



**Making an indoor project calculation
with Acoustic Design Analysis**



Welcome Test user

Click Analysis to create a new project

Products



Select and configure noise control product without conducting a duct analysis.

Analysis



Analyze a duct system for noise levels in occupied spaces.

Projects



Create or open a project in your account for duct analysis or product selection.

User settings
Like language

Recent Projects

Project Name	Type	Revision	Created	Last Edited ▾
--------------	------	----------	---------	---------------

Need help?



Contact your local Swegon representative for assistance.
<https://www.swegon.com/contact/>

TU

Select project...

Projects

Search lastEdited Anytime showRevisions No ownedBy Me

Klick "New project"



New Project

Select project...

Projects

Search lastEdited Anytime

New Project

Project Name

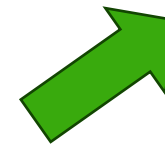
AHU project 123

AHU Silencer

Cancel

Create

Give it a name
and click "Create"



New Project

Cancel

Analysis

Views

[Analysis](#)

[Filter](#)

Libraries

[Library](#)

[Receivers](#)

Product Configurators

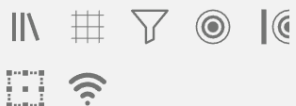
[Swegon Silencers](#)

Calculation Modules

[Rectangular Breakout In-Line](#)

[Circular Breakout In-Line](#)

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



[AHU project 123](#)

Path (1)



[Add Path](#)

	dBA	63	125	250	500	1k	2k	4k	8k
Frequency									
Total	7	-	-	-	-	-	-	-	-
Required Insertion Loss	-	-	-	-	-	-	-	-	-
Receiver: default (dBA)	7	-	-	-	-	-	-	-	-

This will open the work space.
Start with clicking Library to open it.

Library

Analysis

Views

Analysis

Filter

Libraries

Libraries

Reception

Product Categories

Swegon

Calculations

Rectangular

Circular

Library Elements

Library Elements

Straight Duct

Flexible Duct

Elbow

Branching

Category

Project Organization

- Air Terminal
- Ceilings
- Doors
- Electrical Equipment
- Floors
- Mechanical Equipment
- Air Conditioner
- Air Handling Unit
- Boiler
- Chiller
- Coil
- Condensing Unit
- Cooling Tower
- Damper
- Energy Recovery Ventilator
- Fan
- Fan Coil Unit
- Filter
- Heat Pumps
- Pump
- Rooftop Unit
- VAV Box
- Roofs
- User Defined
- Walls
- Windows

Properties

New Folder New Element

Close

10

Adding a new Air handling unit in the Library, choose "Mechanical Equipment" then "Air Handling Unit" and click "New Element"

Library

x

TU

Category

Project Organization

- Air Terminal
- Ceilings
- Doors
- Electrical Equipment
- Floors
- Mechanical Equipment
 - Air Conditioner
 - Air Handling Unit
 - AHU 123
 - Boiler
 - Chiller
 - Coil
 - Condensing Unit
 - Cooling Tower
 - Damper
 - Energy Recovery Ventilator
 - Fan
 - Fan Coil Unit
 - Filter
 - Heat Pumps
 - Pump
 - Rooftop Unit
 - VAV Box
- Roofs
- User Defined
- Walls
- Windows

Properties

Name

AHU 123

Project Tag

AHU 123

Dimensions

Height Length

Width

Add Parameter

Identity Data

Area Served Location

Manufacturer Model

URL

Add Parameter

Mechanical - Loads

Total Cooling Capacity

Write a name and a Project Tag

Duplicate Element **Delete Element** **Copy to Organization**

Close

Library

- Boiler
- Chiller
- Coil
- Condensing Unit
- Cooling Tower
- Damper
- Energy Recovery Ventilator
- Fan
- Fan Coil Unit
- Filter
- Heat Pumps
- Pump
- Rooftop Unit
- VAV Box
- Roofs
- User Defined
- Walls
- Windows

Height Length

Width

Add Parameter

Identity Data

Area Served Location

Manufacturer Model

URL

Add Parameter

Mechanical - Loads

Total Cooling Capacity

Add Group Add Parameter

Acoustic data

Data	Metric	Dist (m)	Airflow (l/s)	63	125	250	500	1k	2k	4k	8k
Supply	Sound R _e		3000	85	83	82	82	82	78	78	76
Extract	Sound R _e		3000	82	81	80	80	80	76	75	74

Add Data

Scroll down to Acoustic data and fill in Name, Airflow and Sound power level

End with clicking Save Changes

New Folder New Element Save Changes

Close

Analysis

Views

[Analysis](#)

[Filter](#)

Libraries

[Library](#)

[Receivers](#)

Product Configurators

[Swegon Silencers](#)

Calculation Modules

[Rectangular Breakout In-Line](#)

[Circular Breakout In-Line](#)

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



AHU project 123

Path (1)									
	dBA	63	125	250	500	1k	2k	4k	8k
Frequency									
Total	7	-	-	-	-	-	-	-	-
Required Insertion Loss	-	-	-	-	-	-	-	-	-
Receiver: default (dBA)	7	-	-	-	-	-	-	-	-

Move to head of path

[Add Path](#)

Drag and drop the "Noise source" symbol inside the dashed square

Analysis

Views

Analysis

Filter

Libraries

Library

Receivers

Product Configurators

Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

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Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



AHU project

Path (1)

Frequency
Total
Required Insert
Receiver: default

Noise Source
No data set selected

Noise Source

Properties

Category

Mechanical Equipment/Air Handling Unit

Element

AHU 123

Data Set

Supply

Airflow and Velocity

Override Airflow & Velocity

Airflow (l/s)

3000

Velocity (m/s)

0

Acoustic Data

Project Tag

Data Set

Details

Noise sources (from the Library).

[Add Attachment](#)

Choose your Air Handling Unit and correct data set

And click Save

Previous Next Cancel Save

Analysis

Views

- [Analysis](#)
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Libraries

- [Library](#)
- [Receivers](#)

Product Configurators

- [Swegon Silencers](#)

Calculation Modules

- [Rectangular Breakout In-Line](#)
- [Circular Breakout In-Line](#)

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



AHU project 123

Path (1)

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	87	85	83	82	82	82	78	78	76
Required Insertion Loss	-	-	-	-	-	-	-	-	-
Receiver: default (dBA)	87	85	83	82	82	82	78	78	76
AHU 123 Supply	87	85	83	82	82	82	78	78	76

[Add Path](#)

Add your receiver by clicking "Receivers"

Receivers

Fill in name, Dimensions, Absorption and Receiver Criterias, and click Save.

Name

Receiver Properties

Name
Office Room 123

Receiver Type
Indoor

Length (m) Width (m) Height (m)
4 3 3

Notes

Room Absorption
Absorption Coefficients
Office room

63	125	250	500	1000	2000	4000	8000
0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

Receiver Criteria

Metric	Value
A	30 dB(A) (30)

Close New **Reset** Save



Icons

Straight Duct

Flexible Duct

Elbow

Branching

End Reflection

Noise Control

Duct Breakin/Breakout

Sound Transmission

Room Effect

Outdoor Noise

AHU project 123

Path (1)	dB	63	125	250	500	1k	2k	4k	8k
Frequency	dB	63	125	250	500	1k	2k	4k	8k
Total		87	85	83	82	82	82	78	76
Required Insertion Loss		-	-	-	-	-	-	-	-
Receiver: default (dBA)		87	85	83	82	82	78	78	76

[Add Path](#)

Move to head of path

	AHU 123	87	85	83	82	82	82	78	76
	Supply								

Branch →

Drag and drop the "Room Effect – Classic Field" symbol inside the dashed square

- Straight Duct
- Flexible Duct
- Elbow
- Branching
- End Reflection
- Noise Control
- Duct Breakin/ Breakout
- Sound Transmission
- Room Effect
- Outdoor Noise

AHU project

Path (1)

- Frequency Total
- Required Insert
- Receiver: defa
- AHU 123 Supply
- Room Effect - No receiver se

Room Effect - Classic Field

Choose your Receiver
Click Save

Edit properties Details

Receiver name
Office Room 123

Receiver Distance (m) 1.5 Air Outlets (Path) 1

Directivity Factor 2 *(You can read about directivity factors by clicking this link)*

Use Thompson Modification
 Use Room Constant

Airflow and Velocity

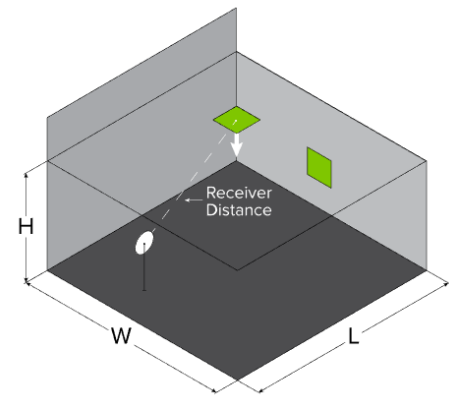
Override Airflow & Velocity

Airflow (l/s) 3000 Velocity (m/s) 0

Additional Resources
Calculation References
[2015 ASHRAE Applications Handbook, Chapter 48, Noise and Vibration Control](#)

[Add Attachment](#)

Previous Next Cancel Save



For a point source in an enclosed space, classical diffuse-field theory predicts that as the distance between the source and point of observation is increased, the sound pressure level initially decreases at the rate of 6 dB per doubling of distance. At some point, the reverberant sound field begins to dominate and the sound pressure level remains at a constant level.



Receivers

Product Configurators

Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



AHU project 123

Path (1) 📄 ✎ 🔗 🗑️ [Add Path](#)

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	83	81	79	78	78	78	74	74	72
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))	83	81	79	78	78	78	74	74	72
AHU 123 Supply	87	85	83	82	82	82	78	78	76
Room Effect - Classic Field Office Room 123	83	-4	-4	-4	-4	-4	-4	-4	-4

Build your duct system between the Noise Source and the Receiver by dragging and dropping elements from the Library Elements Quick Add

Calculation Modules

- Rectangular Breakout In-Line
- Circular Breakout In-Line

Library Element Quick Add

Straight Duct

Flexible Duct

Elbow

Branching

End Reflection

Noise Control

Duct Breakin/ Breakout

Sound Transmission

AHU project 123

Path (1)

	Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	58	53	53	53	54	54	50	50	48	
Required Insertion Loss	30	-	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))	58	53	53	53	54	54	50	50	48	

AHU 123 Supply	87	85	83	82	82	82	78	78	76	
Rectangular Duct 1600mm x 800mm x 3m	86	-2	-1	-1	-0	-0	-0	-0	-0	
Branch - Takeoff 1600mm x 800mm / 400mm x 400mm	77	-10	-10	-10	-10	-10	-10	-10	-10	
Rectangular Duct 400mm x 400mm x 3m	76	-4	-2	-1	-0	-0	-0	-0	-0	
Branch - Takeoff 400mm x 400mm / 200mm	68	-8	-8	-8	-8	-8	-8	-8	-8	
Circular Duct 200mm x 3m	68	-0	-0	-0	-0	-1	-1	-1	-0	
Branch - Takeoff 200mm / 125mm	62	-6	-6	-6	-6	-6	-6	-6	-6	
Room Effect - Classic Field Office Room 123	58	-4	-4	-4	-4	-4	-4	-4	-4	

Branch - Takeoff

200

Override Airflow & Velocity

Airflow (l/s): 55 Velocity (m/s): 2

Upstream Turbulence?

Main Continuation

Selected Branch

Diameter (mm): 200

Override Airflow & Velocity

Airflow (l/s): 39 Velocity (m/s): 1

Takeoff

Selected Branch

Diameter (mm): 125

[Add Attachment](#)

Previous Next **Close**

Choose direction in branch, and dimension.

Choosing if Takeoff is Rectangular or Circular

Product Configurators

[Swegon Silencers](#)

Calculation Modules

[Rectangular Breakout In-Line](#)

[Circular Breakout In-Line](#)

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU_project 123

Path (1)		dB(A)	63	125	250	500	1k	2k	4k	8k
Frequency										
Total		45	37	42	45	38	36	38	39	37
Required Insertion Loss		30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))		45	37	42	45	38	36	38	39	37
<hr/>										
	AHU 123 Supply	87	85	83	82	82	82	78	78	76
	Rectangular Duct 1600mm x 800mm x 3m	86	-2	-1	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	77	-10	-10	-10	-10	-10	-10	-10	-10
	Rectangular Duct 400mm x 400mm x 3m	76	-4	-2	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 400mm x 400mm/200mm	68	-8	-8	-8	-8	-8	-8	-8	-8
	Circular Duct 200mm x 3m	68	-0	-0	-0	-0	-1	-1	-1	-0
	Branch - Takeoff 200mm/125mm	62	-6	-6	-6	-6	-6	-6	-6	-6
	Supply Diffusor 1 EAGLE Ceiling C	49	-16	-11	-8	-16	-18	-12	-11	-11
	Room Effect - Classic Field Office Room 123	45	-4	-4	-4	-4	-4	-4	-4	-4

[Add Path](#)

Give Diffusor a Project Tag, and Choose Product

Diffusers

Project Tag

Category

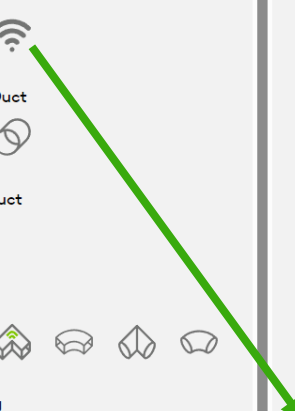
Product line

Air
 Air flow (l/s): Total pressure drop, Pt (Pa):

Product Configuration
 Size:

Duct connection

Box **Installation height**



Product Configurators

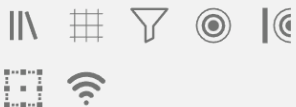
Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU_project 123

Path (1)		dB(A)							
		63	125	250	500	1k	2k	4k	8k
●	Total	45	37	42	45	38	36	38	37
●	Required Insertion Loss	30	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	45	37	42	45	38	36	38	37
🎯	AHU 123 Supply	87	85	83	82	82	78	78	76
📦	Rectangular Duct 1600mm x 800mm x 3m	86	-2	-1	-1	-0	-0	-0	-0
📏	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	77	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm x 400mm x 3m	76	-4	-2	-1	-0	-0	-0	-0
📏	Branch - Takeoff 400mm x 400mm/200mm	68	-8	-8	-8	-8	-8	-8	-8
📏	Circular Duct 200mm x 3m	68	-0	-0	-0	-0	-1	-1	-0
📏	Branch - Takeoff 200mm/125mm	62	-6	-6	-6	-6	-6	-6	-6
📶	Supply Diffusor 1 EAGLE Ceiling C	49	-16	-11	-8	-16	-18	-12	-11
🏠	Room Effect - Classic Field Office Room 123	45	-4	-4	-4	-4	-4	-4	-4

Add Path

If you want to add silencers
Select the place (click to highlight) in the duct system
where you want to put a silencer after

Then click Swegon Silencers

Silencer Selection

Write a Tag and Choose Shape and dimensions
 Choose a silencer from the list (click to highlight) and click Create

Identity

Tag: Quantity:

Dimensions & Airflow

Shape:

Duct Width: mm Duct Height: mm

Max Length: mm

Override Airflow & Velocity

Silencer Flow Rate: l/s Velocity: m/s

Maximum Pressure Drop: Pa

System Effects

Silencer Inlet Condition

Override Required Inserti...

Required Insertion Loss

Frequency	dB(A)	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	87	85	83	82	82	82	78	78	76
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Calculated Insertion Loss	-	-	-	-	-	-	-	-	-
Safety Factor	0	0	0	0	0	0	0	0	0

Silencer Selection

Model	Octave Midband Frequency, Hz											
	L	PD	w/SE	A	63	125	250	500	1k	2k	4k	8k
CALMO a-1611-1600-800-650	650	6	6		5	10	15	23	27	27	15	10
Generated Noise					28	28	24	22	19	16	15	13
End Result				30	32	32	30	15	9	11	24	27
CALMO a-1621-1600-800-1250	1250	7	7		7	15	24	39	45	40	23	17
Generated Noise					28	28	24	22	19	16	15	13
End Result				22	30	27	21	1	0	0	16	20
CALMO a-1622-1600-800-1250	1250	3	3		4	9	16	21	25	18	11	11
Generated Noise					11	11	<10	<10	<10	<10	<10	<10
End Result				32	33	33	29	17	11	20	28	26

Options

Uninsulated Cleaning Cover:

Fire-Resistant Insulated Cleaning Cover:

Insulated 50mm Stone Wool

Perforated Sheet Metal Lining

Flange Connection

Resources

Product Sheet
[Attenuator with recessed connection for rectangular ducts](#)

Brochure
[Acoustics Overview](#)

Instruction
[Installation, commissioning, maintenance](#)

Quality
[Approval 2706/92, Duct insulation](#)
[Building product declaration](#)

Image

Pressure drop

Sound Level in Receiver room with this silencer

To copy the path, click "duplicate this path" button

Product Configurators

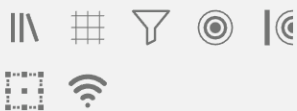
Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU_project 123

Path (1)		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Total	22	30	27	21	1	-	-	16	20
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	22	30	27	21	1	-	-	16	20
🎯	AHU 123 Supply	87	85	83	82	82	82	78	78	76
📦	Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct 200mm x 3m	42	-0	-0	-0	-0	-1	-1	-1	-0
📦	Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	-6
📶	Supply Diffuser 1 EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	-11
📦	Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	-4

Add Path



Now you have a copy of the first path



Product Configurators

Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU_project 123

Path (1)		dB(A)	63	125	250	500	1k	2k	4k	8k
Frequency										
● Total		22	30	27	21	1	-	-	16	20
● Required Insertion Loss		30	-	-	-	-	-	-	-	-
● Receiver: Office Room 123 (30 dB(A))		25	33	30	24	4	-	3	19	23
AHU 123 Supply		87	85	83	82	82	82	78	78	76
Silencer 1 CALMO a-1621-1600-800-1250		62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m		61	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm		52	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m		51	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm		43	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m		42	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm		37	-6	-6	-6	-6	-6	-6	-6	-6
Supply Diffusor 1 (Copy) EAGLE Ceiling C		26	-16	-11	-8	-16	-18	-12	-11	-11
Room Effect - Classic Field Office Room 123		22	-4	-4	-4	-4	-4	-4	-4	-4

Path (1) (Copy)		dB(A)	63	125	250	500	1k	2k	4k	8k
Frequency										
● Total		22	30	27	21	1	-	-	16	20
● Required Insertion Loss		30	-	-	-	-	-	-	-	-
● Receiver: Office Room 123 (30 dB(A))		25	33	30	24	4	-	3	19	23
AHU 123 Supply		87	85	83	82	82	82	78	78	76
Silencer 1 CALMO a-1621-1600-800-1250		62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m		61	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm		52	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m		51	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm		43	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m		42	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm		37	-6	-6	-6	-6	-6	-6	-6	-6
Supply Diffusor 1 (Copy) EAGLE Ceiling C		26	-16	-11	-8	-16	-18	-12	-11	-11
Room Effect - Classic Field Office Room 123		22	-4	-4	-4	-4	-4	-4	-4	-4

[Add Path](#)

Change name by clicking Edit button

Save name here

Product Configurators

Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU_project 123

Supply air	Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total		22	30	27	21	1	-	-	16	20
Required Insertion Loss		30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))		25	33	30	24	4	-	3	19	23
AHU 123 Supply		87	85	83	82	82	82	78	78	76
Silencer 1 CALMO a-1621-1600-800-1250		62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m		61	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm		52	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m		51	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm		43	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m		42	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm		37	-6	-6	-6	-6	-6	-6	-6	-6
Supply Diffuser 1 (Copy) EAGLE Ceiling C		26	-16	-11	-8	-16	-18	-12	-11	-11
Room Effect - Classic Field Office Room 123		22	-4	-4	-4	-4	-4	-4	-4	-4

Extract Air	Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total		22	30	27	21	1	-	-	16	20
Required Insertion Loss		30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))		25	33	30	24	4	-	3	19	23
AHU 123 Supply		87	85	83	82	82	82	78	78	76
Silencer 1 CALMO a-1621-1600-800-1250		62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m		61	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm		52	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m		51	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm		43	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m		42	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm		37	-6	-6	-6	-6	-6	-6	-6	-6
Supply Diffuser 1 (Copy) EAGLE Ceiling C		26	-16	-11	-8	-16	-18	-12	-11	-11
Room Effect - Classic Field Office Room 123		22	-4	-4	-4	-4	-4	-4	-4	-4

Add Path

Product Configurators

Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout

AHU project 123

Supply air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency									
●	Total	22	30	27	21	1	-	-	16	20
●	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
🎯	AHU 123 Supply	87	85	83	82	82	82	78	78	76
📦	Silencer 1 CALMO α-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm × 800mm × 3m	61	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm × 800mm/400mm × 400mm	52	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm × 400mm × 3m	51	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm × 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct 200mm × 3m	42	-0	-0	-0	-0	-1	-1	-1	-0
📦	Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	-6
📶	Supply Diffuser 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	-11
🏠	Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	-4

Extract Air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency									
●	Total	20	16	14	11	5	4	3	16	19
●	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
🎯	AHU 123 Extract	84	82	80	78	78	74	70	68	66
📦	Silencer 1 CALMO α-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm × 800mm × 3m	58	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm × 800mm/400mm × 400mm	49	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm × 400mm × 3m	48	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm × 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct 200mm × 3m	40	-0	-0	-0	-0	-1	-1	-1	-0
📦	Branch - Takeoff 200mm/125mm	35	-6	-6	-6	-6	-6	-6	-6	-6
📶	Extract Diffuser 1 ALG	24	-28	-22	-18	-16	-15	-15	-15	-15
🏠	Room Effect - Classic Field Office Room 123	20	-4	-4	-4	-4	-4	-4	-4	-4

Click on the Sound Source to change data Set

AHU 123

Properties

Category: Mechanical Equipment/Air Handling Unit

Element: AHU 123

Data Set: **Supply**

Airflow (l/s): 3000 Velocity (m/s): 0

Acoustic Data

Project Tag: []

Data Set: []

Details: Noise sources (from the Library). Attachments: [Add Attachment](#)

Navigation: Previous Next Close

Click on the Diffusor to change product

- Product Configurators
- Swegon Silencers
- Calculation Modules
- Rectangular Breakout In-Line
 - Circular Breakout In-Line
- Library Element Quick Add
- Straight Duct
 - Flexible Duct
 - Elbow
 - Branching
 - End Reflection
 - Noise Control
 - Duct Breakin/Breakout

AHU project 123

Supply air

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	22	30	27	21	1	-	-	16	20
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22

AHU 123 Supply	87	85	83	82	82	82	78	78	76
Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m	42	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	-6
Supply Diffusor 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	-11
Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	-4

Extract Air

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	20	16	16	20	12	10	-	12	17
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22

AHU 123 Extract	84	82	81	81	81	81	77	77	75
Silencer 1 CALMO a-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m	59	-2	-1	-1	-0	-0	-0	-0	-0
Branch - Takeoff 1600mm x 800mm/400mm x 400mm	49	-10	-10	-10	-10	-10	-10	-10	-10
Rectangular Duct 400mm x 400mm x 3m	48	-4	-2	-1	-0	-0	-0	-0	-0
Branch - Takeoff 400mm x 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	-8
Circular Duct 200mm x 3m	40	-0	-0	-0	-0	-1	-1	-1	-0
Branch - Takeoff 200mm/125mm	35	-6	-6	-6	-6	-6	-6	-6	-6
Extract Diffusor 1 ALG	24	-28	-21	-15	-15	-15	-15	-15	-15
Room Effect - Classic Field Office Room 123	20	-4	-4	-4	-4	-4	-4	-4	-4

Supply Diffusor 1 (Copy)

Project Tag: Extract Diffusor 1 Change Tag

Category: Air Terminal/Diffuser

Product line: ALG

Air

Air flow (l/s): 16 Total pressure drop, Pt (Pa): 30

Product Configuration

Width: 200 Height: 100

Duct connection: 125 mm

Box: []

Diffusers [Add Attachment](#)

Previous Next Cancel Save

Green is Supply air sound pressure level

Blue is Extract air sound pressure level

Orange is total sound pressure level (Supply+Extract)

Analysis

Views

Analysis

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Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



AHU_project 123

Supply air

	125	250	500	1k	2k	4k	8k		
Frequency	63	125	250	500	1k	2k	4k	8k	
Total	22	30	27	21	1	-	16	20	
Required Insertion Loss	-	-	-	-	-	-	-	-	
Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
AHU 123 Supply	87	85	83	82	82	78	78	76	
Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0	-0	-0	-0	
Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10	-10	-10	-10	
Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0	-0	-0	-0	
Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	
Circular Duct 200mm x 3m	42	-0	-0	-0	-0	-1	-1	-0	
Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	
Supply Diffusor 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	
Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	

Extract Air

	125	250	500	1k	2k	4k	8k		
Frequency	63	125	250	500	1k	2k	4k	8k	
Total	20	16	16	20	12	10	-	12	17
Required Insertion Loss	-	-	-	-	-	-	-	-	
Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
AHU 123 Extract	84	82	81	80	80	80	76	75	74
Silencer 1 CALMO a-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
Rectangular Duct 1600mm x 800mm x 3m	59	-2	-1	-1	-0	-0	-0	-0	
Branch - Takeoff 1600mm x 800mm/400mm x 400mm	49	-10	-10	-10	-10	-10	-10	-10	
Rectangular Duct 400mm x 400mm x 3m	48	-4	-2	-1	-0	-0	-0	-0	
Branch - Takeoff 400mm x 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	
Circular Duct 200mm x 3m	40	-0	-0	-0	-0	-1	-1	-0	
Branch - Takeoff 200mm/125mm	35	-6	-6	-6	-6	-6	-6	-6	
Extract Diffusor 1 ALG	24	-28	-21	-10	-11	-5	-13	-12	
Room Effect - Classic Field Office Room 123	20	-4	-4	-4	-4	-4	-4	-4	

Add Path

Print out result by hovering over Reporting and click Calculation summary

[Calculation Summary](#)
[Silencer Schedule](#)
[Silencer Submittal](#)
[AHU project 123](#)

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[Swegon Silencers](#)

Calculation Modules

[Rectangular Breakout In-Line](#)

[Circular Breakout In-Line](#)

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



Supply air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	22	30	27	21	1	-	-	16	20
	Total	30	-	-	-	-	-	-	-	-
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
🎯	AHU 123 Supply	87	85	83	82	82	82	78	78	76
📦	Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
		28	28	24	22	19	16	15	13	
📦	Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0	-0	-0	-0	-0
📌	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10	-10	-10	-10	-10
		18	12	<10	<10	<10	<10	<10	<10	<10
📦	Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0	-0	-0	-0	-0
📌	Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	-8
		12	<10	<10	<10	<10	<10	<10	<10	<10
📌	Circular Duct 200mm x 3m	42	-0	-0	-0	-0	-1	-1	-1	-0
📌	Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	-6
		<10	<10	<10	<10	<10	<10	<10	<10	<10
📶	Supply Diffusor 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	-11
		<10	<10	<10	<10	<10	<10	<10	<10	<10
🏠	Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	-4

Extract Air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	20	16	16	20	12	10	-	12	17
	Total	30	-	-	-	-	-	-	-	-
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
🎯	AHU 123 Extract	84	82	81	80	80	80	76	75	74
📦	Silencer 1 CALMO a-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
		28	28	24	22	19	16	15	13	
📦	Rectangular Duct 1600mm x 800mm x 3m	59	-2	-1	-1	-0	-0	-0	-0	-0
📌	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	49	-10	-10	-10	-10	-10	-10	-10	-10
		18	12	<10	<10	<10	<10	<10	<10	<10
📦	Rectangular Duct 400mm x 400mm x 3m	48	-4	-2	-1	-0	-0	-0	-0	-0
📌	Branch - Takeoff 400mm x 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	-8
		12	<10	<10	<10	<10	<10	<10	<10	<10
📌	Circular Duct 200mm x 3m	40	-0	-0	-0	-0	-1	-1	-1	-0
📌	Branch - Takeoff 200mm/125mm	35	-6	-6	-6	-6	-6	-6	-6	-6
		<10	<10	<10	<10	<10	<10	<10	<10	<10
📶	Extract Diffusor 1 ALG	24	-28	-21	-10	-11	-5	-13	-12	-12
		15	15	21	15	13	<10	<10	<10	<10
🏠	Room Effect - Classic Field Office Room 123	20	-4	-4	-4	-4	-4	-4	-4	-4

[Add Path](#)

Report shows Supply air path, Extract air path and Summed level to receiver in a diagram.

Calculation Summary

Project: AHU project 123

Office Room 123

Length (m)	4
Width (m)	3
Height (m)	3
Area	12.0
Volume	36.0

PathName: Sypply air

Duct detail	Airl/s	63	125	250	500	1k	2k	4k	8k	dB(A)
AHU 123	3000	Ld	-	-	-	-	-	-	-	-
Data set: Supply; Metric: Sound Power Level		Lw	85	83	82	82	82	78	78	76
Silencer 1	3000	Ld	-7	-15	-24	-39	-45	-40	-23	-17
Model: CALMO a-1621-1600-800-1250; Size (W x H): 1600mm x 800mm; Length: 1250mm; Velocity: 2m/s; Pressure Drop: 7Pa		Lw	28	28	24	22	19	16	15	13
Rectangular Duct	3000	Ld	-2	-1	-1	-0	-0	-0	-0	-0
Size (W x H): 1600mm x 800mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	333	Ld	-10	-10	-10	-10	-10	-10	-10	-10
Size (Main): 1600mm x 800mm; Size (Main Continuation): 1600mm x 800mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 400mm x 400mm; Bend Radius (Takeoff): 0mm		Lw	18	12	<10	<10	<10	<10	<10	<10
Rectangular Duct	333	Ld	-4	-2	-1	-0	-0	-0	-0	-0
Size (W x H): 400mm x 400mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	55	Ld	-8	-8	-8	-8	-8	-8	-8	-8
Size (Main): 400mm x 400mm; Size (Main Continuation): 400mm x 400mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 200mm; Bend Radius (Takeoff): 0mm		Lw	12	<10	<10	<10	<10	<10	<10	<10
Circular Duct	55	Ld	-0	-0	-0	-0	-1	-1	-1	-0
Size (Diameter): 200mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	16	Ld	-6	-6	-6	-6	-6	-6	-6	-6
Size (Main): 200mm; Size (Main Continuation): 200mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 125mm; Bend Radius (Takeoff): 0mm		Lw	<10	<10	<10	<10	<10	<10	<10	<10
Supply Diffusor 1 (Copy)	16	Ld	-16	-11	-8	-16	-18	-12	-11	-11
Data set: Supply Diffusor 1 - DataSet IL; Metric: Insertion Loss		Lw	0	2	3	0	0	0	0	0
Room Effect: Classic Field	16	Ld	-4	-4	-4	-4	-4	-4	-4	-4
Size (W x H x L): 3m x 3m x 4m; Number of Inlets/Outlets: 1; Receiver Distance (Average): 1.5m; Room Absorption: Office room; Directivity Factor: 2		Lw	-	-	-	-	-	-	-	-
Demand	Lk	55	44	36	29	25	22	20	18	30
Level	Lp	30	27	21	1	-	0	16	20	22
Damping requirement	Ld	-	-	-	-	-	-	-	-	3

Calculation Summary

Project: AHU project 123

Office Room 123

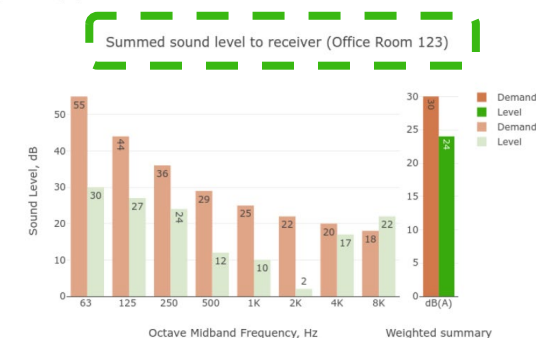
Length (m)	4
Width (m)	3
Height (m)	3
Area	12.0
Volume	36.0

PathName: Extract Air

Duct detail	Airl/s	63	125	250	500	1k	2k	4k	8k	dB(A)
AHU 123	3000	Ld	-	-	-	-	-	-	-	-
Data set: Extract; Metric: Sound Power Level		Lw	82	81	80	80	80	76	75	74
Silencer 1	3000	Ld	-7	-15	-24	-39	-45	-40	-23	-17
Model: CALMO a-1621-1600-800-1250; Size (W x H): 1600mm x 800mm; Length: 1250mm; Velocity: 2m/s; Pressure Drop: 7Pa		Lw	28	28	24	22	19	16	15	13
Rectangular Duct	3000	Ld	-2	-1	-1	-0	-0	-0	-0	-0
Size (W x H): 1600mm x 800mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	333	Ld	-10	-10	-10	-10	-10	-10	-10	-10
Size (Main): 1600mm x 800mm; Size (Main Continuation): 1600mm x 800mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 400mm x 400mm; Bend Radius (Takeoff): 0mm		Lw	18	12	<10	<10	<10	<10	<10	<10
Rectangular Duct	333	Ld	-4	-2	-1	-0	-0	-0	-0	-0
Size (W x H): 400mm x 400mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	55	Ld	-8	-8	-8	-8	-8	-8	-8	-8
Size (Main): 400mm x 400mm; Size (Main Continuation): 400mm x 400mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 200mm; Bend Radius (Takeoff): 0mm		Lw	12	<10	<10	<10	<10	<10	<10	<10
Circular Duct	55	Ld	-0	-0	-0	-0	-1	-1	-1	-0
Size (Diameter): 200mm; Length: 3m		Lw	-	-	-	-	-	-	-	-
Branch: Takeoff	16	Ld	-6	-6	-6	-6	-6	-6	-6	-6
Size (Main): 200mm; Size (Main Continuation): 200mm; Bend Radius (Main Continuation): 0mm; Size (Takeoff): 125mm; Bend Radius (Takeoff): 0mm		Lw	<10	<10	<10	<10	<10	<10	<10	<10
Extract Diffusor 1	16	Ld	-28	-21	-10	-11	-5	-13	-12	-12
Data set: Supply Diffusor 1 (Copy) - DataSet IL; Metric: Insertion Loss		Lw	15	15	21	15	13	0	0	0
Room Effect: Classic Field	16	Ld	-4	-4	-4	-4	-4	-4	-4	-4
Size (W x H x L): 3m x 3m x 4m; Number of Inlets/Outlets: 1; Receiver Distance (Average): 1.5m; Room Absorption: Office room; Directivity Factor: 2		Lw	-	-	-	-	-	-	-	-
Demand	Lk	55	44	36	29	25	22	20	18	30
Level	Lp	16	16	20	12	10	-	12	17	20
Damping requirement	Ld	-	-	-	-	-	-	-	-	-0

Calculation Summary

Project: AHU project 123



Analysis

Views

Analysis

Filter

Libraries

Library

Receivers

Product Configurators

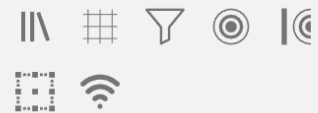
Swegon Silencers

Calculation Modules

Rectangular Breakout In-Line

Circular Breakout In-Line

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



Calculation Summary
 Silencer Schedule
 Silencer Submittal
 AHU project 123

Print out silencer info by hovering over Reporting and click Silencer Submittal

Supply air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency									
	Total	22	30	27	21	1	-	-	16	20
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
	AHU 123 Supply	87	85	83	82	82	82	78	78	76
	Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-39	-45	-40	-23	-17
	Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10	-10	-10	-10	-10
	Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8	-8	-8	-8	-8
	Circular Duct 200mm x 3m	42	-0	-0	-0	-0	-1	-1	-1	-0
	Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6	-6	-6	-6	-6
	Supply Diffusor 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16	-18	-12	-11	-11
	Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4	-4	-4	-4	-4

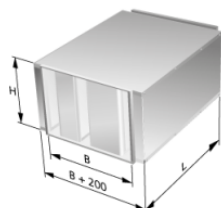
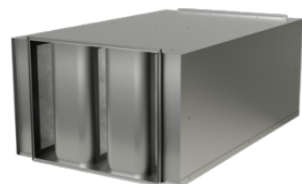
Extract Air		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency									
	Total	20	16	16	20	12	10	-	12	17
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
	AHU 123 Extract	84	82	81	80	80	80	76	75	74
	Silencer 1 CALMO a-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
	Rectangular Duct 1600mm x 800mm x 3m	59	-2	-1	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	49	-10	-10	-10	-10	-10	-10	-10	-10
	Rectangular Duct 400mm x 400mm x 3m	48	-4	-2	-1	-0	-0	-0	-0	-0
	Branch - Takeoff 400mm x 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	-8
	Circular Duct 200mm x 3m	40	-0	-0	-0	-0	-1	-1	-1	-0
	Branch - Takeoff 200mm/125mm	35	-6	-6	-6	-6	-6	-6	-6	-6
	Extract Diffusor 1 ALG	24	-28	-21	-10	-11	-5	-13	-12	-12
	Room Effect - Classic Field Office Room 123	20	-4	-4	-4	-4	-4	-4	-4	-4

[Add Path](#)

Silencer Submittal

Project: AHU project 123

CALMO a-1621-1600-800-1250



Path

Supply air

Position

Silencer 1

Quick facts

- Included in the MagiCAD database
- Excellent aerodynamic characteristics
- Available with cleaning cover
- Available in an insulated version with 50 mm thick fire-resistant stone wool
- Connection sizes ranging from 400x300 to 2200x2200
- Remarkably space-saving rectangular sound attenuator
- Extremely low pressure drop via tapered acoustic baffle surfaces
- Type-approved, environmentally friendly sound attenuating material, ISOVER Cleantec® PLUS
- ISOVER Cleantec® PLUS is cleanable using a wet method.

General

- The CALMO is, due to its unique design with connections facing the side baffles, suitable for use both in ducts and in direct connection to ventilation units.

Dimensions

Width, B	1600mm
Height, H	800mm
Length, L	1250mm
Weight	111.57kg

Data

Inlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Outlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Air flowl/s	3000
Velocity(m/s)	2
Pressure drop(Pa)	7

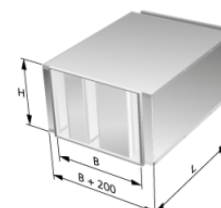
Frequency band	63	125	250	500	1k	2k	4k	8k	Sum db(A)
Lw before attenuator	40	46	49	42	40	42	43	41	49
Attenuation (Ld)	7	15	24	39	45	40	23	17	
Sound generation (Lw)	28	28	24	22	19	16	15	13	
Lw after attenuator	35	32	27	22	19	16	21	24	28

Date: 8/10/2023 - Version: 1.1.22.56531

Silencer Submittal

Project: AHU project 123

CALMO a-1621-1600-800-1250



Path

Extract Air

Position

Silencer 1

Quick facts

- Included in the MagiCAD database
- Excellent aerodynamic characteristics
- Available with cleaning cover
- Available in an insulated version with 50 mm thick fire-resistant stone wool
- Connection sizes ranging from 400x300 to 2200x2200
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General

- The CALMO is, due to its unique design with connections facing the side baffles, suitable for use both in ducts and in direct connection to ventilation units.

Dimensions

Width, B	1600mm
Height, H	800mm
Length, L	1250mm
Weight	111.57kg

Data

Inlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Outlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Air flowl/s	3000
Velocity(m/s)	2
Pressure drop(Pa)	7

Frequency band	63	125	250	500	1k	2k	4k	8k	Sum db(A)
Lw before attenuator	26	34	45	45	51	39	39	38	52
Attenuation (Ld)	7	15	24	39	45	40	23	17	
Sound generation (Lw)	28	28	24	22	19	16	15	13	
Lw after attenuator	28	28	26	22	19	16	18	22	27

Date: 8/10/2023 - Version: 1.1.22.56531



Tips and Tricks

You can mute objects, by clicking the mute symbol
 Then the object turns grey and is not longer included in the sound calculation.
 You can unmute them the same way.

Extract Air		dBA	63	125	250	500	1k	2k	4k	8k
●	Frequency	20	16	16	20	12	10	-	12	17
	Total	30	-	-	-	-	-	-	-	-
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	24	30	27	24	12	10	2	17	22
🎯	AHU 123 Extract	84	82	81	80	80	80	76	75	74
📦	Silencer 1 CALMO a-1621-1600-800-1250	59	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm x 800mm x 3m	59	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	49	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm x 400mm x 3m	48	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm x 400mm/200mm	41	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct 200mm x 3m	40	-0	-0	-0	-0	-1	-1	-1	-0

Add Path

Hover over this area to show the bar

Mute button

Extract Air		dBA	63	125	250	500	1k	2k	4k	8k
●	Frequency	20	16	16	20	12	10	-	12	17
●	Total	48	22	30	41	41	47	35	35	34
	Required Insertion Loss	30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))	48	30	32	41	41	47	35	35	34
🎯	AHU 123 Extract	84	82	81	80	80	80	76	75	74
📦	Silencer 1 CALMO a-1621-1600-800-1250	-	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm x 800mm x 3m	84	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm x 800mm/400mm x 400mm	75	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm x 400mm x 3m	74	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm x 400mm/200mm	66	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct 200mm x 3m	66	-0	-0	-0	-0	-1	-1	-1	-0
📦	Branch - Takeoff 200mm/125mm	60	-6	-6	-6	-6	-6	-6	-6	-6
📶	Extract Diffusor 1 ALG	52	-28	-21	-10	-11	-5	-13	-12	-12
📦	Room Effect - Classic Field Office Room 123	48	-4	-4	-4	-4	-4	-4	-4	-4

The benefit is to be able to see what the result is without a silencer for example, without deleting any object.

Quick add Library Elements without drag and drop

Extract Air		dB(A)	63	125	250	500	1k	2k	4k	8k	
●	Frequency		20	16	16	20	12	10	-	12	17
●	Total		30	-	-	-	-	-	-	-	-
●	Required Insertion Loss		30	-	-	-	-	-	-	-	-
●	Receiver: Office Room 123 (30 dB(A))		24	30	27	24	12	10	2	17	22
🎯	AHU 123 Extract		84	82	81	80	80	80	76	75	74
📦	Silencer 1 CALMO a-1621-1600-800-1250		59	-7	-15	-24	-39	-45	-40	-23	-17
📦	Rectangular Duct 1600mm x 800mm x 3m		59	-2	-1	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 1600mm x 800mm/400mm x 400mm		49	-10	-10	-10	-10	-10	-10	-10	-10
📦	Rectangular Duct 400mm x 400mm x 3m		48	-4	-2	-1	-0	-0	-0	-0	-0
📦	Branch - Takeoff 400mm x 400mm/200mm		41	-8	-8	-8	-8	-8	-8	-8	-8
📦	Circular Duct		40	-0	-0	-0	-0	-1	-1	-1	-0

[Add Path](#)

Hover over here to see the bar

Delete Edit

Quick add elements

Hover over element icon Quick add by clicking "Add"

Swegon Silencers

Calculation Modules

- Rectangular Breakout In-Line
- Circular Breakout In-Line

Library Element Quick Add

- Straight Duct
- Flexible Duct
- Elbow
- Branching
- End Reflection

● Receiver: Office Room 123 (30 dB(A))

🎯 AHU 123 Supply	87	85	83	82	82
📦 Silencer 1 CALMO a-1621-1600-800-1250	62	-7	-15	-24	-35
📦 Rectangular Duct 1600mm x 800mm x 3m	61	-2	-1	-1	-0
📦 Branch - Takeoff 1600mm x 800mm/400mm x 400mm	52	-10	-10	-10	-10
📦 Rectangular Duct 400mm x 400mm x 3m	51	-4	-2	-1	-0
📦 Branch - Takeoff 400mm x 400mm/200mm	43	-8	-8	-8	-8
📦 Circular Duct 200mm x 3m	42	-0	-0	-0	-0
📦 Branch - Takeoff 200mm/125mm	37	-6	-6	-6	-6
📶 Supply Diffusor 1 (Copy) EAGLE Ceiling C	26	-16	-11	-8	-16
📦 Room Effect - Classic Field Office Room 123	22	-4	-4	-4	-4

Add Branch

Circular Duct
Unlined and acoustically lined round ducts.

Get the correct pressure drop for the silencer by using system effects

Silencer Selection

Identity

Tag: Silencer 1 Quantity: 1

Dimensions & Airflow

Shape: Rectangular/CALMO

Duct Width: 1600 mm Duct Height: 800 mm

Max Length: 1250 mm

Override Airflow & Velocity

Silencer Flow Rate: 3000 l/s Velocity: 2.34 m/s

Maximum Pressure Drop: 50 Pa

System Effects

Silencer Inlet Condition: Axial Fan

Diameter from Silencer: 0 Transition Length:

Silencer Outlet Condition: Radius Elbow with no turning vanes

Override Required Inserti...

Required Insertion Loss

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	87	85	83	82	82	82	78	78	76
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Calculated Insertion Loss	-	-	-	-	-	-	-	-	-
Safety Factor	0	0	0	0	0	0	0	0	0

Silencer Selection

Model	Octave Midband Frequency, Hz											
	L	PD	w/SE	A	63	125	250	500	1k	2k	4k	8k
CALMO a-1611-1600-800-650	650	6	12		5	10	15	23	27	27	15	10
Generated Noise			+9		28	28	24	22	19	16	15	13
End Result				30	32	32	30	15	9	11	24	27
CALMO a-1621-1600-800-1250	1250	7	14		7	15	24	39	45	40	23	17
Generated Noise			+9		28	28	24	22	19	16	15	13
End Result				22	30	27	21	1	0	0	16	20
CALMO a-1622-1600-800-1250	1250	3	7		4	9	16	21	25	18	11	11
Generated Noise			+9		11	11	<10	<10	<10	<10	<10	<10
End Result				32	33	33	29	17	11	20	28	26

Options

Uninsulated Cleaning Cover: None

Fire-Resistant Insulated Cleaning Cover: None

- Insulated 50mm Stone Wool
- Perforated Sheet Metal Lining
- Flange Connection

Resources

- Product Sheet: [Attenuator with recessed connection for rectangular ducts](#)
- Brochure: [Acoustics Overview](#)
- Instruction: [Installation, commissioning, maintenance](#)
- Quality: [Approval 2706/92, Duct insulation](#)
- [Building product declaration](#)

Image



Pressure drop with system effects

Pressure drop at ideal conditions (3-4 diameters straight duct)

Silencer Selection

Identity

Tag: Silencer 1 Quantity: 1

Dimensions & Airflow

Shape: Rectangular/CALMO

Duct Width: 1600 mm Duct Height: 800 mm

Max Length: 1250 mm

Override Airflow & Velocity:

Silencer Flow Rate: 3000 l/s Velocity: 2.34 m/s

Maximum Pressure Drop: 3 Pa

System Effects

Silencer Inlet Condition: Axial Fan

Diameter from Silencer: 0 Transition Length: []

Silencer Outlet Condition: Radius Elbow with no turning vanes

Override Required Inserti...

Required Insertion Loss

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	87	85	83	82	82	82	78	78	76
Required Insertion Loss	30	-	-	-	-	-	-	-	-
Calculated Insertion Loss	-	-	-	-	-	-	-	-	-
Safety Factor	0	0	0	0	0	0	0	0	0

Silencer Selection

Model	Octave Midband Frequency, Hz											
	L	PD	w/SE	A	63	125	250	500	1k	2k	4k	8k
No silencers found matching your parameters												

Options

Please select a silencer to configure options

← If you dont see any silencers in the list, its probably because the maximum pressure drop is set to low. Increase the value to 50 Pa or higher.

Swegon 

