-400	DUCT	SR-400	400	0.5	400.0	3.8	10.5	Sound in: 47.4 45.7 42.9 38.7 43.2 44.3 44.1 44.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-400	DUCT	SR-400	400	0.4	360.0	2.9	0.1	Sound in: 44.5 42.7 39.8 35.6 40.1 41.2 41.0 40.9	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	REDUCER	RCU-400-315	REDUCER	RCU-400-315	400-315			2.9	0.4	Sound in: 44.5 42.6 39.5 35.3 39.9 41.0 40.8 40.7	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	1.1	360.0	4.6	0.9	Sound in: 44.5 42.6 39.5 35.3 39.9 41.0 40.8 40.7	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	0.2	360.0	4.6	0.6	Sound in: 44.5 42.6 39.5 35.3 39.9 41.0 40.8 40.7	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	2.2	320.0	4.1	1.5	Sound in: 44.0 42.1 39.2 35.0 39.5 40.6 40.4 40.3	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	0.2	320.0	4.1	0.4	Sound in: 43.8 41.9 39.0 34.8 39.3 40.4 40.2 40.1	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	2.2	280.0	3.6	1.1	Sound in: 43.3 41.4 38.5 34.3 38.8 39.9 39.7 39.6	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-315	DUCT	SR-315	315	0.2	280.0	3.6	0.3	Sound in: 43.2 41.3 38.4 34.2 38.7 39.8 39.6 39.5	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	REDUCER	RCU-315-250	REDUCER	RCU-315-250	315-250			2.9	0.5	Sound in: 42.3 40.4 37.5 33.3 37.8 38.9 38.7 38.6	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-250	DUCT	SR-250	250	2.2	240.0	4.9	2.7	Sound in: 42.3 40.4 37.5 33.3 37.8 38.9 38.7 38.6	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-250	DUCT	SR-250	250	0.2	240.0	4.9	0.1	Sound in: 42.2 40.3 37.4 33.2 37.7 38.8 38.6 38.5	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	TAP	FSU-250-125	TAP	FSU-250-125	250-125			3.3	15.6	Sound in: 39.6 37.8 34.9 30.7 35.2 36.3 36.1 36.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-125	DUCT	SR-125	125	0.7	400.0	3.3		Sound in: 39.6 37.8 34.9 30.7 35.2 36.3 36.1 36.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	

Figure 10 The MagiCAD sound calculation report before adding the silencer

Location	Level	Node	System	Type	Product	Size	L [m]	qv [m³/s]	v [m/s]	dB [Pa]	f3 [Hz]	f5 [Hz]	f10 [Hz]	f20 [Hz]	f50 [Hz]	f100 [Hz]	LpA(1/250h) [dB(A)]	Warning
Floor 1	S1	DUCT	SR-125	DUCT	SR-125	125	0.7	400.0	3.3		Sound in: 39.6 37.8 34.9 30.7 35.2 36.3 36.1 36.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	SILENCER	MFP 100-125-300	SILENCER	MFP 100-125-300	125			3.3	10.5	Sound in: 39.6 37.8 34.9 30.7 35.2 36.3 36.1 36.0	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	
Floor 1	S1	DUCT	SR-125	DUCT	SR-125	125	1.0	400.0	3.3		Sound in: 31.5 29.6 26.7 22.5 27.0 28.1 27.9 27.8	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	

Figure 11 The MagiCAD sound calculation report after adding the silencer