



## Product overview

Acoustic solutions

# Acoustic solutions

## Does silence have to be a luxury?

There is more noise and disturbance around us than ever before. Unwanted noise is just that – unwanted. At times it seems almost as though silence is a luxury. Here at Lindab we do not believe that this should be the case, and we therefore want to help with quieter climate systems. We know that a great amount of noise can be avoided, and we know how to achieve this feat. Through our research and development, we have built up solid expertise in the field of acoustics. And we want to share this expertise in various ways.

## One of the world's leading sound laboratories produces quieter climate systems

Our sound laboratory will provide us with even better knowledge about acoustics and how to design and dimension the climate systems of the future for increased sound and climate comfort. It has a 21 metre measuring duct and a reverberation room weighing 147 tonnes, suspended on 32 pneumatic vibration dampers.



*Lindab's sound laboratory is located in Farum, Denmark.*

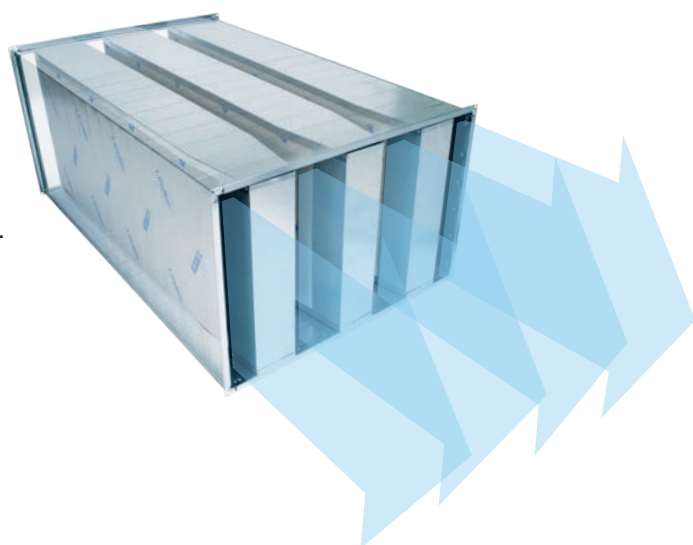
Lindab acoustic products include silencers to all purposes from residential ventilation to big industrial and marine products. As a leading silencer manufacturer Lindab can guarantee wide product range tested acoustic solutions. DIMsilencer calculation tool and its link to Magic Cad gives great help to designers and constructors to create comfortable silent indoor acoustic. All Lindab acoustic products has designed and producer so that those are easy to install and maintenance.

## Aerodim™

### The aerodynamic silencer reduces sound by half

Aerodim™ is based on a silencer splitter with an aerodynamic shape that offers completely new possibilities.

Aerodim™ allows you to use smaller dimensions and still achieve the same silencing with the same pressure loss as before. If you choose to use the same dimensions as before, you can reduce the sound by half or achieve 40% less pressure loss and thereby considerably lower your energy consumption.



Read more about Aerodim™ at [www.lindab.com/aerodim](http://www.lindab.com/aerodim)

# Acoustic solutions

## Circular straight

### Traditional acoustics

Traditional silencer with 50, 100 or 150 mm insulation. Insulation material is mineral wool or Acutec® polyester covered by perforated plate. Also with centre baffle to provide better attenuation.

**Use:** All building types.

**Size:** ø63...1600 mm, length 300...3200 mm

**Important features:** Low cost silencer with good tightness. Good attenuation with centre baffle.



## Circular (rect.) curved low-built

### Effective acoustics to narrow places

Low build curved silencer with very good attenuation. Insulation material is Acutec® polyester.

**Use:** All building types. Especially residential houses.

**Size:** ø100...200 mm, length 600 and 1000 mm

**Important features:** Combination of good attenuation and corner to places where we don't have space for straight silencer.



## Circular curved

### Traditional acoustics

Bend silencer with 50 or 100 mm insulation. Insulation material is mineral wool covered by perforated plate.

**Use:** All building types.

**Size:** ø125...630 mm.

**Important features:** Combination of good attenuation and corner to places where we don't have space for straight silencer.



## Exhaust air terminal device

### Combination of a traditional silencer and exhaust air terminal device

Silencer with 50 or 100 mm insulation and conical inlet with net. Insulation material is mineral wool covered by perforated plate. Acutec® polyester on request.

**Use:** On shopping centres, sport halls and other big rooms where we need big exhaust air volumes with low noise.

**Size:** ø100...400 mm, length 600...1200 mm.

**Important features:** Combination of high air volumes and low noise.



## Circular (rect.) straight low-built

### Low build acoustics

Low build silencer with very good attenuation. It is Easy to install to narrow places. Insulation material is mineral wool or Acutec® polyester.

**Use:** All building types. Especially residential houses.

**Size:** ø63...630 mm, length 300...1250 mm.

**Important features:** Effective silencing with low pressure drop. Also open able models for maintenance of duct system.



## Flexible silencers

### Easy to install silencer

Flexible perforated inner duct, attenuation material mineral wool or Acutec® polyester which is covered by plastic outer jacket make this silencer very easy to install.

**Use:** All building types.

**Size:** ø100...315 mm, length 1100 mm.

**Important features:** Small storage and transport volume. The insulation reduces noise passing through the silencer.



# Acoustic solutions

## Rectangular curved

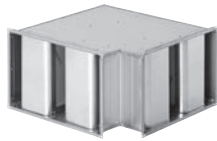
### Effective acoustics

Silencer with the attenuation baffles and corner. Attenuation material is mineral wool or Acutec® polyester. Several models according needs.

**Use:** Shopping centres, schools, hospitals, industry etc...

**Size:** According needs.

**Important features:** Sizing according the air volume, needed attenuation and space. Also open able models.



## Rectangular straight low-built

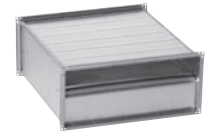
### Effective acoustics

for small ducts Rectangular silencer with low installation height. Attenuation material is mineral wool or Acutec® polyester.

**Use:** All building types.

**Size:** Width 200...1000 mm, height 150...400 mm, length 650...1250 mm.

**Important features:** Sizing according the air volume, needed attenuation and space.



## Rectangular splitter

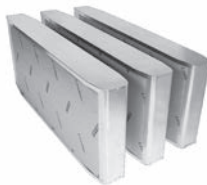
### Effective acoustics

Loose silencer baffles are used to get good attenuation in places where is not possible to use ready rectangular silencers. Attenuation material is mineral wool or Acutec® polyester. To calculate silencer you can use our IT-program DIMsilencer.

**Use:** Shopping centres, schools, hospitals, industry etc...

**Size:** According needs.

**Important features:** Sizing according the air volume, needed attenuation and space.



## Rectangular straight

### Effective acoustics

Silencer with the attenuation baffles. Attenuation material is mineral wool or Acutec® polyester. Several models according needs, with low pressure loss and good attenuation.

**Use:** Shopping centres, schools, hospitals, industry etc...

**Size:** According needs.

**Important features:** Sizing according the air volume, needed attenuation and space. Also open able models.



## Customer based solutions

Lindab has wide product range other silencers for different purposes. We produce attenuating duct, silencers with fire classification and silencers for industry, marine & off-shore.

**Materials:** Can be Galvanized steel, stainless steel, steel S235, aluminium...

**Material thicknes:** 0.5...5 mm.





# Acoustic solutions

## The choice of acoustic products

| Product type                       | Circular connection |                             |  |   |                                       |  |                             |   | Rectangular connection |   |                                  |               |
|------------------------------------|---------------------|-----------------------------|--|---|---------------------------------------|--|-----------------------------|---|------------------------|---|----------------------------------|---------------|
|                                    | Circular curved     | Circular curved - low build | Circular straight                                    | Circular straight with central pod / baffle | Circular straight with central baffle | Circular straight - low build                          | Exhaust air terminal device | Flexible silencers                                    | Rectangular curved     | Rectangular straight                              | Rectangular straight - low build | Silencer duct |
| <b>Product name</b>                | BSLCU<br>BSLU       | KVDP-90                     | PVA,<br>PVD<br><br>SLCU,<br>SLGU,<br><br>SLU<br>SLXU | PVAP,<br>PVDP,                              | SLBGU,<br>SLBU,<br>SLCBU              | KVAP,<br>KVDP,<br><br>LRBCB<br>LRCA,<br>LRCB,<br>LRCEC | EXAD,<br>SLKNU              | FSA<br><br>AKU-<br>COMP<br><br>SLFA,<br>SLFK,<br>SLFU | BDDL,<br><br>SLRB      | DACKA,<br>MINKA,<br><br>DLA,<br>DLDY,<br><br>SLRS | LRLB,<br>LRLS                    | SDI,<br>SDO   |
| <b>Residential ventilation</b>     |                     |                             |  |   |                                       |  |                             |   |                        |   |                                  |               |
| AHU silencer                       | •                   | •••                         | ••   |   |                                       | •••  |                             | • 1)  |                        |   |                                  |               |
| Duct (secondary) silencer          | ••                  | ••                          | ••   | •   | •                                     | •••  |                             | • 1)  |                        |   |                                  |               |
| <b>Non-residential ventilation</b> |                     |                             |  |   |                                       |  |                             |   |                        |   |                                  |               |
| Axial fans                         |                     |                             | •  | •••   |                                       |  | •                           |   |                        |   |                                  |               |
| AHU silencer                       |                     |                             |  |   |                                       |  |                             |   | •••                    | •••   |                                  |               |
| Duct (secondary) silencer          |                     |                             |  |   |                                       |  |                             |   |                        |   |                                  |               |
| • Rectangular ducts                |                     |                             |  |   |                                       |  |                             |   | •••                    | •••   | •••                              |               |
| • Round ducts                      |                     |                             | •••  | •••   | •••                                   | •••  | ••                          |   |                        |   |                                  | ••            |
| • Exhaust                          |                     |                             |  |   |                                       |  |                             | ••• 2)  |                        |   |                                  |               |
| • Cross talk                       | •••                 | ••                          | •••  |   |                                       | •••  |                             | • 1)  |                        | •   | ••                               | ••            |
| • VAV-systems                      |                     |                             |  |   |                                       |  |                             |   |                        |   |                                  |               |
| - VRA                              |                     |                             |  |   |                                       |  |                             |   |                        | •••   | •••                              |               |
| - VRU                              |                     |                             | •••  |   |                                       | •••  |                             |   |                        |   |                                  | •             |

••• very good      •• good      • suitable

1) Make sure that the emitted noise through silencer does not effect surroundings.

2) Big air-volumes.

