



Bevent Rasch

MagiCAD plugin for AutoCAD – User guide

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1 General

1.1 About this document

This document contains instructions on using Bevent-Rasch MagiCAD for AutoCAD plugin. Bevent-Rasch MagiCAD plugin integrates Dimensio calculation tool into MagiCAD allowing users to insert roof cowls, roof inlets and silencers into MagiCAD project and drawing. Plugin enables also proper support for handling the combination roof cowls and roof inlets.

1.2 Installing the software

1.2.1 Required third-party software

Bevent-Rasch MagiCAD plugin works with the following MagiCAD and AutoCAD versions:

- MagiCAD 2025 and AutoCAD 2021-2025
- MagiCAD 2026 and AutoCAD 2023-2026

1.2.2 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 the plugin installs on the same AutoCAD platform as MagiCAD. When using MagiCAD plugin manager, the plugin is installed on the currently active AutoCAD version.

Installation

1. Use MagiCAD plugin manager to install the plugin or download the plugin installer from MagiCAD portal:

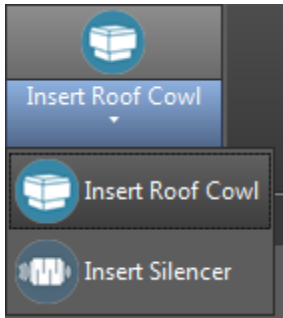
<https://portal.magicad.com/Download/ProductSearch?searchStr=Bevent-Rasch&categoryId=3>

2. Run the installer on your workstation.

1.3 Starting the program

The plugin is automatically loaded and is ready to be used once AutoCAD is started next time after the plugin is installed. If you installed the plugin with plugin manager, the plugin is ready to be used without restarting the AutoCAD.

Bevent-Rasch MagiCAD plugin ribbon panel can be found from MagiCAD Connect tab:



2 Functions

Bevent-Rasch plugin contains two operations:

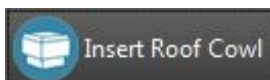
- Insert Roof Cowl
- Insert Silencer

2.1 Insert Roof Cowl operation



This command opens Dimensio calculation tool for selecting available Bevent-Rasch roof cowls. User can choose which roof cowl to insert, and optionally include the roof inlet to be inserted along with the roof cowl.

2.1.1 Detailed insert operation in MagiCAD for AutoCAD



Follow these steps to insert roof cowl from Dimensio calculation tool to MagiCAD drawing:

1. Click the "Insert Roof Cowl" button. Once the operation is started the plugin opens the Dimensio calculation tool.

Bevent Rasch MagiCAD Plugin for AutoCAD 2020.1.1.0

Roof cowls

Step 1 – Sizing ?

Get suggestions for suitable products based on desired values or select a specific product.

☒ Suggest suitable products ☐ Select a specific product

MANDATORY (Select the type of cowl and fill in the desired air flow):

SELECT THE TYPE OF COWL ? EXHAUST AIR ☒ OUTDOOR AIR ☐ COMBINATION COWL ☐

AIR FLOW ? 500 l/s

OPTIONAL (Select the desired pressure drop and/or the desired size):

PRESSURE DROP ? from 0 to 0
and / or

SIZE ? Select a size (optional) ▼

CALCULATE




- Proceed by selecting the wanted type of the cowl (exhaust, outdoor, combination cowl) and enter the required airflow and other wanted search parameters. Optionally you can choose to size a specific product, which allows you to directly choose from list of available products within the cowl type. After that click the calculate -button, and Dimensio will show list of suitable products:

Bevent Rasch MagiCAD Plugin for AutoCAD 2020.1.1.0

Step 2 – Suitable products

The following products meet the values you have chosen. Select the product to complete your sizing.

Is **within** the recommended areas of use
Is **not within** the recommended areas of use

Product	Specifications	Buttons
 DELTA-AH Low pressure drop, available in stock in the most common sizes	<ul style="list-style-type: none"> Sizes for flows from 100 l/s to 15000 l/s Design similar to outdoor air cowl DELTA-UH and combination cowl DELTA-KH Water separation class A according to EN13030 Very low pressure drop With adjustable outlet as an accessory Integrated lifting points Available in MagiCAD 	Size 200 gives pressure drop 321 Pa at 500 l/s Exhaust air velocity 7,4 m/s Size 300 gives pressure drop 43 Pa at 500 l/s Exhaust air velocity 4,6 m/s Sound power level: 47 dB(A) Size 400 gives pressure drop 21 Pa at 500 l/s Exhaust air velocity 3,2 m/s Sound power level: 39 dB(A) Size 500 gives pressure drop 10 Pa at 500 l/s Exhaust air velocity 2,3 m/s Sound power level: 34 dB(A)
 DELTA-AD Exhaust air cowl DELTA-AD Low pressure drop, designer model	<ul style="list-style-type: none"> Sizes for flows from 100 l/s to 8000 l/s Design as outdoor air cowl DELTA-UD and combination cowl DELTA-KD Water separation class A according to EN13030 Very low pressure drop Integrated lifting points Included in MagiCAD 	Size 200 gives pressure drop 321 Pa at 500 l/s Exhaust air velocity 7,4 m/s Size 300 gives pressure drop 43 Pa at 500 l/s Exhaust air velocity 4,6 m/s Sound power level: 47 dB(A) Size 400 gives pressure drop 21 Pa at 500 l/s Exhaust air velocity 3,2 m/s Sound power level: 39 dB(A) Size 500 gives pressure drop 10 Pa at 500 l/s Exhaust air velocity 2,3 m/s Sound power level: 34 dB(A)
 BRDJ Circular roof cowl for use in comfort and industrial facilities. Used for high-speed exhaust air.	Size 250 gives pressure drop 277 Pa at 500 l/s Exhaust air velocity 10,2 m/s Sound power level: 56 dB(A) Size 315 gives pressure drop 128 Pa at 500 l/s	SELECT SELECT SELECT SELECT SELECT SELECT SELECT

3. Proceed by choosing the wanted product variant and click the select -button. Dimensio loads the product view:

Bevent Rasch MagiCAD Plugin for AutoCAD 2019.12.1.0

Sizing results for DELTA-AH

Update the values of the selected cowl: ?

Exhaust air DELTA-AH

Air flow l/s 500

Pressure drop from 0 to 0

Size 300

UPDATE

PRODUCT INFORMATION DOCUMENTATION

Specification / Product code ?

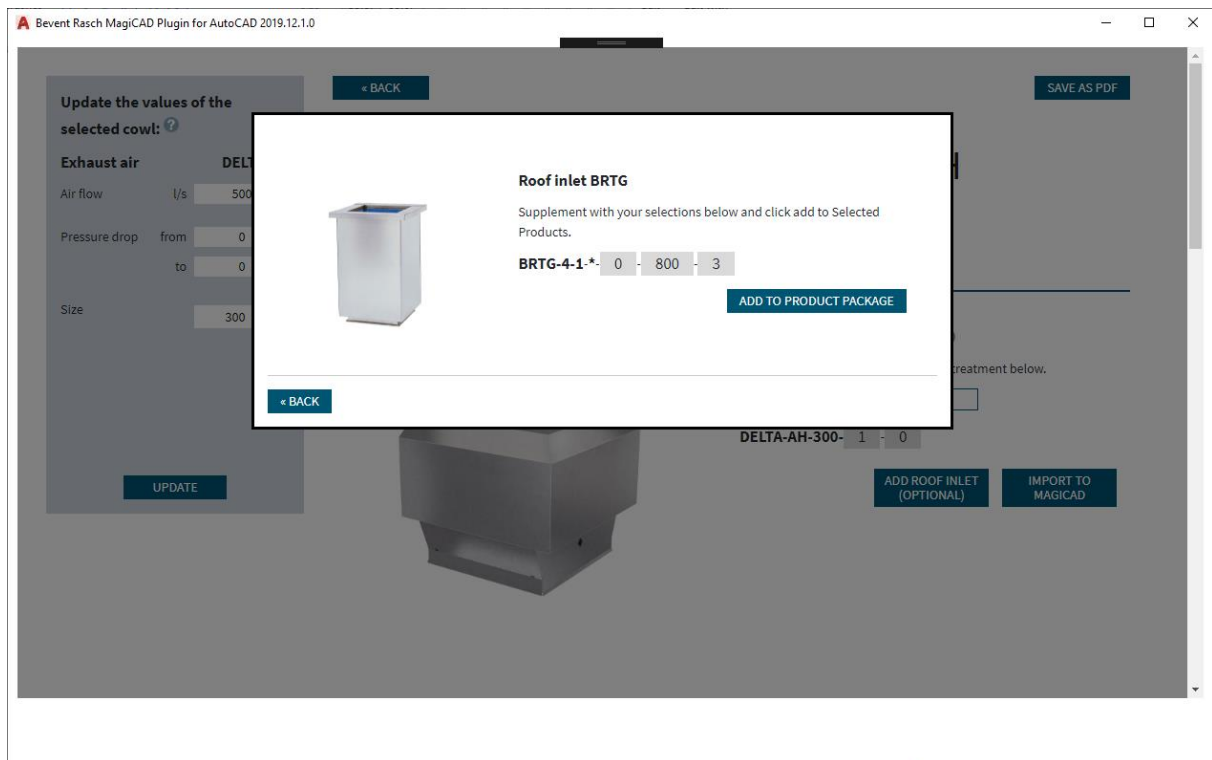
Make a material selection and surface treatment below.

Own description for AMA-text

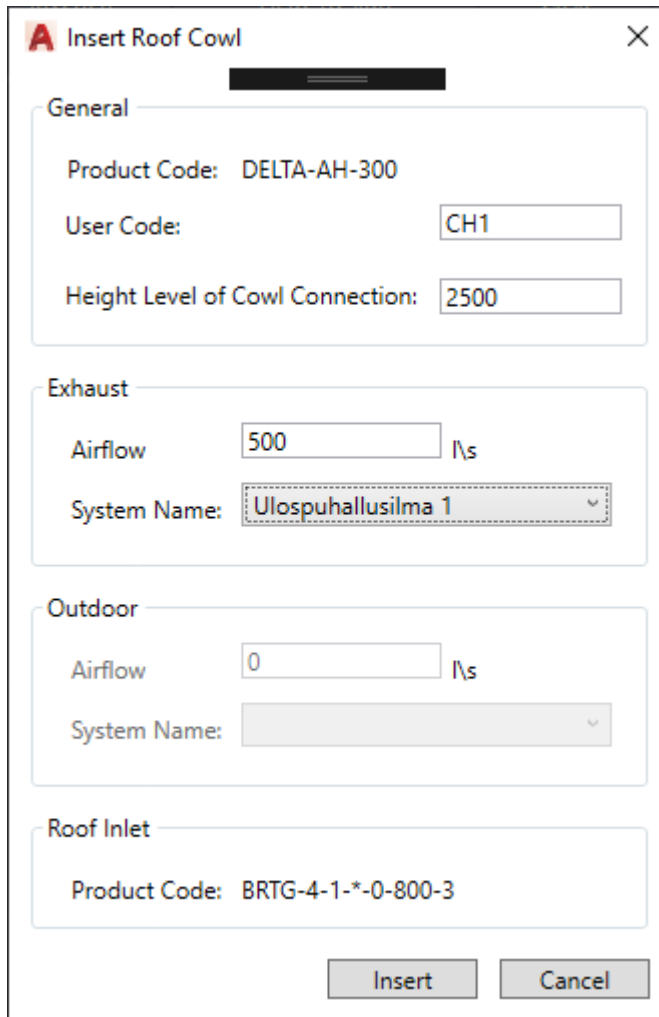
DELTA-AH-300 1 - 0

ADD ROOF INLET (OPTIONAL) IMPORT TO MAGICAD

4. In product view, it's possible to still make the final selections to the product variant. Once the selection are made, you can proceed by clicking the Import to MagiCAD -button, which initiates the roof cowl insert operation to MagiCAD drawing. Optionally you can click Add roof inlet -button which allows you to insert also the roof inlet in addition to roof cowl. By clicking Add to product package users adds the roof inlet to list of products to be imported to MagiCAD and the roof inlet view is closed.



5. Import to MagiCAD -button starts the insert operation. Dimensio window is closed and Insert Roof Cowl view is displayed:



A Insert Roof Cowl [X]

General

Product Code: DELTA-AH-300

User Code: CH1

Height Level of Cowl Connection: 2500

Exhaust

Airflow: 500 l/s

System Name: Ulospuhallusilma 1

Outdoor

Airflow: 0 l/s

System Name:

Roof Inlet

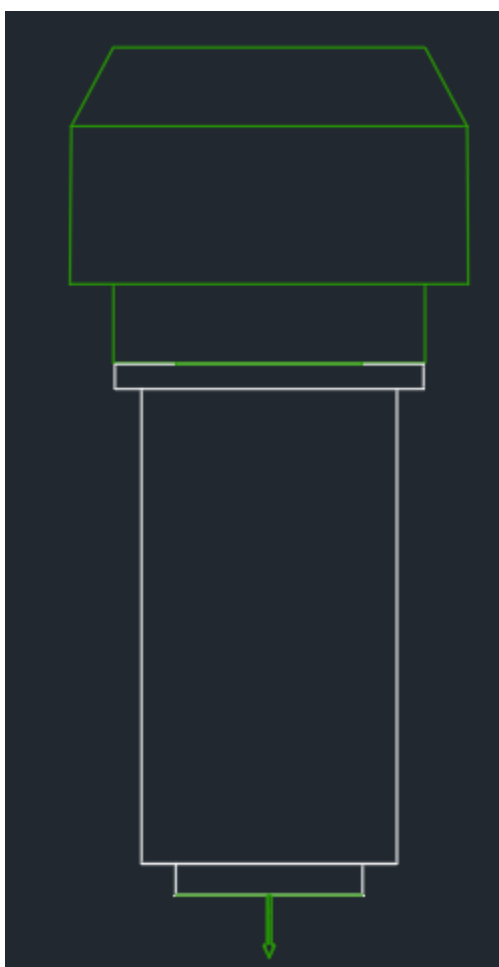
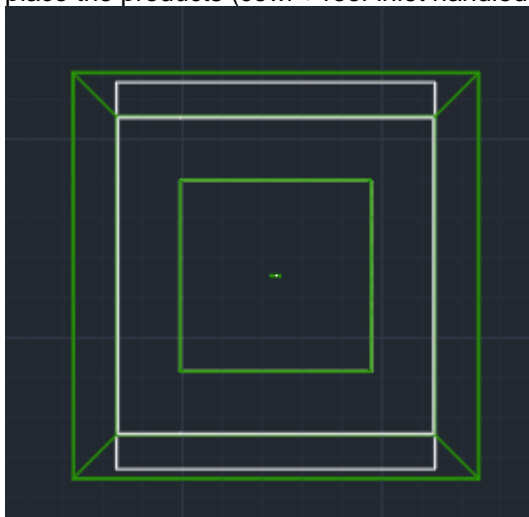
Product Code: BRTG-4-1-*-0-800-3

Insert Cancel

6. In insert Roof Cowl view following fields must be filled:

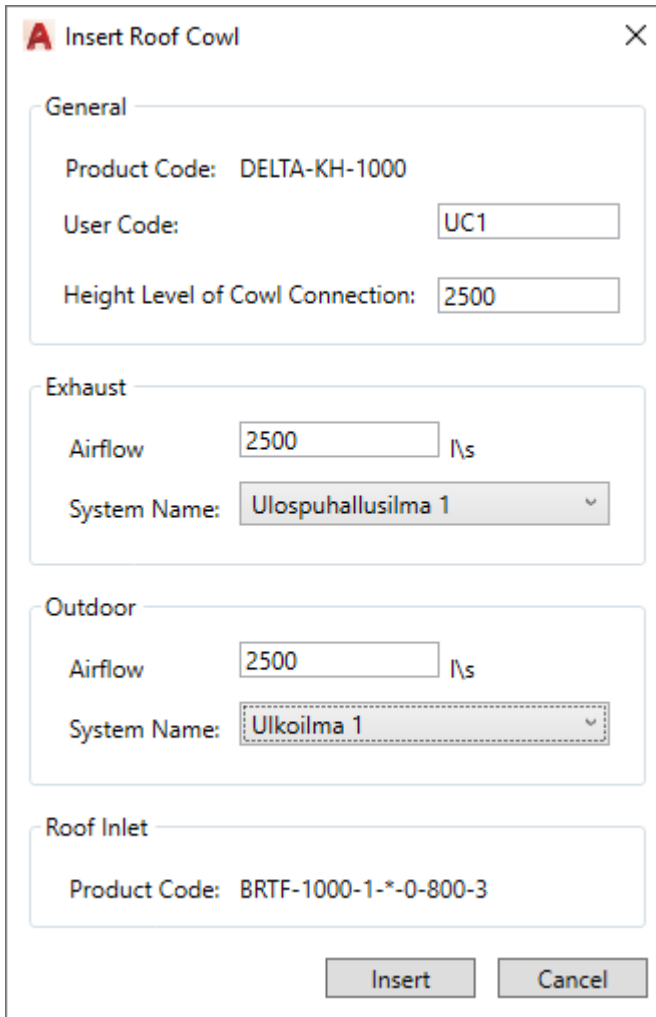
- **User code:** User code of the roof cowl is entered here.
- **Height Level of Cowl Connection:** Insertion point of the roof cowl. Roof inlet is installed automatically below the roof cowl and connected to it (there is duct of minimum length between cowl and roof inlet).
- **Exhaust airflow:** Airflow of the exhaust side is entered here. Disabled if the imported cowl is connected only to outdoor system. By default the field is filled with the search criteria value filled in Dimensio.
- **System Name:** Exhaust system for the roof cowl. Disabled if the imported cowl is connected only to outdoor system.
- **Outdoor airflow:** Airflow of the exhaust side is entered here. Disabled if the imported cowl is connected only to outdoor system. By default the field is filled with the search criteria value filled in Dimensio.
- **System Name:** Outdoor system for the roof cowl. Disabled if the imported cowl is connected only to exhaust system. For combination cowls both systems are enabled.
- **Roof inlet User Code:** User code for the roof inlet is entered here.

Once the required fields have been filled, proceed by clicking the insert button, which allows to place the products (cowl + roof inlet handled as one product package) to the drawing:



2.1.2 Combination cowls

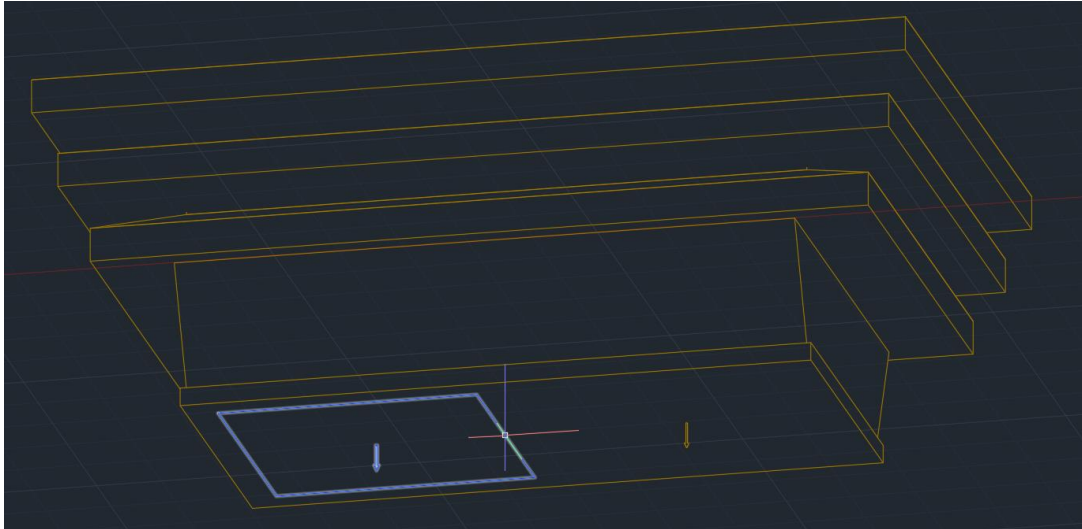
The plugin also includes support for insertion of Bevent-Rach combination roof cowls. The workflow is similar to inserting of regular roof cowls, but in Insert Roof Cowl dialog user needs to provide the airflow and system selections for both system types.



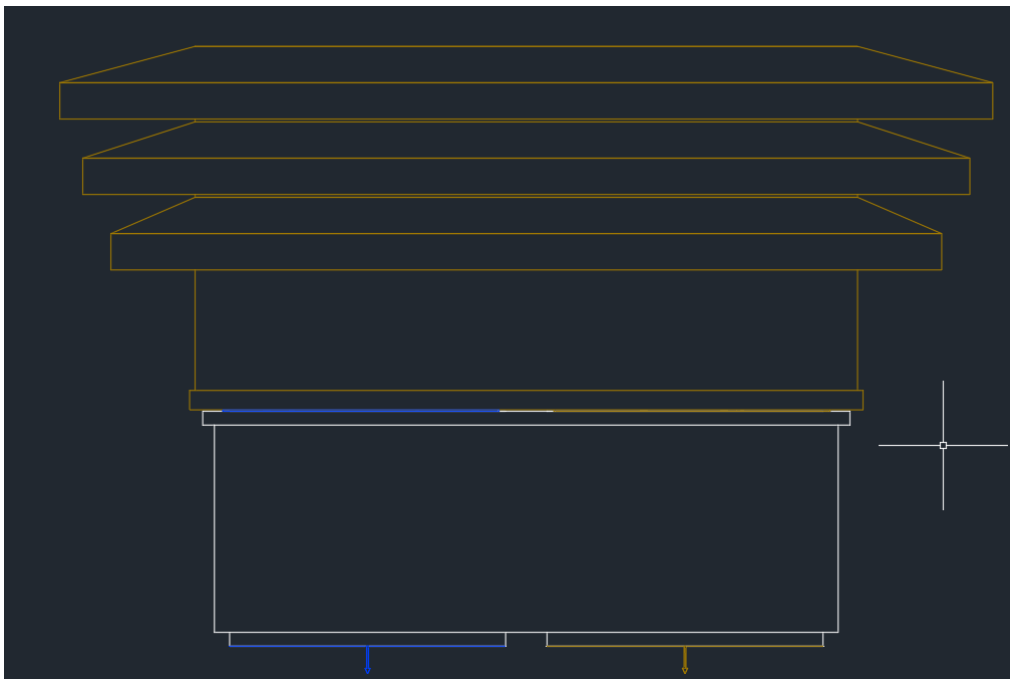
The dialog box is titled "Insert Roof Cowl" and contains four sections: General, Exhaust, Outdoor, and Roof Inlet. The General section has fields for Product Code (DELTA-KH-1000), User Code (UC1), and Height Level of Cowl Connection (2500). The Exhaust section has fields for Airflow (2500 l/s) and System Name (Ulospuhallusilma 1). The Outdoor section has fields for Airflow (2500 l/s) and System Name (Ulkoilma 1). The Roof Inlet section has a field for Product Code (BRTF-1000-1-*-0-800-3). At the bottom are Insert and Cancel buttons.

Section	Field	Value
General	Product Code	DELTA-KH-1000
	User Code	UC1
	Height Level of Cowl Connection	2500
Exhaust	Airflow	2500 l/s
	System Name	Ulospuhallusilma 1
Outdoor	Airflow	2500 l/s
	System Name	Ulkoilma 1
Roof Inlet	Product Code	BRTF-1000-1-*-0-800-3

Plugin creates additional connector to the outdoor system in case of combination cowl:



Also the roof inlet for combination cowl is supported:



2.2 Insert silencer operation



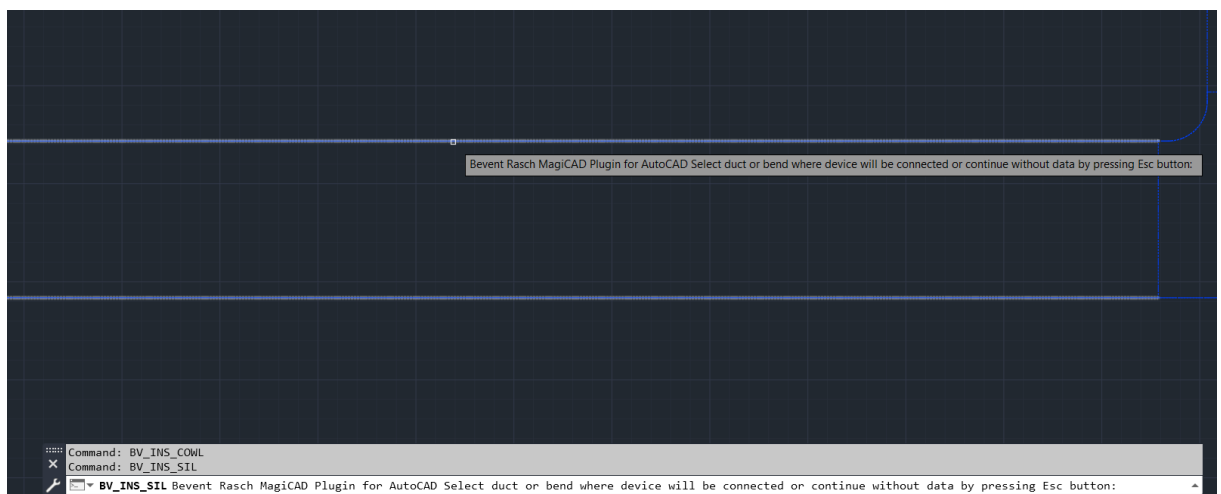
This command opens Dimensio calculation tool allowing user to search for suitable silencers and then insert the selected silencer into MagiCAD project.

2.2.1 Detailed insert operation in MagiCAD for AutoCAD



Follow these steps to insert Bevent-Rasch silencer into MagiCAD drawing:

1. Click the "Insert Silencer" button.
2. Plugin asks you to selected the duct where to connect the silencer to (this step can be skipped by pressing esc -button):



3. Once the duct has been selected, plugin opens the Dimensio selection tool for silencer search. Notice that most of search criteria fields have been automatically filled with the parameters read from the selected duct:

Bevent Rasch MagiCAD Plugin for AutoCAD 2020.1.1.0

Get suggestions for suitable products based on desired values or select a specific product.

☒ Suggest suitable products ☐ Select a specific product

MANDATORY (Fill in the air flow in l/s or m³/h and maximum pressure drop):

AIR FLOW ? l/s m³/h

MAXIMUM PRESSURE DROP ? Pa

OPTIONAL

SELECT THE DESIRED SHAPE ? ☒ RECTANGULAR ☐ CIRCULAR

SIZE ?

MAXIMUM LENGTH ? mm

SOUND POWER LEVEL (LW) BEFORE THE SILENCER ?

Octave band, Hz							
63	125	250	500	1000	2000	4000	8000
54	53	52	47	44	49	52	53

CALCULATE

Notice though that if the flow summation, balancing and sound calculations have not been done in MagiCAD, the airflow and sound power levels are not available. If you skip selecting the duct, the wanted search parameters needs to be filled manually.

- Once search parameters are ok, click the calculate -button, at the bottom of the view. Dimensio displays list of products that match the search criteria:

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LFIK-1-400-400-1800	-13	-23	-40	-50	-50	-50	-50	-40	35*	16	SELECT
Typ 3 ? Pressure loss: 20 Pa Inherent sound generation: 25 dB											
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-3-400-400-600	-4	-7	-10	-16	-21	-17	-12	-9	50	46	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-3-400-400-900	-5	-9	-15	-23	-28	-23	-17	-11	47	42	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-3-400-400-1200	-6	-13	-19	-26	-35	-26	-20	-13	45	40	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-3-400-400-1500	-7	-16	-22	-30	-40	-30	-22	-16	43	37	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-3-400-400-1800	-9	-17	-26	-38	-46	-35	-24	-18	41	35	SELECT
Typ 5 ? Pressure loss: 5 Pa Inherent sound generation: 15 dB											
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-5-400-400-600	-4	-5	-7	-12	-15	-10	-7	-6	52	50	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	
LFIK-5-400-400-900	-4	-6	-9	-15	-20	-13	-9	-7	51	48	SELECT
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)	

- Proceed by selecting the product variant you want to use. When Select -button is clicked Dimensio load the product view:

Update the values of the selected silencer: ?

LFIK

Type

Typ 3

Air flow

l/s

500

m³/h

0

Max. pressure drop

Pa

30

Size

Width

400

Height

400

Length

900

UPDATE

« BACK

SAVE AS PDF

Sizing results for LFIK

To make a tender enquiry or to create a complete product code, complete the option below.

PRODUCT INFORMATION

DOCUMENTATION

Possible inspection hatch

500

400

400

900

400 + 200

Specification / Product code ?

Make a material selection and surface treatment below.

Own description

LFIK-3-400-400-900

IMPORT TO MAGICAD

Facts at a glance

Rectangular muffler LFIK.

Sizes from width 300 mm to 2000 mm and height from 300 mm to 2000 mm

Three standard types with 5 different lengths

Indented low pressure Drop Connection

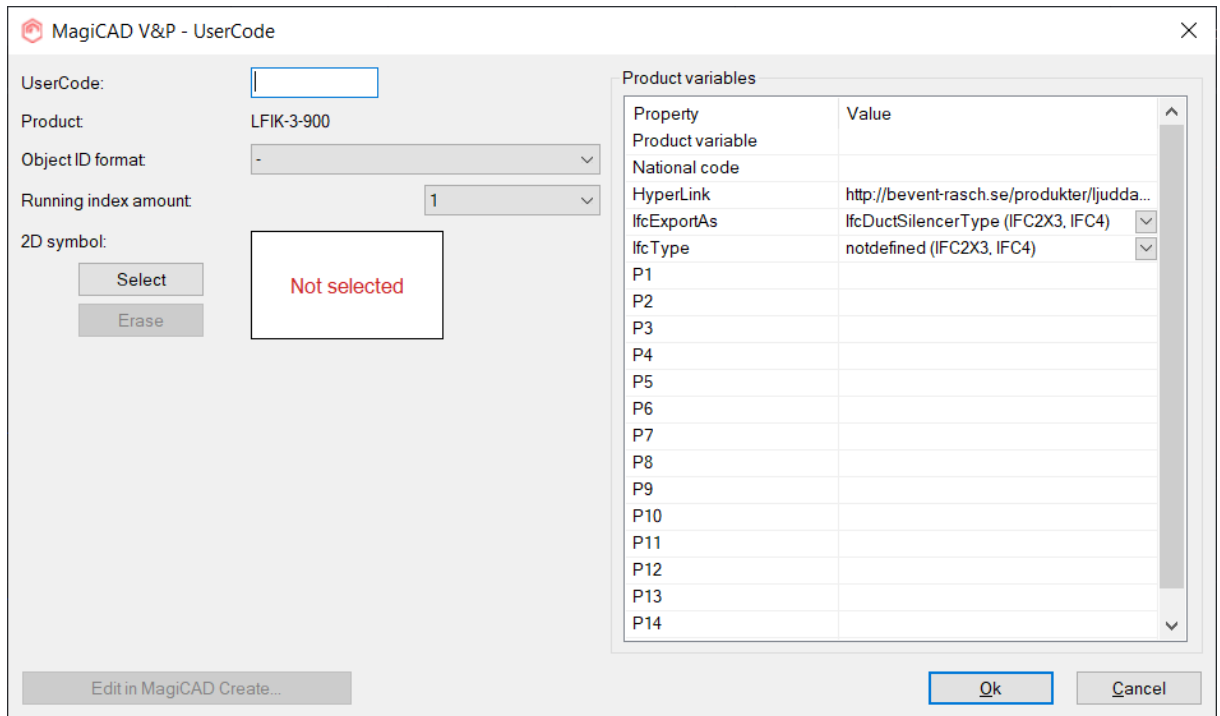
Type approved cleanable surface finish Protec

Available with inspection hatch

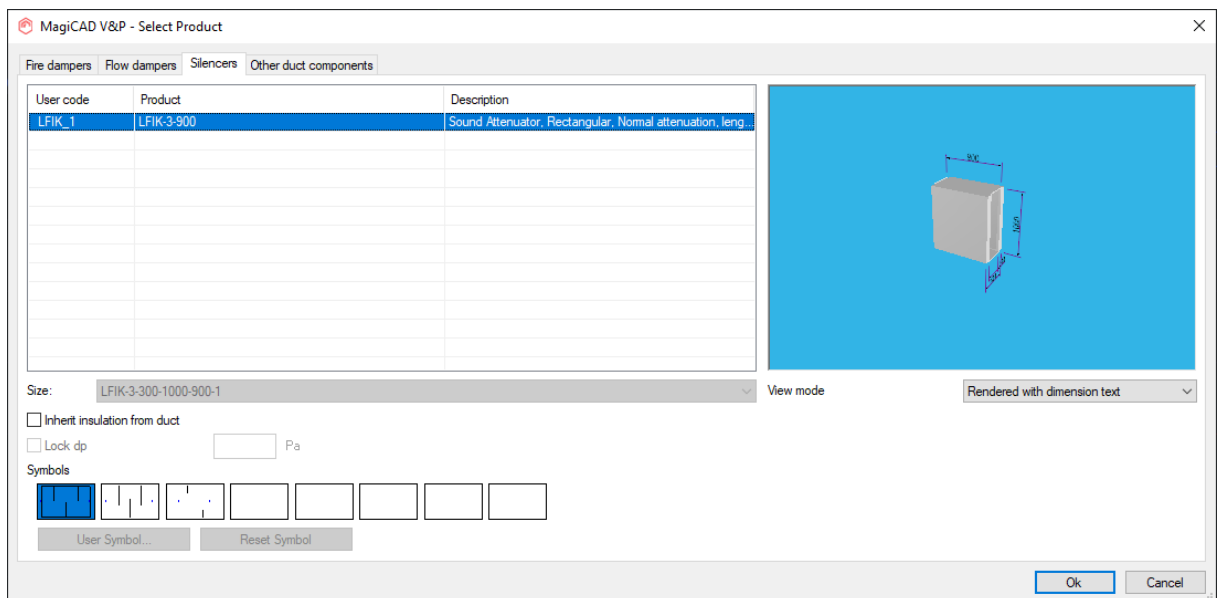
Can be manufactured in many special variants

Available in MagiCAD

6. From product view click Import to MagiCAD -button in order to insert the silencer into MagiCAD project. Once the button is clicked, Dimensio window is closed and MagiCAD User Code dialog is loaded:



- Proceed by entering the user code and optionally choosing the 2D symbol for the silencer. Once ready, click OK -button. MagiCAD Silencer dialog is opened, and selected product is active in the view, proceed by clicking the OK -button.



- Silencer insert operation is started, place the product to the duct that you selected at the beginning of the command:

