



**Making a Damper with Silencer  
calculation in 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 ▾
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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

Swegon Home Products Analysis

Select project...

## Projects

Search  lastEdited Anytime

Project Name	Owner	Editor	
Silencers 123	Test user	Test user	...
AHU project 123 Outdoor	Test user	Test user	...
AHU project 123	Test user	Test user	...

### New Project

Project Name

Other

Cancel Create



Give it a name and click "Create"

New Project

Cancel

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#### Straight Duct



#### Flexible Duct



#### Elbow



#### Branching



#### End Reflection



### Damper Silencer

Path (1)

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

Move to head of path

[Add Path](#)

Drag and drop the Dampers symbol inside the dashed area

Write a project Tag and Select Product, then click Save

The screenshot shows the 'Dampers' configuration dialog box in the Swegon software. The dialog is titled 'Dampers' and has a close button (X) in the top right corner. It contains the following fields and options:

- Project Tag:** A text input field containing 'Damper 1'. This field is highlighted with a green box.
- Category:** A dropdown menu set to 'Mechanical Equipment/Damper'.
- Product line:** A dropdown menu with 'Select product model...' selected. The dropdown is open, showing a list of product models: 'Select product model...', 'WISE Damper a (EA)', 'WISE Damper a (SA)', 'WISE Damper a (Zone EA)', and 'WISE Damper a (Zone SA)'. This dropdown is also highlighted with a green box.
- Buttons:** At the bottom right, there are four buttons: 'Previous', 'Next', 'Cancel', and 'Save'. A large green arrow points down to the 'Save' button.

On the right side of the dialog, there are links for 'Details' and 'Dampers', and a link for 'Add Attachment'.

Different dampers in the same size still often generates the same sound, so you can choose another product in the list if your product is not there.

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- Damper Silencer
  - Path (1)
    - Frequency
    - Total
    - Required Insertion Loss
    - Receiver: default (dBA)
  - Damper 1
    - WISE Damper a (SA)

## Damper 1

Project Tag: Damper 1

Category: Mechanical Equipment / Damper

Product line: WISE Damper a (SA)

**Air**

airflow (l/s)	pressuredrop (Pa)
100	50

dampressure (Pa): 100

**Product Configuration**

ductconn: 125 mm

variant: Circular

[Add Attachment](#)

Fill in the data

Previous Next Cancel Save



**Analysis**

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Library Element Quick Add

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Straight Duct

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Flexible Duct

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Elbow

---

Branching

---

End Reflection

**Damper Silencer**

Path (1)   [Add Path](#)

Frequency	dBa	63	125	250	500	1k	2k	4k	8k
Total	52	57	59	56	48	46	40	31	25
Required Insertion Loss	-	-	-	-	-	-	-	-	-
Receiver: default (dBa)	52	57	59	56	48	46	40	31	25

Damper 1	52	0	0	0	0	0	0	0	0
WISE Damper a (SA)	57	59	56	48	46	40	31	25	

Click on Receivers to add a receiver

Fill in all required fields, but only Receiver Criteria is important this time, and click Save

## Receivers

Name

Receiver

Receiver Properties

Name

Receiver

Receiver Type

Indoor

Length (m) Width (m) Height (m)

3 3 3

Notes

Room Absorption

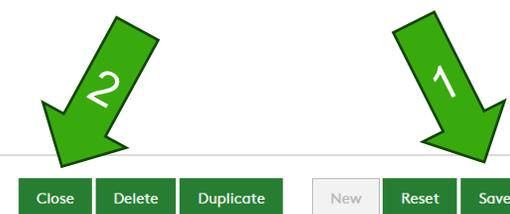
Absorption Coefficients

Other

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	35 dB(A) (35)



Close Delete Duplicate New Reset Save

Library Element Quick Add



Straight Duct



Flexible Duct



Elbow



Branching



End Reflection



Noise Control



Duct Breakin/Breakout



Sound Transmission



Room Effect



Outdoor Noise



Damper Silencer

Path (1)

	dB	63	125	250	500	1k	2k	4k	8k
Frequency	dB	63	125	250	500	1k	2k	4k	8k
Total	52	57	59	56	48	46	40	31	25
Required Insertion Loss	-	-	-	-	-	-	-	-	-
Receiver: default (dBA)	52	57	59	56	48	46	40	31	25

[Add Path](#)

Move to head of path

Damper 1	52	0	0	0	0	0	0	0	0
WISE Damper a (SA)	57	59	56	48	46	40	31	25	

Branch →

Drag and drop the Simple Receiver symbol inside the dashed area

Select your receiver and click Save

Swegon Home Products Analysis Reporting

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Damper Silencer

Path (1)

- Frequency
- Total
- Required Insertion Loss
- Receiver: Receiver (30)

Damper 1

- WISE Damper a (SA)

Simple Receiver Assignment

Simple Receiver

### Simple Receiver Assignment

Edit properties

Receiver name

Receiver

Add Attachment

Details

Simple receiver assignment

Previous Next Cancel Save

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### Damper Silencer

Path (1)

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	52	57	59	56	48	46	40	31	25
Required Insertion Loss	35	-	-	-	-	-	-	-	-
Receiver: Receiver (35 dB(A))	52	57	59	56	48	46	40	31	25
Damper 1	52	0	0	0	0	0	0	0	0
WISE Damper a (SA)		57	59	56	48	46	40	31	25
Simple Receiver Assignment Receiver	52								

[Add Path](#)



A Simple receiver has no room attenuation, it just shows the current sound power in the duct, but you can use it to set a required insertion loss in the duct

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#### Branching



#### End Reflection



### Damper Silencer

Path (1)										<a href="#">Add Path</a>
	Frequency	dBA	63	125	250	500	1k	2k	4k	8k
	Total	52	57	59	56	48	46	40	31	25
	Required Insertion Loss	35	-	-	-	-	-	-	-	-
	Receiver: Receiver (35 dB(A))	52	57	59	56	48	46	40	31	25
	Damper 1	52	0	0	0	0	0	0	0	0
	WISE Damper a (SA)	57	59	56	48	46	40	31	25	
<input type="checkbox"/>	Simple Receiver Assignment Receiver	52								

Highlight the damper by clicking on it

Then click on Swegon Silencers

# Write a Tag and fill in the dimensions

## Silencer Selection

### Identity

#### Tag

#### Quantity

### Dimensions & Airflow

#### Shape

#### Connection Dim

 mm

#### Max Length

 mm

### Override Airflow & Velocity

#### Silencer Flow Rate

#### Velocity

 m/s

#### Maximum Pressure Drop

 Pa

### System Effects

#### Silencer Inlet Condition

#### Diameter from Silencer

#### Transition Length

### Override Required Inserti...



### Required Insertion Loss

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	52	57	59	56	48	46	40	31	25
Required Insertion Loss	35	-	-	-	-	-	-	-	-
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
SORDO-C-125-800 Generated Noise End Result	800	19	19		6	12	19	34	44	50	40	26
CLA-A-125-1000 Generated Noise End Result	1000	19	19		7	16	23	39	50	50	47	35
SORDO-A-125-1100 Generated Noise End Result	1100	19	19		5	12	21	39	50	50	44	33
SORDO-C-125-1100 Generated Noise End Result	1100	19	19		7	15	24	43	50	50	46	34
SORDO-A-125-800 Generated Noise End Result	800	19	19		4	9	16	30	40	50	38	25
CLA-A-125-500	500	19	19		5	9	13	21	29	35	31	20

### Options

#### Resources

- Product Sheet  
[Sound attenuator for circular ducts](#)
- Brochure  
[Acoustics Overview](#)
- Instruction  
[Installation - Maintenance](#)
- Quality  
[Building product declaration](#)

### Image



# Silencer Selection

## Identity

Tag: Silencer 1      Quantity: 1

## Dimensions & Airflow

Shape: Circular

Connection Dim: 125 mm

Max Length: 1200 mm

Override Airflow & Velocity:

Silencer Flow Rate: 100 l/s      Velocity: 8.15 m/s

Maximum Pressure Drop: 87.18 Pa

## System Effects

Silencer Inlet Condition: Ideal Outlet Conditions - 3 to 4 diameters of straight duct

Diameter from Silencer:      Transition Length:

## Override Required Inserti...

### Required Insertion Loss

Frequency	dB(A)	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	52	57	59	56	48	46	40	31	25
Required Insertion Loss	35	-	-	-	-	-	-	-	-
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
SORDO-C-125-800	800	19	19		6	12	19	34	44	50	40	26
Generated Noise					31	30	22	15	10	<10	<10	12
End Result				34	51	47	37	18	11	9	8	13
CLA-A-125-1000	1000	19	19		7	16	23	39	50	50	47	35
Generated Noise					27	27	23	21	18	15	14	12
End Result				31	50	43	33	22	19	15	14	13
SORDO-A-125-1100	1100	19	19		5	12	21	39	50	50	44	33
Generated Noise					31	30	22	15	10	<10	<10	12
End Result				33	52	47	35	16	11	9	8	13
SORDO-C-125-1100	1100	19	19		7	15	24	43	50	50	46	34
Generated Noise					31	30	22	15	10	<10	<10	12
End Result				31	50	44	32	16	11	9	8	13
SORDO-A-125-800	800	19	19		4	9	16	30	40	50	38	25
Generated Noise					31	30	22	15	10	<10	<10	12
End Result				36	53	50	40	20	12	9	8	13
CLA-A-125-500	500	19	19		5	9	13	21	29	35	31	20

## Options

### Resources

- Product Sheet: [Sound attenuator for circular ducts](#)
- Brochure: [Acoustics Overview](#)
- Instruction: [Installation - Maintenance](#)
- Quality: [Building product declaration](#)

### Image



Pressure drop



Sound power after Silencer



Choose a silencer in the list (highlight it) and click Create

## Silencer Selection

### Identity

Tag: Silencer 1      Quantity: 1

### Dimensions & Airflow

Shape: Circular

### Connection Dim

125 mm

### Max Length

1200 mm

### Override Airflow & Velocity

### Silencer Flow Rate

### Velocity

100 l/s      8.15 m/s

### Maximum Pressure Drop

87.18 Pa

### System Effects

### Silencer Inlet Condition

Ideal Outlet Conditions - 3 to 4 diameters of straight duct

### Diameter from Silencer

### Transition Length

### Override Required Inserti...

### Required Insertion Loss

Frequency	dB(A)	63	125	250	500	1k	2k	4k	8k
Sound Before Attenuator	52	57	59	56	48	46	40	31	25
Required Insertion Loss	35	-	-	-	-	-	-	-	-
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
SORDO-C-125-800 Generated Noise End Result	800	19	19		6	12	19	34	44	50	40	26
				34	31	30	22	15	10	<10	<10	12
					51	47	37	18	11	9	8	13
CLA-A-125-1000 Generated Noise End Result	1000	19	19		7	16	23	39	50	50	47	35
				31	27	27	23	21	18	15	14	12
					50	43	33	22	19	15	14	13
SORDO-A-125-1100 Generated Noise End Result	1100	19	19		5	12	21	39	50	50	44	33
				33	31	30	22	15	10	<10	<10	12
					52	47	35	16	11	9	8	13
SORDO-C-125-1100 Generated Noise End Result	1100	19	19		7	15	24	43	50	50	46	34
				31	31	30	22	15	10	<10	<10	12
					50	44	32	16	11	9	8	13
SORDO-A-125-800 Generated Noise End Result	800	19	19		4	9	16	30	40	50	38	25
				36	31	30	22	15	10	<10	<10	12
					53	50	40	20	12	9	8	13
CLA-A-125-500	500	19	19		5	9	13	21	29	35	31	20

### Options

#### Resources

- Product Sheet  
[Compact sound attenuator for circular ducts](#)
- Brochure  
[Acoustics Overview](#)
- Instruction  
[Installation - Maintenance](#)
- Quality  
[Approval 2706/92, Duct insulation](#)  
[Building product declaration](#)

### Image



Cancel      Create

Write a name on the path by clicking here

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**Damper Silencer**

Damper 1

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	31	50	43	33	22	19	15	14	13
Required Insertion Loss	35	-	-	-	-	-	-	-	-
Receiver: Receiver (35 dB(A))	31	50	43	33	22	19	15	14	13

Damper 1	52	0	0	0	0	0	0	0	0
WISE Damper a (SA)	57	59	56	48	46	40	31	25	

Silencer 1 CLA-A-125-1000	31	-7	-16	-23	-39	-50	-50	-47	-35
Simple Receiver Assignment Receiver	31								

Add Path

**Damper Silencer**

Damper 1

Frequency	dBA	63	125	250	500	1k	2k	4k	8k
Total	31	50	43	33	22	19	15	14	13
Required Insertion Loss	35	-	-	-	-	-	-	-	-
Receiver: Receiver (35 dB(A))	31	50	43	33	22	19	15	14	13

Damper 1	52	0	0	0	0	0	0	0	0
WISE Damper a (SA)	57	59	56	48	46	40	31	25	

Silencer 1 CLA-A-125-1000	31	-7	-16	-23	-39	-50	-50	-47	-35
Simple Receiver Assignment Receiver	31								

Save name by clicking here

You can add more calculations by clicking on "Add path" or Duplicate the first path

Duplicate this path

**Damper Silencer**

Damper 1										
Frequency	dB(A)	63	125	250	500	1k	2k	4k	8k	
Total	31	50	43	33	22	19	15	14	13	
Required Insertion Loss	35	-	-	-	-	-	-	-	-	
Receiver: Receiver (35 dB(A))	31	50	43	33	22	19	15	14	13	
Damper 1	52	0	0	0	0	0	0	0	0	
WISE Damper a (SA)	57	59	56	48	46	40	31	25		
Silencer 1	31	-7	-16	-23	-39	-50	-50	-47	-35	
CLA-A-125-1000	27	27	23	21	18	15	14	12		
Simple Receiver Assignment	31									
Receiver										



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- - 
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  -
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If you duplicate the path you get a copy

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Elbow



Branching



End Reflection



Damper Silencer

Damper 1										
Frequency	dBA	63	125	250	500	1k	2k	4k	8k	
Total	31	50	43	33	22	19	15	14	13	
Required Insertion Loss	35	-	-	-	-	-	-	-	-	
Receiver: Receiver (35 dB(A))	34	53	46	36	25	22	19	17	16	
-----										
Damper 1 (Copy)	52	0	0	0	0	0	0	0	0	
WISE Damper a (SA)	57	59	56	48	46	40	31	25		
-----										
Silencer 1	31	-7	-16	-23	-39	-50	-50	-47	-35	
CLA-A-125-1000	27	27	23	21	18	15	14	12		
-----										
Simple Receiver Assignment	31									
Receiver										

Damper 1 (Copy)										
Frequency	dBA	63	125	250	500	1k	2k	4k	8k	
Total	31	50	43	33	22	19	15	14	13	
Required Insertion Loss	35	-	-	-	-	-	-	-	-	
Receiver: Receiver (35 dB(A))	34	53	46	36	25	22	19	17	16	
-----										
Damper 1 (Copy)	52	0	0	0	0	0	0	0	0	
WISE Damper a (SA)	57	59	56	48	46	40	31	25		
-----										
Silencer 1	31	-7	-16	-23	-39	-50	-50	-47	-35	
CLA-A-125-1000	27	27	23	21	18	15	14	12		
-----										
Simple Receiver Assignment	31									
Receiver										

[Add Path](#)



Change name on the new path and change Damper by clicking on it.

**Analysis**

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**Damper Silencer**

Damper 1		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	31	50	43	33	22	19	15	14	13
●	Total	35	-	-	-	-	-	-	-	-
●	Required Insertion Loss	35	-	-	-	-	-	-	-	-
●	Receiver: Receiver (35 dB(A))	32	51	44	34	25	22	18	17	16

□	Damper 1 (Copy)	52	0	0	0	0	0	0	0	0
□	WISE Damper a (SA)	57	59	56	48	46	40	31	25	

□	Silencer 1	31	-7	-16	-23	-39	-50	-50	-47	-35
	CLA-A-125-1000		27	27	23	21	18	15	14	12

<input type="checkbox"/>	Simple Receiver Assignment	31								
<input type="checkbox"/>	Receiver									

**Damper 2**

Damper 2		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	26	45	33	26	22	18	15	14	12
●	Total	26	45	33	26	22	18	15	14	12
●	Required Insertion Loss	35	-	-	-	-	-	-	-	-
●	Receiver: Receiver (35 dB(A))	32	51	44	34	25	22	18	17	16

□	Damper 2	44	0							
□	WISE Damper a (SA)	52								

□	Silencer 1	26	-7							
	CLA-A-125-1000		27							

<input type="checkbox"/>	Simple Receiver Assignment									
<input type="checkbox"/>	Receiver									

**Damper 1 (Copy)**

Project Tag: Damper 2

Category: Mechanical Equipment / Damper

Product line: WISE Damper a (SA)

Air airflow (l/s): 300

pressuredrop (Pa): 50

damppressure (Pa): 100

Product Configuration width: 600 mm, height: 300 mm

variant: Standard

Standard means rectangular

## Delete the old silencer, and Select a new with Swegon Silencers

### Analysis

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### Damper Silencer

Damper 1																													
Frequency	dBA	63	125	250	500	1k	2k	4k	8k																				
Total	31	50	43	33	22	19	15	14	13																				
Required Insertion Loss	35	-	-	-	-	-	-	-	-																				
Receiver: Receiver (35 dB(A))	33	52	45	36	25	20	16	16	17																				
<table border="1"> <thead> <tr> <th colspan="2">Damper 1 (Copy)</th> <th>52</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> </tr> </thead> <tbody> <tr> <td colspan="2">WISE Damper a (SA)</td> <td>57</td> <td>59</td> <td>56</td> <td>48</td> <td>46</td> <td>40</td> <td>31</td> <td>25</td> </tr> </tbody> </table>										Damper 1 (Copy)		52	0	0	0	0	0	0	0	WISE Damper a (SA)		57	59	56	48	46	40	31	25
Damper 1 (Copy)		52	0	0	0	0	0	0	0																				
WISE Damper a (SA)		57	59	56	48	46	40	31	25																				
<table border="1"> <tbody> <tr> <td> Silencer 1 CLA-A-125-1000</td> <td>31</td> <td>-7</td> <td>-16</td> <td>-23</td> <td>-39</td> <td>-50</td> <td>-50</td> <td>-47</td> <td>-35</td> </tr> <tr> <td></td> <td></td> <td>27</td> <td>27</td> <td>23</td> <td>21</td> <td>18</td> <td>15</td> <td>14</td> <td>12</td> </tr> </tbody> </table>										Silencer 1 CLA-A-125-1000	31	-7	-16	-23	-39	-50	-50	-47	-35			27	27	23	21	18	15	14	12
Silencer 1 CLA-A-125-1000	31	-7	-16	-23	-39	-50	-50	-47	-35																				
		27	27	23	21	18	15	14	12																				
<table border="1"> <tbody> <tr> <td><input type="checkbox"/> Simple Receiver Assignment Receiver</td> <td>31</td> <td colspan="8"></td> </tr> </tbody> </table>										<input type="checkbox"/> Simple Receiver Assignment Receiver	31																		
<input type="checkbox"/> Simple Receiver Assignment Receiver	31																												

Damper 2																													
Frequency	dBA	63	125	250	500	1k	2k	4k	8k																				
Total	29	48	40	33	22	15	9	11	14																				
Required Insertion Loss	35	-	-	-	-	-	-	-	-																				
Receiver: Receiver (35 dB(A))	33	52	45	36	25	20	16	16	17																				
<table border="1"> <thead> <tr> <th colspan="2">Damper 2</th> <th>44</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> <th>0</th> </tr> </thead> <tbody> <tr> <td colspan="2">WISE Damper a (SA)</td> <td>52</td> <td>48</td> <td>46</td> <td>43</td> <td>39</td> <td>31</td> <td>23</td> <td>22</td> </tr> </tbody> </table>										Damper 2		44	0	0	0	0	0	0	0	WISE Damper a (SA)		52	48	46	43	39	31	23	22
Damper 2		44	0	0	0	0	0	0	0																				
WISE Damper a (SA)		52	48	46	43	39	31	23	22																				
<table border="1"> <tbody> <tr> <td> Silencer 2 MORENDO a-0301-600-300-650</td> <td>29</td> <td>-4</td> <td>-8</td> <td>-13</td> <td>-21</td> <td>-25</td> <td>-25</td> <td>-15</td> <td>-8</td> </tr> <tr> <td></td> <td></td> <td>19</td> <td>19</td> <td>15</td> <td>13</td> <td>&lt;10</td> <td>&lt;10</td> <td>&lt;10</td> <td>&lt;10</td> </tr> </tbody> </table>										Silencer 2 MORENDO a-0301-600-300-650	29	-4	-8	-13	-21	-25	-25	-15	-8			19	19	15	13	<10	<10	<10	<10
Silencer 2 MORENDO a-0301-600-300-650	29	-4	-8	-13	-21	-25	-25	-15	-8																				
		19	19	15	13	<10	<10	<10	<10																				
<table border="1"> <tbody> <tr> <td><input type="checkbox"/> Simple Receiver Assignment Receiver</td> <td>29</td> <td colspan="8"></td> </tr> </tbody> </table>										<input type="checkbox"/> Simple Receiver Assignment Receiver	29																		
<input type="checkbox"/> Simple Receiver Assignment Receiver	29																												

[Add Path](#)

Hover over here to show the bar  
Click delete



Hover over Reporting and click on Silencer Submittal

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



End Reflection



- Calculation Summary
- Silencer Schedule
- Silencer Submittal
- Damper Silencer

Damper 1		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	31	50	43	33	22	19	15	14	13
	Total	31	50	43	33	22	19	15	14	13
	Required Insertion Loss	35	-	-	-	-	-	-	-	-
●	Receiver: Receiver (35 dB(A))	33	52	45	36	25	20	16	16	17
Damper 1 (Copy)		52	0	0	0	0	0	0	0	0
WISE Damper a (SA)		57	59	56	48	46	40	31	25	
Silencer 1		31	-7	-16	-23	-39	-50	-50	-47	-35
CLA-A-125-1000		27	27	23	21	18	15	14	12	
<input type="checkbox"/>	Simple Receiver Assignment	31								
<input type="checkbox"/>	Receiver									

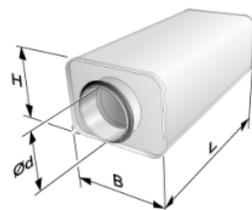
Damper 2		dB(A)	63	125	250	500	1k	2k	4k	8k
●	Frequency	29	48	40	33	22	15	9	11	14
	Total	29	48	40	33	22	15	9	11	14
	Required Insertion Loss	35	-	-	-	-	-	-	-	-
●	Receiver: Receiver (35 dB(A))	33	52	45	36	25	20	16	16	17
Damper 2		44	0	0	0	0	0	0	0	0
WISE Damper a (SA)		52	48	46	43	39	31	23	22	
Silencer 2		29	-4	-8	-13	-21	-25	-25	-13	-8
MORENDO a-0301-600-300-650		19	19	15	13	<10	<10	<10	<10	
<input type="checkbox"/>	Simple Receiver Assignment	29								
<input type="checkbox"/>	Receiver									

[Add Path](#)

## Silencer Submittal

Project: Damper Silencer

CLA-A-125-1000



Path

Damper 1

Position

Silencer 1

### Quick facts

- Extremely low installation height.
- Excellent sound attenuation
- Mineral wool covered with special polyester woven fabric.
- Tightness Class D
- Low pressure drop
- Included in the MagiCAD database
- Type-approved
- Fire-resistance classes EI30-EI120\* \*See required protection distance
- M1 classified

### General

- A rectangular sound attenuator with circular connection spigots.
- Unique properties regarding installation height, fire-resistance class, fibre-migration proof design and sound attenuation.
- Patented self-supporting fibre-migration proof surface lining and end wall solution.

### Dimensions

Width, B	236mm
Height, H	177mm
Length, L	1000mm
Diameter, Ød	125mm
Weight	7.2kg

### Data

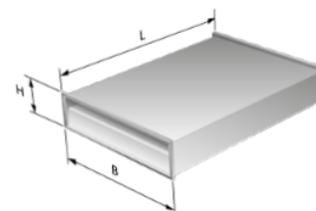
Inlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Outlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Air flow/s	100
Velocity (m/s)	8
Pressure drop (Pa)	19

Frequency band	63	125	250	500	1k	2k	4k	8k	Sum db(A)
Lw before attenuator	57	59	56	48	46	40	31	25	52
Attenuation (Ld)	7	16	23	39	50	50	47	35	
Sound generation (Lw)	27	27	23	21	18	15	14	12	
Lw after attenuator	50	43	33	22	19	15	14	13	31

## Silencer Submittal

Project: Damper Silencer

MORENDO a-0301-600-300-650



Path

Damper 2

Position

Silencer 2

### Quick facts

- Included in the MagiCAD database
- Low pressure drop via tapered acoustic baffle surfaces
- Available with cleaning cover
- ISOVER Cleantec® PLUS is cleanable using a wet method.
- Can be used everywhere where rectangular sound attenuators are used
- Low installation height
- Type-approved insulation material, ISOVER Cleantec® PLUS
- Available in a cleanable version
- Connection sizes ranging from 150x150 to 400x1000 mm

### General

- The MORENDO is a rectangular sound attenuator with extra low installation height to enable it to be used in installations where available space is restricted.

### Dimensions

Width, B	600mm
Height, H	300mm
Length, L	650mm
Weight	14kg

### Data

Inlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Outlet	Ideal Outlet Conditions - 3 to 4 diameters of straight duct
Air flow/s	300
Velocity (m/s)	2
Pressure drop (Pa)	5

Frequency band	63	125	250	500	1k	2k	4k	8k	Sum db(A)
Lw before attenuator	52	48	46	43	39	31	23	22	44
Attenuation (Ld)	4	8	13	21	25	25	13	8	
Sound generation (Lw)	19	19	15	13	<10	<10	<10	<10	
Lw after attenuator	48	40	33	22	15	9	11	14	29

Sound calculations



# 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

Quick add elements

Delete Edit

## 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

- Rectangular Duct
- Circular 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

Hover over element icon  
Quick add by clicking "Add"

# 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
<b>Required Insertion Loss</b>	<b>30</b>	-	-	-	-	-	-	-	-
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** 

