



Bevent Rasch

MagiCAD plugin for BricsCAD – User guide

28/11/2024

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1 General

About this document

This document contains instructions on using Bevent-Rasch MagiCAD for BricsCAD 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.

Installing the software

Required third-party software

Bevent-Rasch MagiCAD plugin supports the following BricsCAD and MagiCAD versions:

- BricsCAD V24
 - MagiCAD 2024 UR-1
 - MagiCAD 2024 UR-2
 - MagiCAD 2025
 - MagiCAD 2025 UR-1
- BricsCAD V25
 - MagiCAD 2025 UR-1

Before installation

1. Workstation administrator privileges are recommended for installation.
2. Notice if you have several BricsCAD versions on your workstation. Before you run the plugin installer, start MagiCAD to make sure that the plugin installs on the same BricsCAD platform version where MagiCAD is installed. When using MagiCAD plugin manager, the plugin is installed on the currently active BricsCAD version.

Installation

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

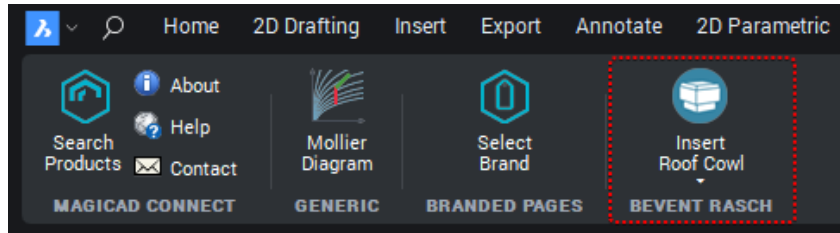
<https://portal.magicad.com/Download/ProductSearch?searchStr=Bevent-Rasch&categoryId=3>

2. Run the installer on your workstation.

Starting the program

The plugin is automatically loaded and is ready to be used once MagiCAD 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 MagiCAD / BricsCAD.

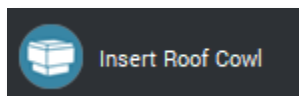
Bevent-Rasch MagiCAD plugin ribbon panel can be found from MagiCAD Connect tab:



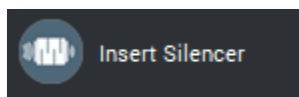
2 Functions

Bevent-Rasch plugin contains two operations:

- Insert Roof Cowl



- Insert Silencer



Insert Roof Cowl operation

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

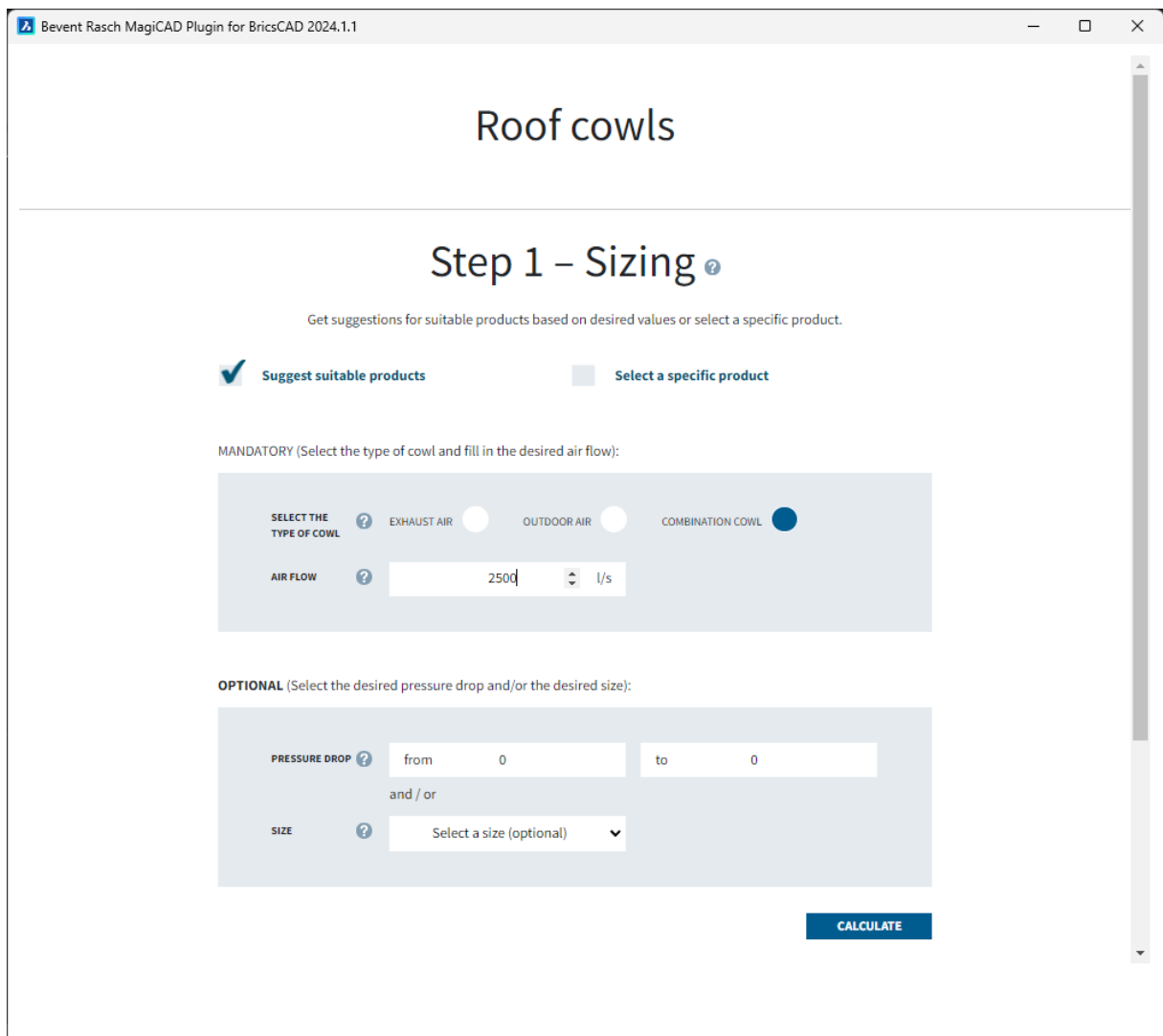
The plugin also includes support for insertion of Bevent-Rach combination roof cowls which means that the product will be attached in exhaust and outdoor systems. The basic workflow in plugin for inserting the different types of roof cowls and inlets always the same.

Detailed combination cowl and inlet insert operation in MagiCAD for BricsCAD

Follow these steps to insert combination roof cowl from Dimensio selection tool to BricsCAD drawing:

1. Click the “Insert Roof Cowl” button from the Bevent-Rasch panel. Once the operation is started the plugin opens the Dimensio selection tool.

Proceed by selecting the type of the cowl (combination cowl) and enter the required airflow and other specific 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 a list of suitable products.



Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

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 ? l/s

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

PRESSURE DROP ? from to

and / or

SIZE ?


- Proceed by choosing the product variant and click the select button. From select button Dimensio shows the detail product view.

Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

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



Low pressure drop, available in stock in the most common sizes

DELTA-KH

- Sizes for flows from 100 l/s to 15000 l/s
- Design similar to exhaust air cowl DELTA-AH and combination cowl DELTA-KH
- Fully rain protected intake
- from 100 l/s to 15000 l/s Design similar to exhaust air cowl DELTA-AH and combination cowl DELTA-KH. Fully rain protected intake. Integrated lifting points
- Available in MagiCAD

(Exhaust air) Size **600** gives pressure drop **119 Pa** at **2500 l/s** Exhaust air velocity **8,4 m/s**
Sound power level: **62 dB(A)** **SELECT**

(Outdoor air) Size **600** gives pressure drop **73 Pa** at **2500 l/s**

(Exhaust air) Size **800** gives pressure drop **47 Pa** at **2500 l/s** Exhaust air velocity **5,6 m/s**
Sound power level: **49 dB(A)** **SELECT**

(Outdoor air) Size **800** gives pressure drop **38 Pa** at **2500 l/s**

(Exhaust air) Size **1000** gives pressure drop **22 Pa** at **2500 l/s** Exhaust air velocity **3,8 m/s**
Sound power level: **43 dB(A)** **SELECT**

(Outdoor air) Size **1000** gives pressure drop **20 Pa** at **2500 l/s**

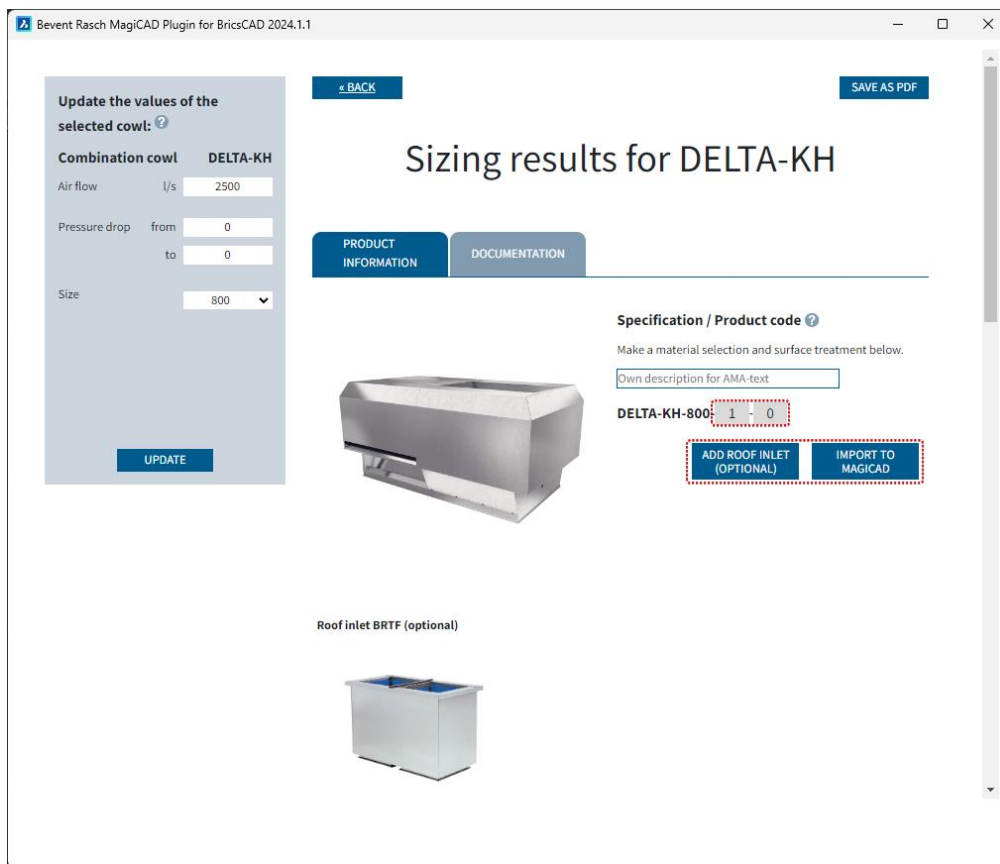
(Exhaust air) Size **1200** gives pressure drop **8 Pa** at **2500 l/s** Exhaust air velocity **3 m/s**
Sound power level: **38 dB(A)** **SELECT**

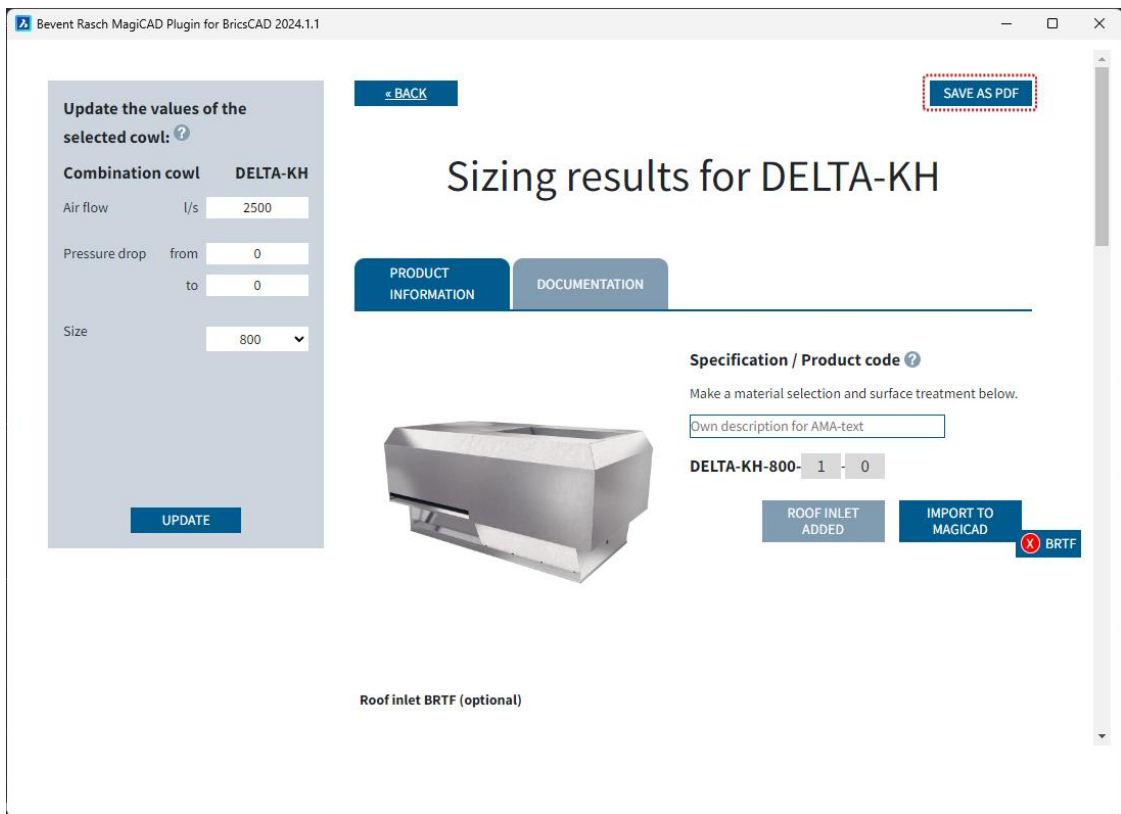
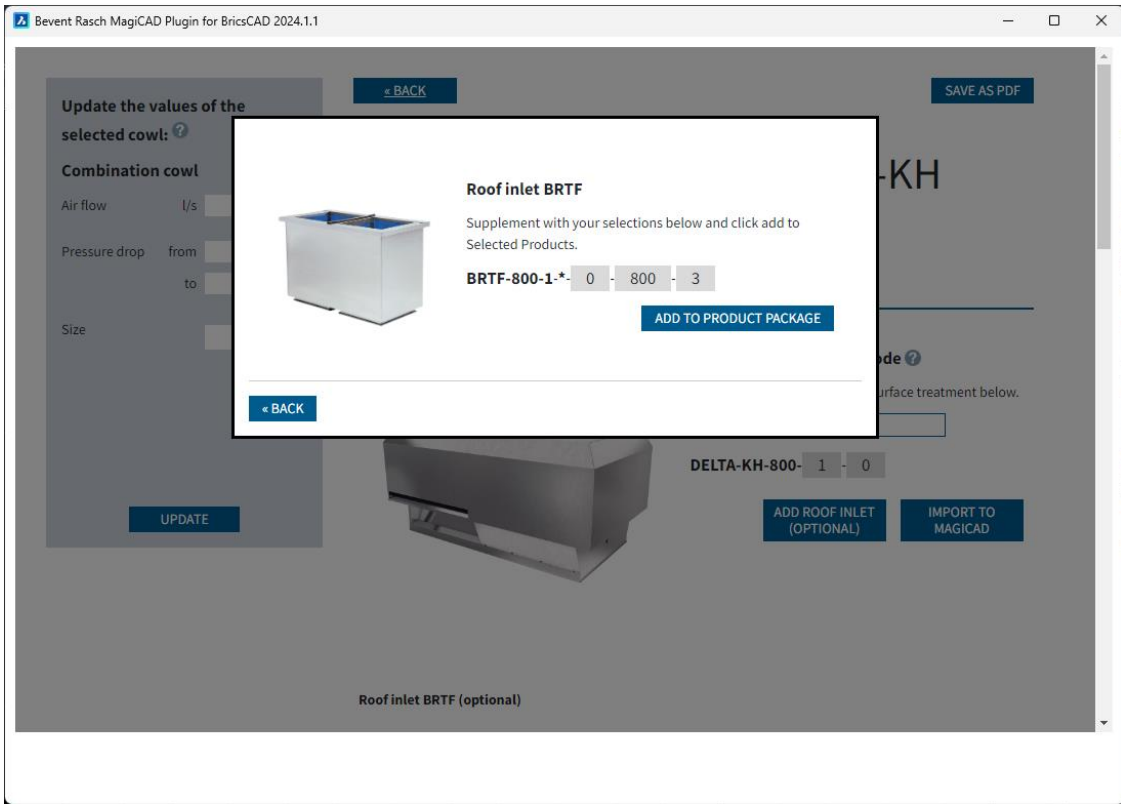
(Outdoor air) Size **1200** gives pressure drop **6 Pa** at **2500 l/s**

- In detail product view, it's still possible to make the final changes to the product variant. Once all the changes 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, user adds the roof inlet to the list of products to be imported in to MagiCAD and the Roof inlet view is closed.

The final configured product can be also saved as PDF file. The save as pdf file button will generate the document and it's opened in the default PDF viewer application.

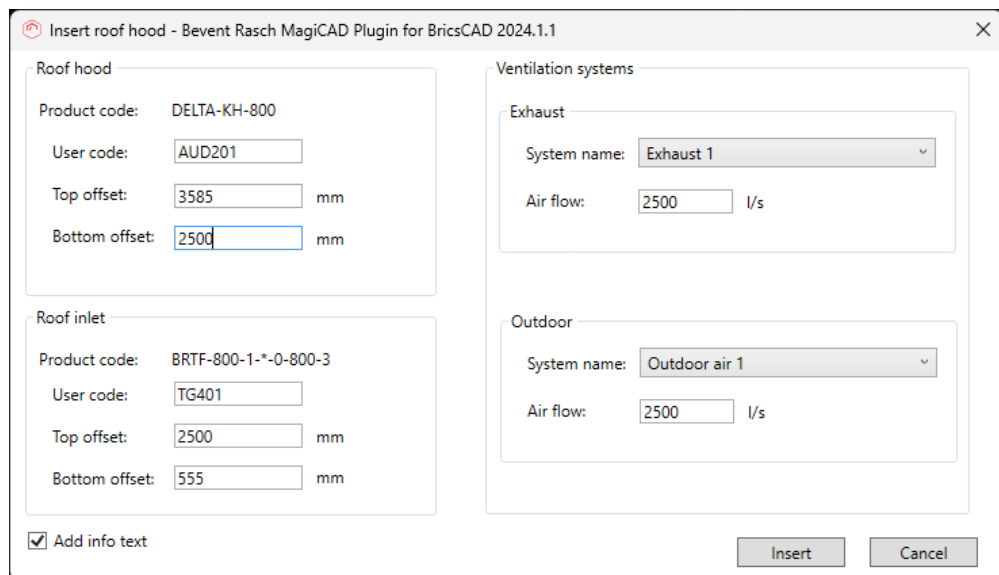




4. Import to MagiCAD button starts the insert operation in BricsCAD. Dimensio view is closed and Insert roof hood view is shown.

In insert view the following fields must be filled:

- **User code:** MagiCAD specific user code of the roof cowl is entered here.
- **Offsets of cowl and inlet:** 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 system name:** MagiCAD exhaust system for the roof cowl. Disabled if the imported cowl is connected only to outdoor system.
- **Exhaust system airflow:** Airflow of the exhaust system 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.
- **Outdoor system name:** MagiCAD outdoor system for the roof cowl. Disabled if the imported cowl is connected only to exhaust system. For combination cowls both systems are enabled.
- **Outdoor system airflow:** Airflow of the outdoor side is entered here. Disabled if the imported cowl is connected only to exhaust system. By default the field is filled with the search criteria value filled in Dimensio.
- **Roof inlet User Code:** MagiCAD specific user code for the roof inlet is entered here.
- **Add info text:** Product specific info text will be generated to drawing.



Insert roof hood - Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

Section	Field	Value	Unit
Roof hood	Product code:	DELTA-KH-800	
	User code:	AUD201	
	Top offset:	3585	mm
	Bottom offset:	2500	mm
Roof inlet	Product code:	BRTF-800-1-*0-800-3	
	User code:	TG401	
	Top offset:	2500	mm
	Bottom offset:	555	mm
Exhaust	System name:	Exhaust 1	
	Air flow:	2500	l/s
Outdoor	System name:	Outdoor air 1	
	Air flow:	2500	l/s

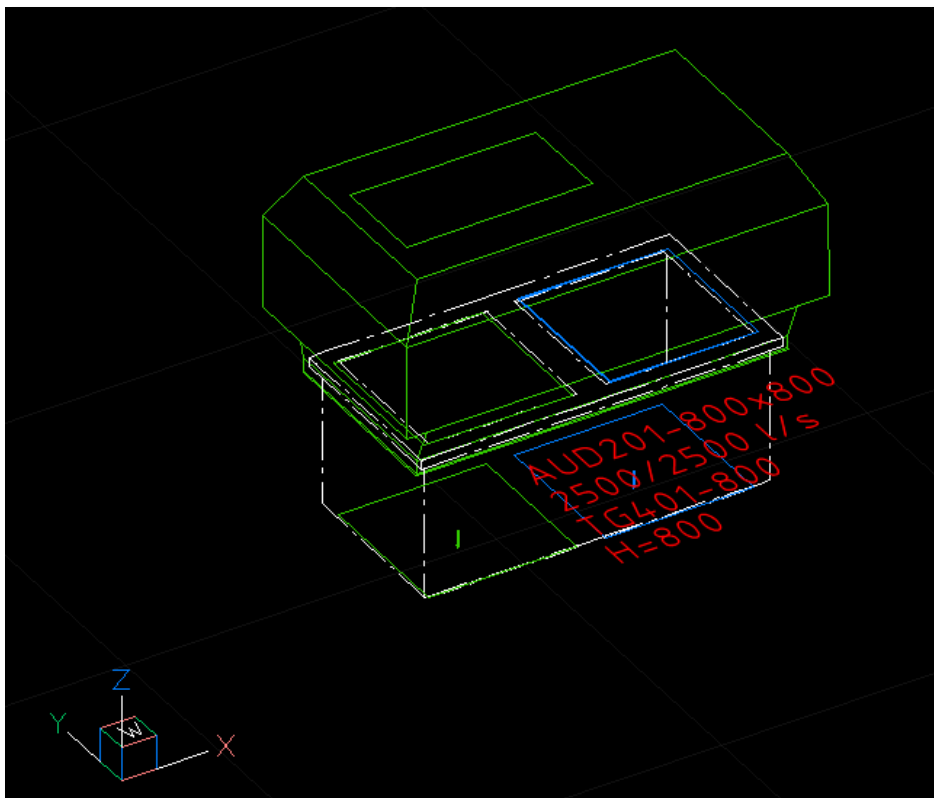
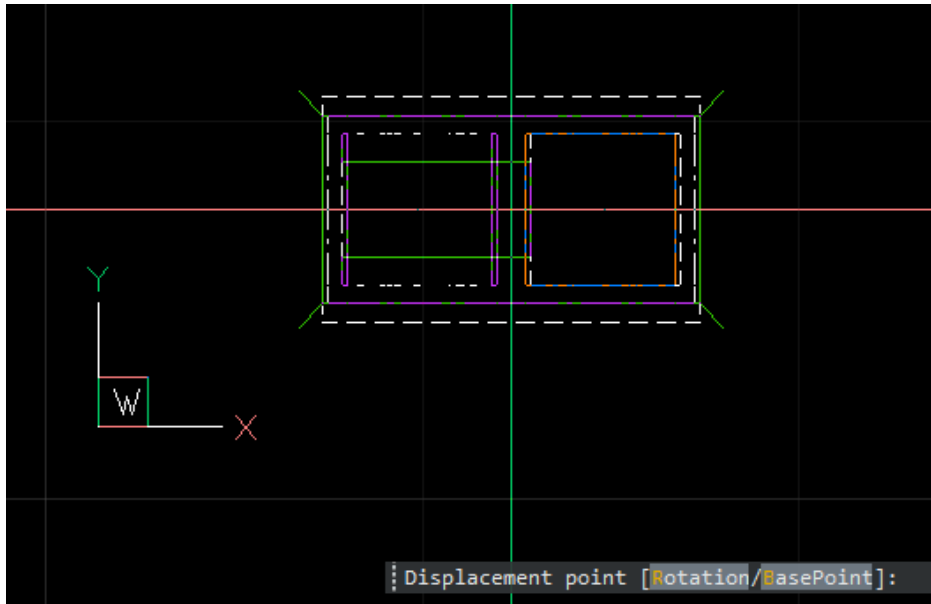
Add info text

Insert Cancel

- 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) in to drawing.

After placement is done, it's possible to rotate the product.

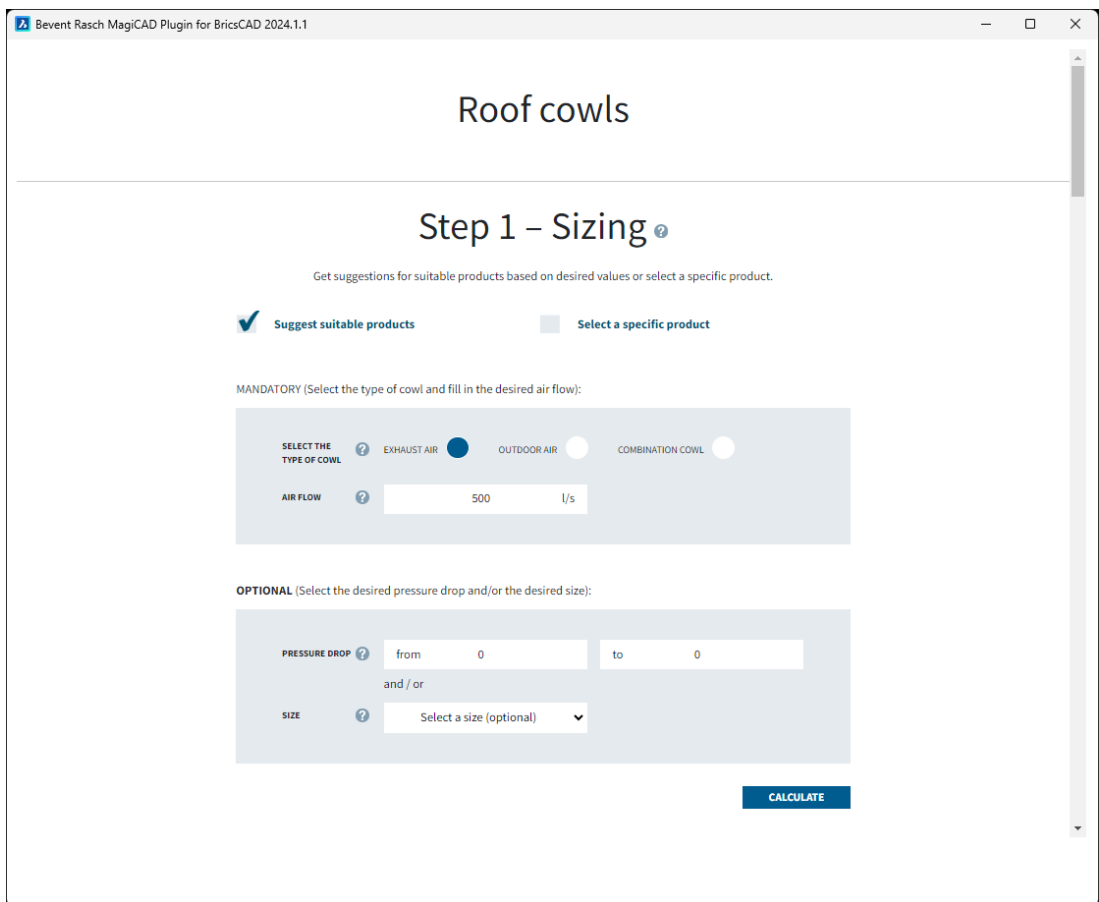
With combination cowls the plugin creates an additional connector for the outdoor system.



Detailed exhaust or outdoor cowl and inlet insert operation in MagiCAD for BricsCAD

1. Click the “Insert Roof Cowl” button from the Bevent-Rasch panel. Once the operation is started the plugin opens the Dimensio selection tool.

Proceed by selecting the type of the cowl (exhaust or outdoor) and enter the required airflow and other specific 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 a list of suitable products.



The screenshot shows a web-based interface titled "Roof cowls" with a sub-header "Step 1 - Sizing". Below the header, there is a note: "Get suggestions for suitable products based on desired values or select a specific product." Two radio buttons are present: "Suggest suitable products" (checked) and "Select a specific product".

The "MANDATORY" section is labeled "(Select the type of cowl and fill in the desired air flow):" and contains:

- "SELECT THE TYPE OF COWL" with three radio buttons: "EXHAUST AIR" (selected), "OUTDOOR AIR", and "COMBINATION COWL".
- "AIR FLOW" with a text input field containing "500" and a unit dropdown set to "l/s".

The "OPTIONAL" section is labeled "(Select the desired pressure drop and/or the desired size):" and contains:

- "PRESSURE DROP" with two text input fields: "from 0" and "to 0".
- "and / or" text.
- "SIZE" with a dropdown menu set to "Select a size (optional)".

A blue "CALCULATE" button is located at the bottom right of the form area.

- Proceed by choosing the product variant and click the select button. From select button Dimensio shows the detail product view.


Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

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



Low pressure drop, available in stock in the most common sizes

DELTA-AH

- 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

[SELECT](#)

Size **300** gives pressure drop **43 Pa** at **500 l/s** Exhaust air velocity **4,6 m/s**
Sound power level: **47 dB(A)**


[SELECT](#)

Size **400** gives pressure drop **21 Pa** at **500 l/s** Exhaust air velocity **3,2 m/s**
Sound power level: **39 dB(A)**

[SELECT](#)

Size 500 gives pressure drop 10 Pa at 500 l/s
Exhaust air velocity 2,3 m/s
Sound power level: 34 dB(A)

[SELECT](#)



Traditional chimney appearance

BRSF

Rectangular roof cowl for use in comfort and industrial facilities. The design resembles a traditional chimney. Used for high-speed exhaust air.

- Sizes from 200 mm to 2000 mm (For sizing see datasheet or Dimensio)
- Design similar to exhaust air cowl BRSK and outdoor air hood BRSI
- Internal water deflector
- Suitable for roof inlet BRTG
- Hot-dip galvanized sheet steel as standard
- For corrosivity class C4 the cowl is

Size 300 gives pressure drop 206 Pa at 500 l/s
Exhaust air velocity 11 m/s
Sound power level: 50 dB(A)

[SELECT](#)

Size **400** gives pressure drop **59 Pa** at **500 l/s** Exhaust air velocity **6,2 m/s**
Sound power level: **38 dB(A)**

[SELECT](#)

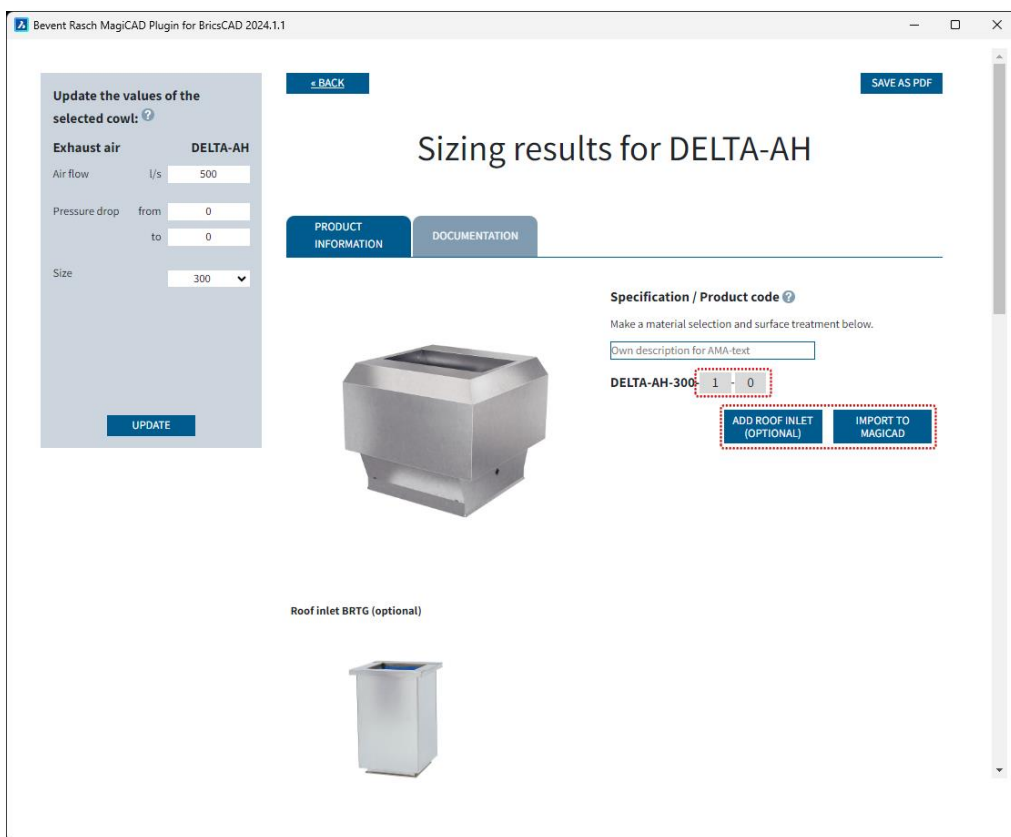
Size 500 gives pressure drop 19 Pa at 500 l/s
Exhaust air velocity 4 m/s
Sound power level: 38 dB(A)

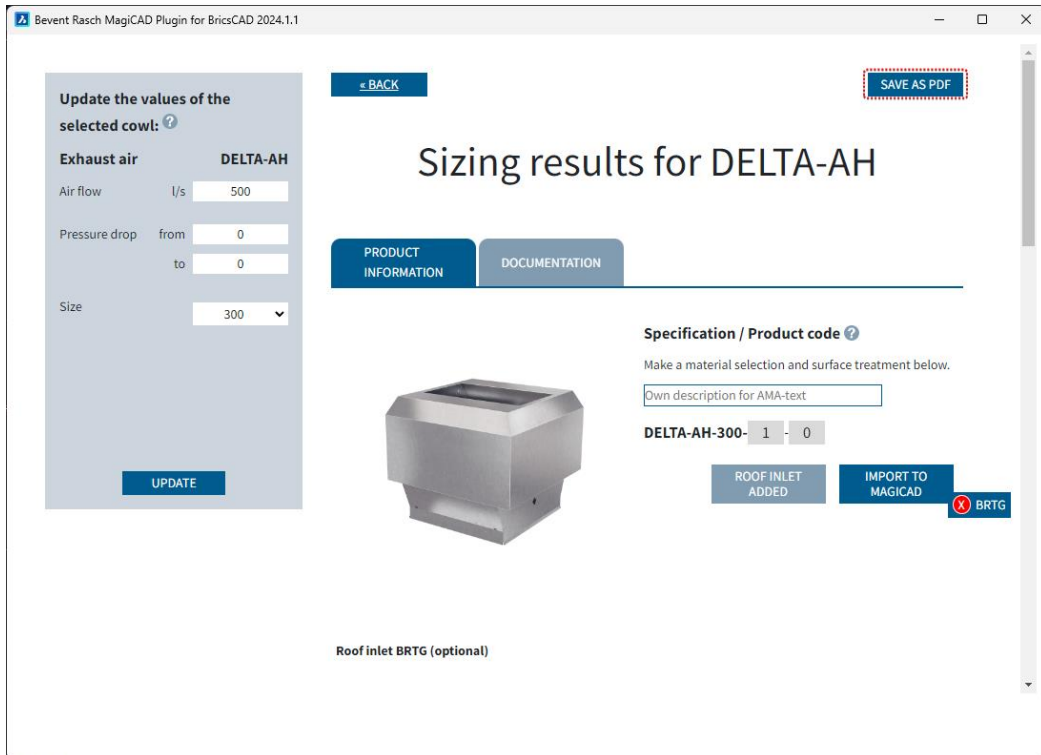
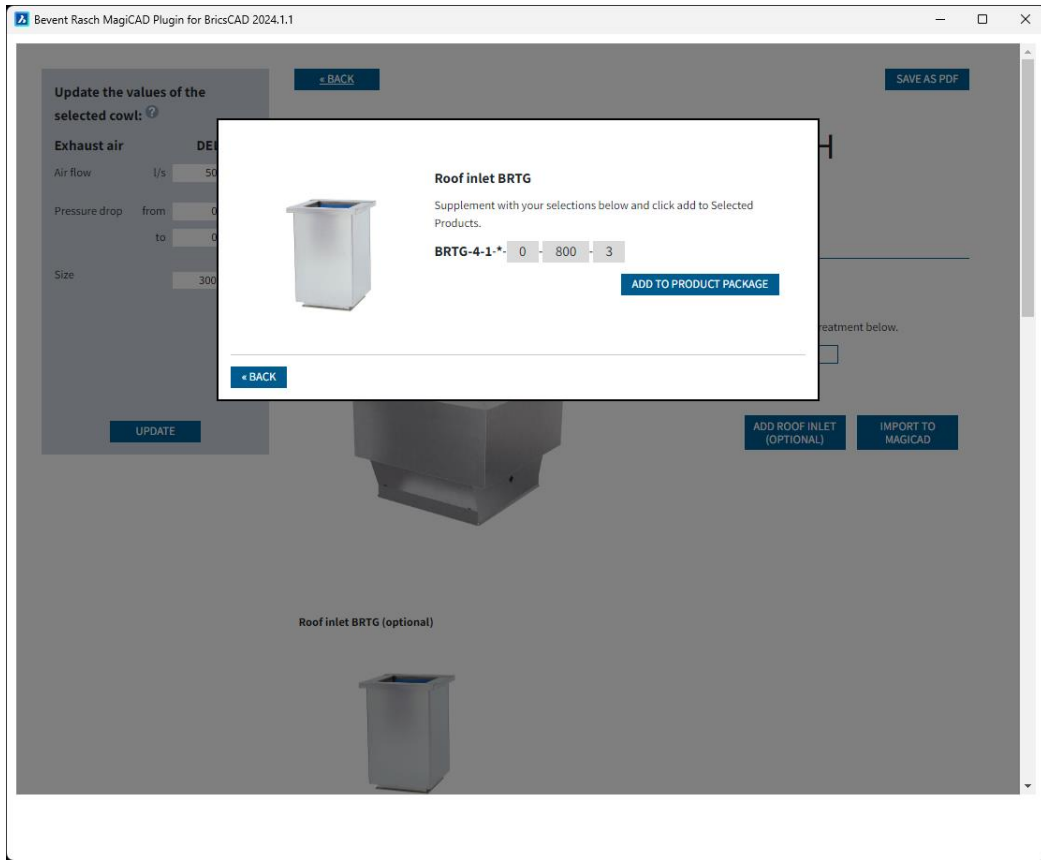
[SELECT](#)

- In detail product view, it's still possible to make the final changes to the product variant. Once the changes 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, user adds the roof inlet to the list of products to be imported in to MagiCAD and the Roof inlet view is closed.

The final configured product can be also saved as PDF file. The save as pdf file button will generate the document and it's opened in the default PDF viewer application.

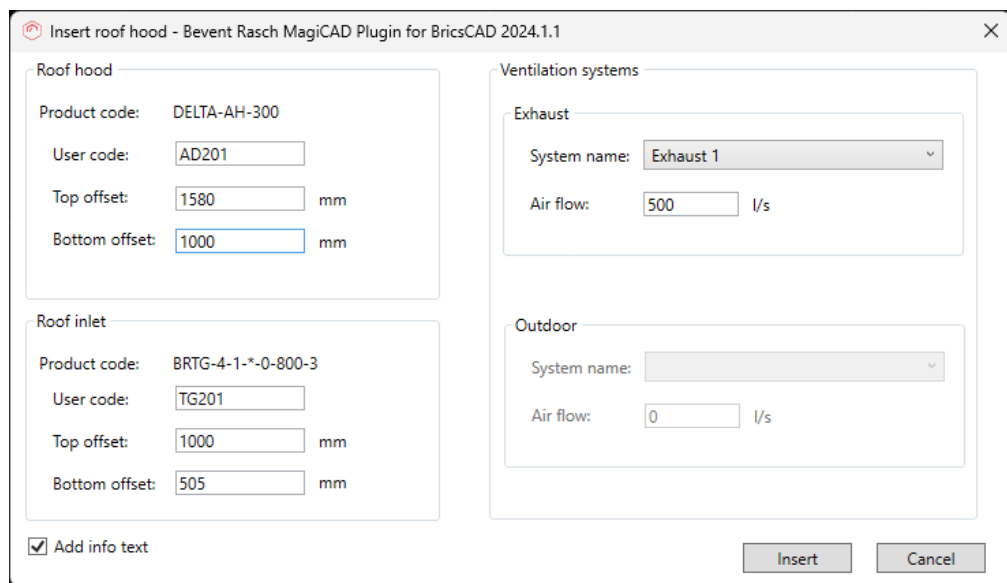




4. Import to MagiCAD button starts the insert operation in BricsCAD. Dimensio view is closed and Insert roof hood view is shown.

In insert view following fields must be filled:

- **User code:** MagiCAD specific user code of the roof cowl is entered here.
- **Offsets of cowl and inlet:** 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 system name:** MagiCAD exhaust system for the roof cowl. Disabled if the imported cowl is connected only to outdoor system.
- **Exhaust system airflow:** Airflow of the exhaust system 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.
- **Roof inlet User Code:** MagiCAD specific user code for the roof inlet is entered here.
- **Add info text:** Product specific info text will be generated to drawing.



Insert roof hood - Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

Roof hood

Product code: DELTA-AH-300

User code:

Top offset: mm

Bottom offset: mm

Roof inlet

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

User code:

Top offset: mm

Bottom offset: mm

Ventilation systems

Exhaust

System name:

Air flow: l/s

Outdoor

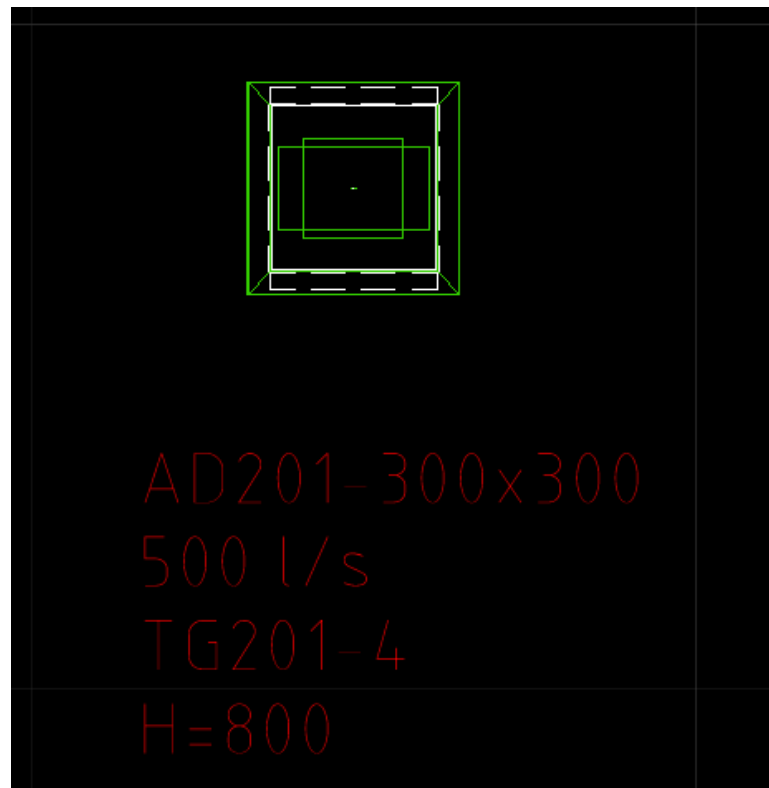
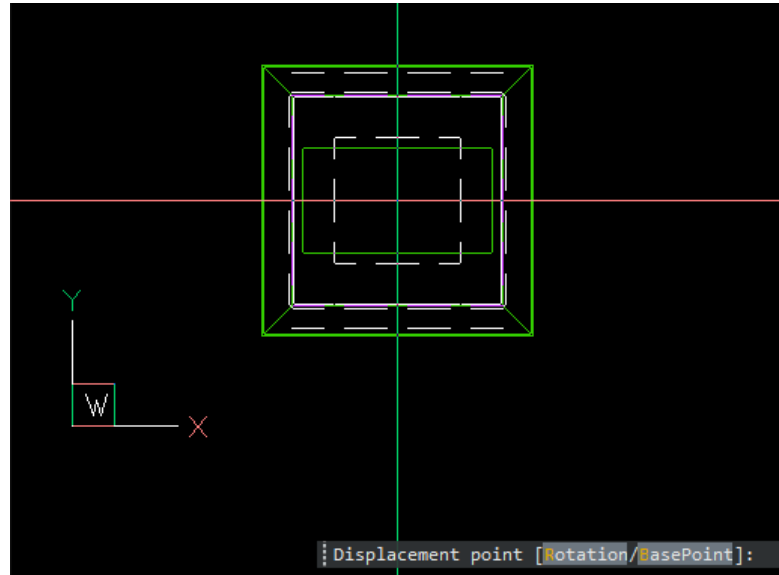
System name:

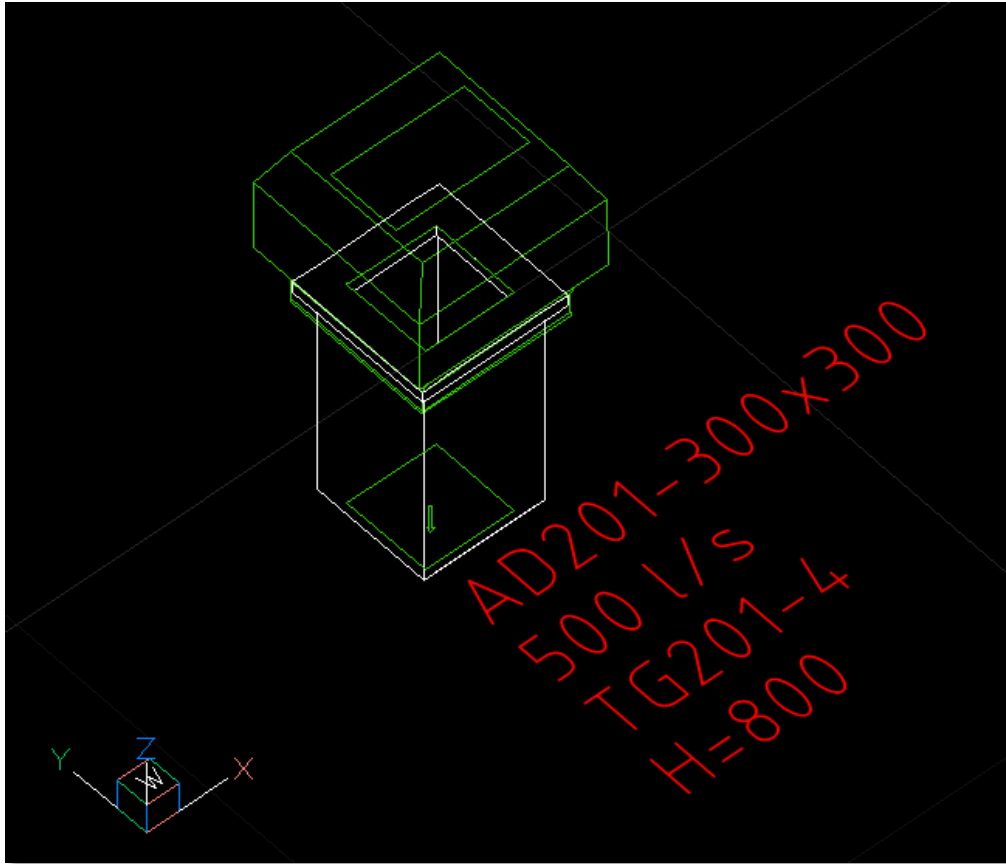
Air flow: l/s

Add info text

5. 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) in to drawing.

After placement is done, it's possible to rotate the product.





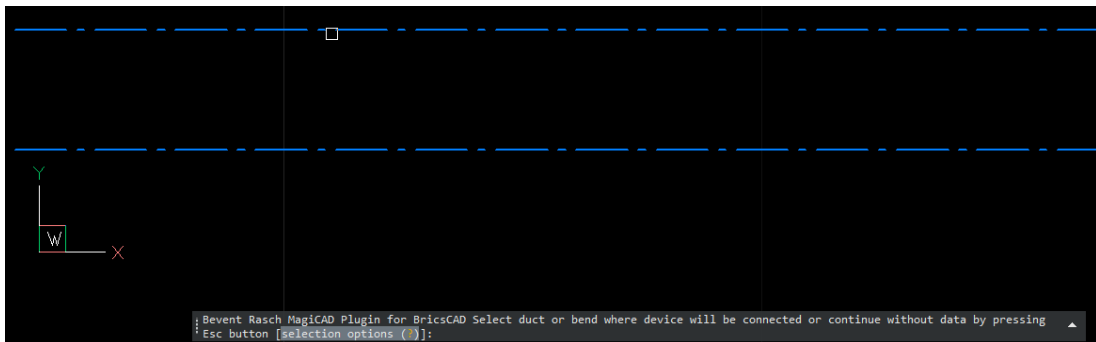
Insert silencer operation

This command opens Dimensio selection tool allowing user to filter and select suitable silencers and finally insert the selected silencer into BricsCAD drawing and MagiCAD project.

Detailed insert silencer operation in MagiCAD for BricsCAD

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

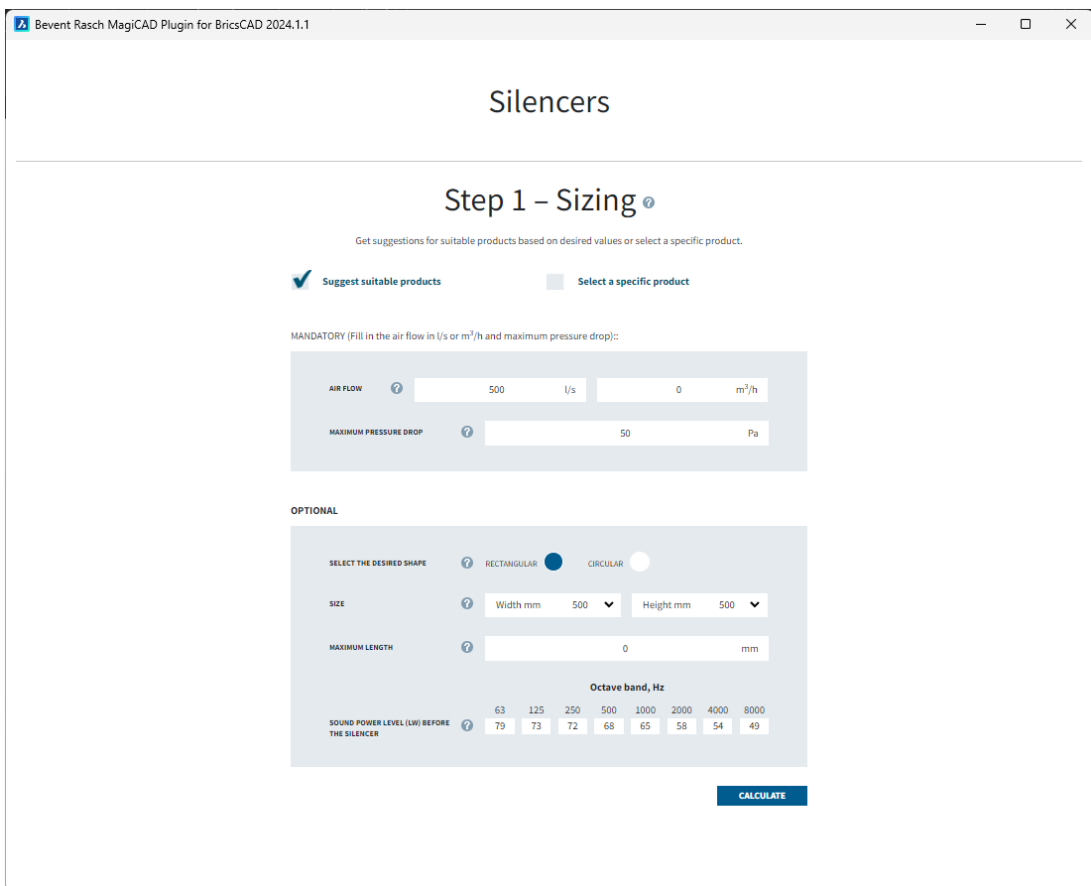
1. Click the “Insert Silencer” button from Bevent-Rasch ribbon panel located in the MagiCAD Connect tab.
2. Plugin asks user to selected the duct where to connect the silencer to (this step can be skipped by pressing the ESC button).



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

Notice also that if the flow summation, balancing and sound calculations have not been done for the ductwork in MagiCAD, the airflow and sound power levels are not available. If you skip selecting the duct, the sound power level values 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.



Silencers

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 (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
 Width mm
 Height mm

MAXIMUM LENGTH mm

	Octave band, Hz							
	63	125	250	500	1000	2000	4000	8000
SOUND POWER LEVEL (LW) BEFORE THE SILENCER	79	73	72	68	65	58	54	49

CALCULATE

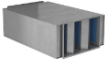
- Proceed by selecting the product variant you want to use. When Select -button is clicked Dimensio loads the detail product view.

Bevent Rasch MagiCAD Plugin for BricsCAD 2024.1.1

Step 2 – Suitable products

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

is **within** the selected maximum pressure drop
is **not within** the selected maximum pressure drop



Standard straight silencer with indented duct connection

LFIK
Rectangular straight silencer 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

Typ 1	Pressure drop: 25 Pa	Self-generated noise: 20 dB										
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)		
LFIK-1-500-500-600	-7	-14	-20	-26	-30	-30	-26	-20	72	50	SELECT	
LFIK-1-500-500-900	-8	-16	-25	-36	-40	-39	-31	-25	71	47	SELECT	
LFIK-1-500-500-1200	-8	-18	-30	-41	-50	-50	-40	-28	71	46	SELECT	
LFIK-1-500-500-1500	-10	-20	-35	-49	-50	-50	-34		69	44	SELECT	
LFIK-1-500-500-1800	-13	-23	-40	-50	-50	-50	-40		66	41	SELECT	
Typ 3	Pressure drop: 10 Pa	Self-generated noise: 20 dB										
	63	125	250	500	1000	2000	4000	8000	dB	dB(A)		
LFIK-3-500-500-600	-4	-7	-10	-16	-21	-17	-12	-9	76	57	SELECT	
LFIK-3-500-500-900	-5	-9	-15	-23	-28	-23	-17	-11	74	54	SELECT	

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

The final configured product can be also saved as PDF file. The save as pdf file button will generate the document and it's opened in the default PDF viewer application.

Click the Import to MagiCAD button in order to insert the silencer into MagiCAD project and BricsCAD drawing. Once the button is clicked, Dimensio view is closed and MagiCAD UserCode dialog is opened.

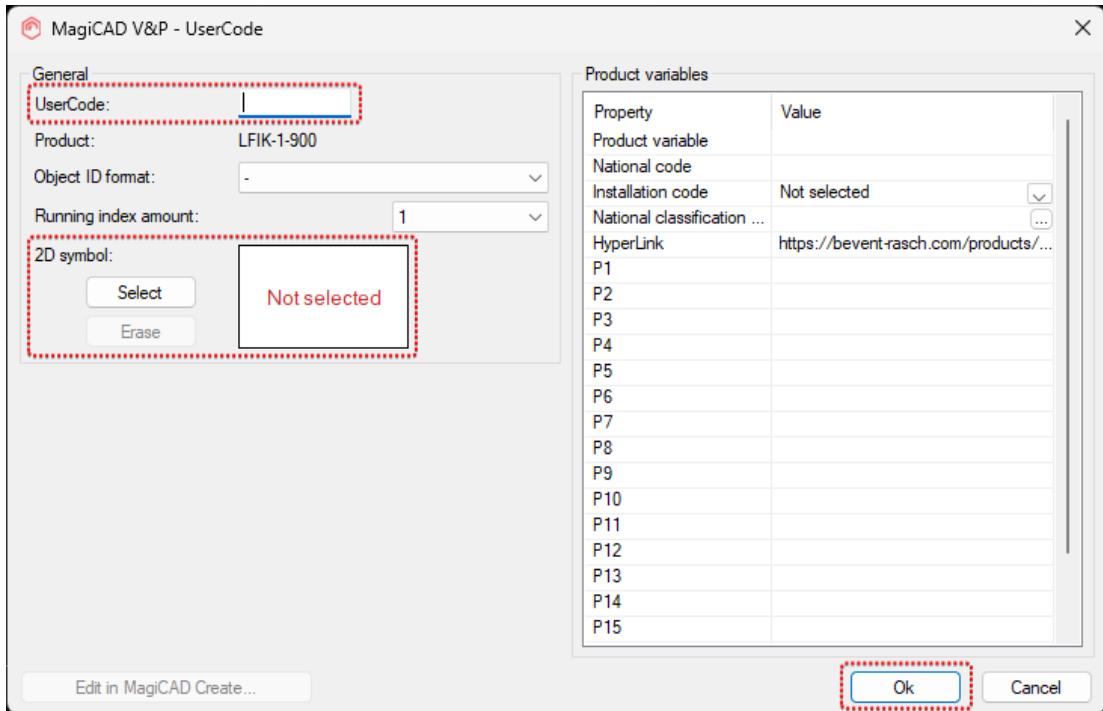
The screenshot shows the 'Sizing results for LFIK' interface. On the left, there is a configuration panel for the selected silencer (LFIK) with the following settings: Type: Typ 1, Air flow: 500 l/s, 0 m³/h, Max. pressure drop: 50 Pa, Size: Width 500, Height 500, Length 900. A 3D model of the silencer is shown with dimensions: 900 (length), 500 (width), and 500 (height). A 'Possible inspection hatch' is indicated on the top surface. The product code is LFIK-1-500-500-900. Below the model, there is a table for sound power level (Lw) before the silencer and a table for attenuation. The sound power level table shows values for octave bands from 63 Hz to 8000 Hz, with a total of 81 dB. The attenuation table shows values for octave bands from 63 Hz to 8000 Hz, with a total of 71 dB. The pressure drop is 25 Pa and self-generated noise is 20 dB.

		OCTAVE BAND, Hz									
		63	125	250	500	1000	2000	4000	8000	dB	dB(A)
Sound power level (Lw) before the silencer		79	73	72	68	65	58	54	49	81	70

		ATTENUATION								
		63	125	250	500	1000	2000	4000	8000	dB
Type	Typ1									
Length	900	-8	-16	-25	-36	-40	-39	-31	-25	

		63	125	250	500	1000	2000	4000	8000	dB
Sound power level after the silencer		71	57	47	32	25	19	23	24	71

- Proceed by entering the user code and optionally choosing the 2D symbol for the silencer. Once ready, click OK button.



The dialog box is titled "MagiCAD V&P - UserCode". It is divided into two main sections: "General" and "Product variables".

General section:

- UserCode:** A text input field containing a vertical cursor, highlighted with a red dashed box.
- Product:** A dropdown menu showing "LFIK-1-900".
- Object ID format:** A dropdown menu showing "-".
- Running index amount:** A dropdown menu showing "1".
- 2D symbol:** A section containing a "Select" button, an "Erase" button, and a box labeled "Not selected", all highlighted with a red dashed box.

Product variables section:

Property	Value
Product variable	
National code	
Installation code	Not selected
National classification
HyperLink	https://bevent-rasch.com/products/...
P1	
P2	
P3	
P4	
P5	
P6	
P7	
P8	
P9	
P10	
P11	
P12	
P13	
P14	
P15	

At the bottom of the dialog, there is an "Edit in MagiCAD Create..." button on the left, and "Ok" and "Cancel" buttons on the right. The "Ok" button is highlighted with a red dashed box.

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

