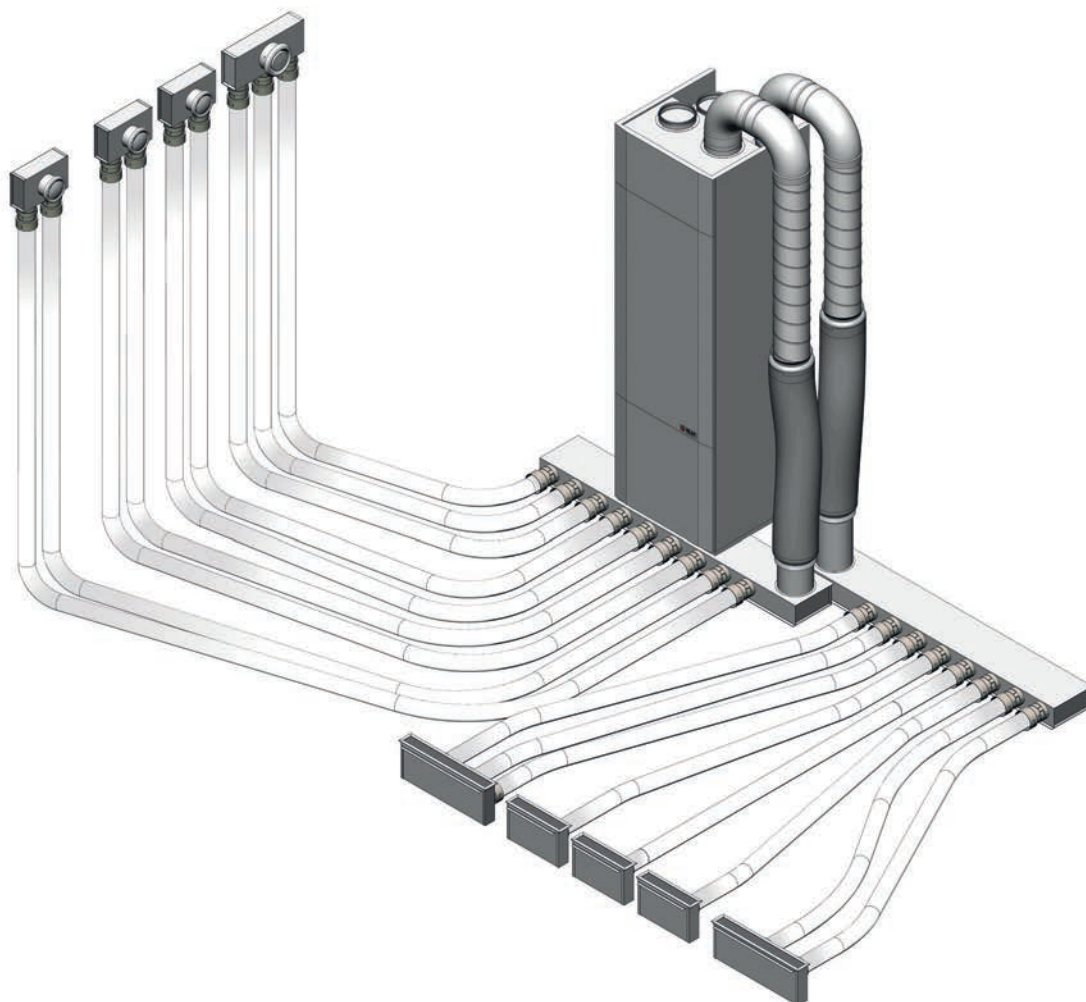


PRODUCT DATA

NILAIR BY NILAN



Air distribution



Domestic



Ventilation

NILAIR

NilAIR is installed together with a ventilation unit, which in simple terms consists of distribution boxes from which tubes are led out to air extraction and air supply boxes in the individual rooms.

NilAIR can be installed in ceilings, walls or floors. The lightweight tubes can be used for even the most complicated tube alignments, where e.g. traditional spiral ducts cannot be used.

Advantages

- Flexible and space-saving solution
- Rapid and simple installation with a click system
- Dimensionally stable and corrosion-resistant quality material
- Simple regulation of the air supply volume
- Low weight
- Airtight
- Easy to clean
- Easy to handle and transport
- Prevents sound travelling from room to room

NilAIR is already installed in thousands of European homes and since its introduction more than ten years ago its use has steadily increased, due to the rapid and easy installation without any special tools being required.

Enabling the impossible

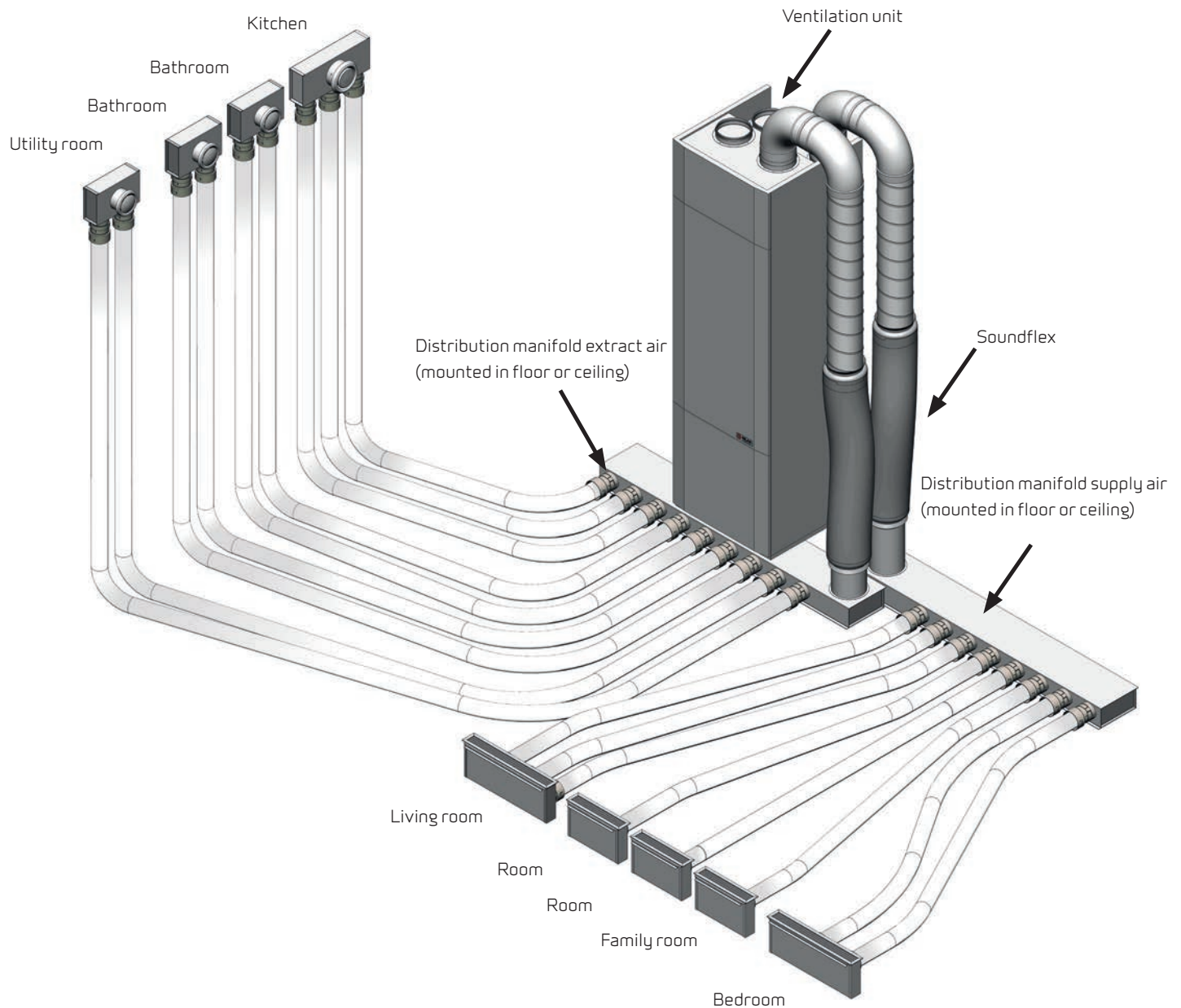
Traditional air distribution systems take up a lot of space and often make special building structures impossible. NilAIR virtually eliminates this problem, due to the tubes' size and flexibility.

Installation examples



Air extraction

(mounted in wall or ceiling)



Air supply

(mounted in floor, wall or ceiling)

TUBE

Use

A flexible solution to carry the supply air and extract air around the home.

The tubes are developed especially for ventilation systems and can be installed in various different building components, such as:

- Insulation layer
- The cast concrete floors or concrete ceilings
- Above suspended ceilings
- Under floors with sufficient space to carry the tubes

The tubes present many advantages compared to the traditional spiral duct solution. Installation does not take a lot of time, no need for special tools such as a grinder, and the tubes are easy to install in confined spaces.

This flexibility means that the tubes can be used in many situations where traditional ducts cannot be used, due to the confined space and narrow ducting routes.

The tubes can be bent to the following radius:

Ø75 mm: 27 cm

Ø90 mm: 30 cm

Advantages

- Smooth inside - minimising resistance and facilitating cleaning
- Reinforced corrugated exterior (STIS > 12.0 kN/m² in accordance with EN ISO 9969 SN 12)
- Easy to hide in the existing insulation (no extra insulation)
- Bendable - not necessary to buy bends and T-sections
- Sound-absorbing - no need to install extra sound absorbers between each room

*The sound-absorbing of "telephony" is more than 50 dB at an octave band medium frequency of 1000 Hz.
Tested according to ISO 3741 and EN ISO 9614-1
(HTA Luzern - Prüfbericht Nr: HP-04389)

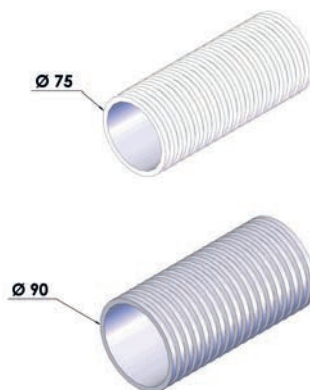
Material

Clean PE-HD

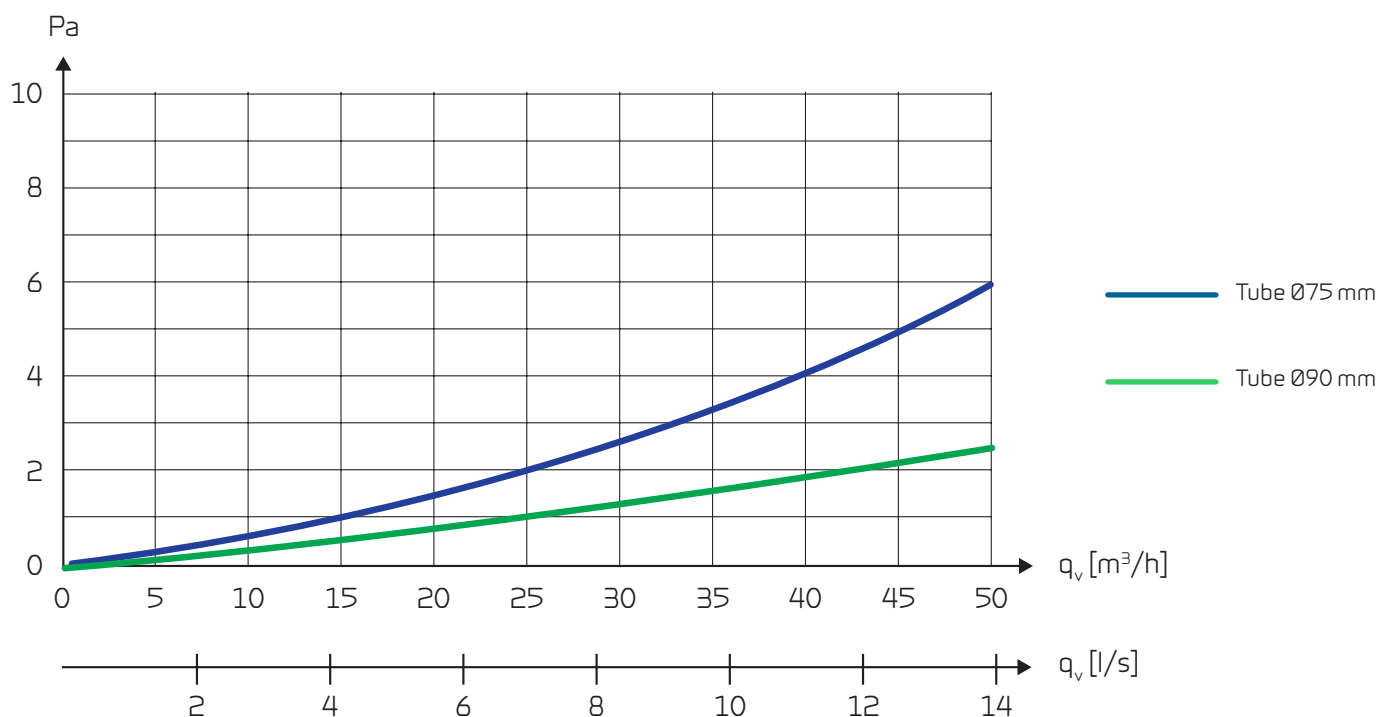
PE is classified as non-hazardous to health. In accordance with 1999/45/EG the tubes are free of hazardous substances.

Sizes:

- Ø75 mm - blue
 - Ø90 mm - green
- (sold in lengths of 50 m)



Pressure loss per meter



UNIQUE CLICK SYSTEM

NILAIR BY NILAN

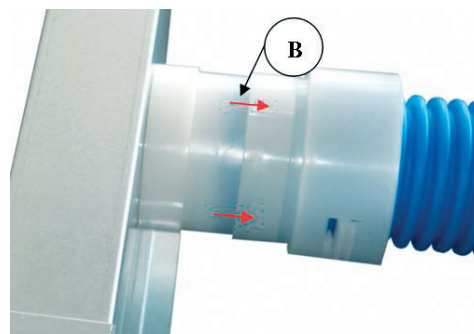
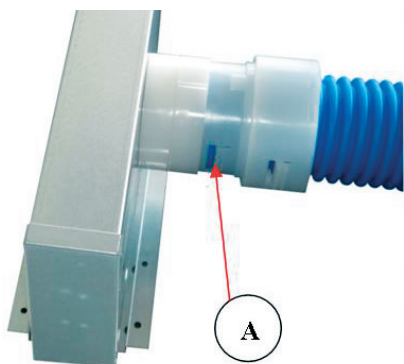
Rapid installation

Thanks to the unique, patented NilA/R click system, all tubes in the air distribution system can be mounted without using tools, due to the special design of the connectors on the distribution, extract and supply air boxes.

The connectors are designed to match both Ø75 mm og Ø90 mm tubes.

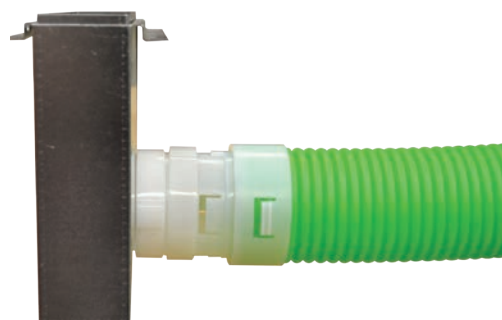
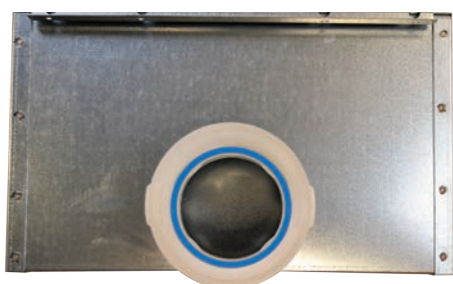
Installation of NilA/R Ø75 mm tube

There is a clamp ring on the connectors. When the tube has been pushed in and locked by the grips in the connector (A), the clamp ring is pushed into place (B), which ensures a stable, sealed join.



Installation of NilA/R Ø90 mm tube

Lay a silicon sealing joint in the connecting pipe. Push the hose into the connecting pipe. Lock the hose in place using the barbs on the connecting pipe. The joint is now stable and watertight.



DISTRIBUTION MANIFOLD

Unibox

The distribution manifold gather the tubes with supply and extract air and carry the air to and from the ventilation unit.

The connection between the unit and the distribution box can be made using a Soundflex connector. Soundflex is a flexible connector with thermal and sound absorbent insulation (read more on page 18).

The manifolds are insulated with 25-mm sound-insulating material to ensure a quiet transition to the tubes.

The distribution manifold can be mounted from ceilings, above suspended ceilings, or in floors under concrete decks.

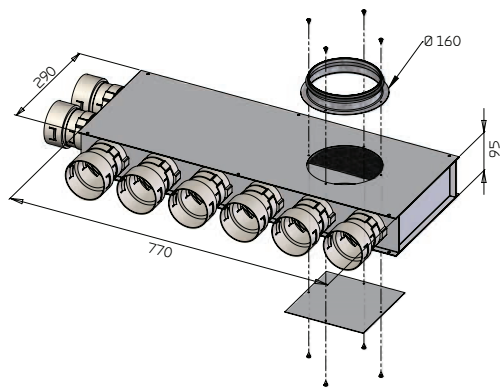
Sizes

For use in single-family home, oblong distribution manifold with 8 or 12 connectors are recommended.

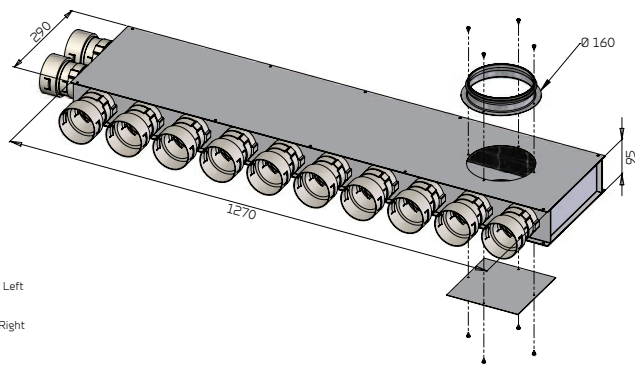
The connectors that are not used are sealed off with a cover.

Material	0,9 mm Aluzinc steel plate
Insulation	25 mm sound and condensateinsulation
Connectors	Pure PE-HD

Either left or right version of Unibox can be used. Screw off the connecting pipe and cover plate. Switch them around and replace.

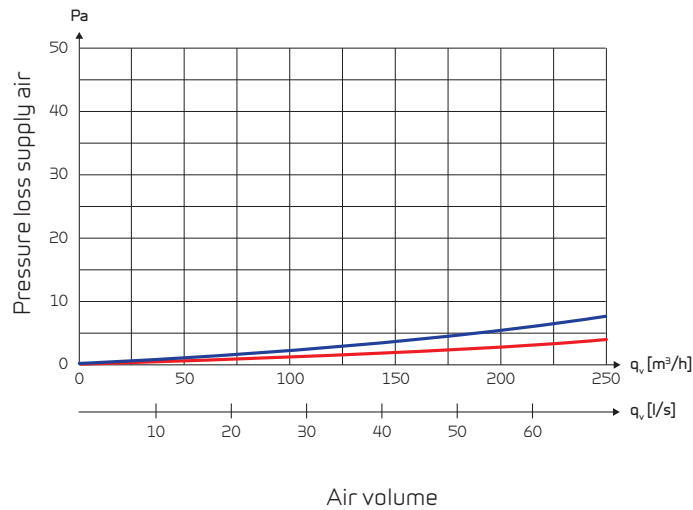


Unibox 8 connectors - Art.no. DK401208 (up to 240 m³/h)



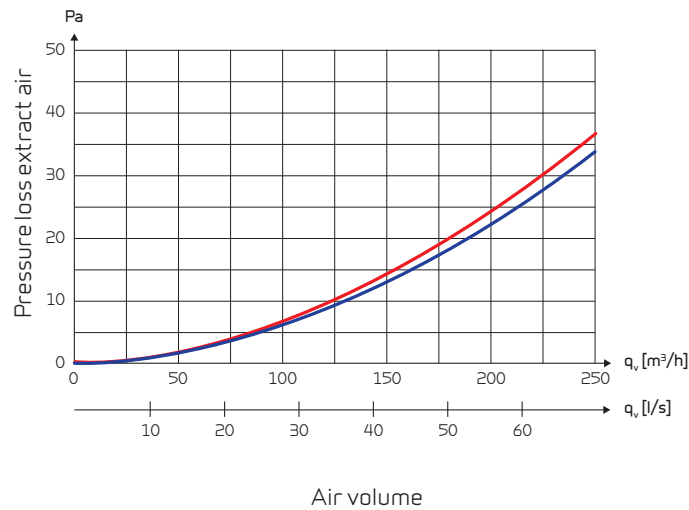
Unibox 12 connectors - Art.no. DK401212 (up to 360 m³/h)

Pressure loss supply air



Unibox 8 connectors - Art.no. DK401208

Pressure loss extract air



Unibox 12 connectors - Art.no. DK401212

DISTRIBUTION MANIFOLD

NILAI/R BY NILAN

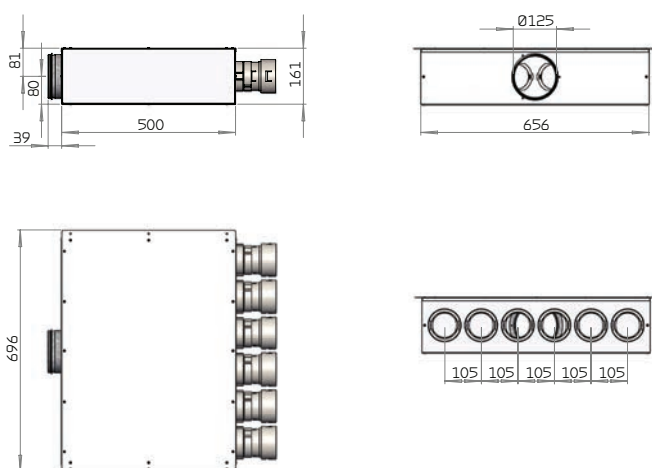
Combox

The distribution manifold gather the tubes with supply and extract air and carry the air to and from the ventilation unit.

The connection between the unit and the distribution box can be made using a Soundflex connector. Soundflex is a flexible connector with thermal and sound absorbent insulation (read more on page 18).

The manifolds are insulated with 25-mm sound-insulating material to ensure a quiet transition to the tubes.

The distribution manifold can be mounted from the ceiling.



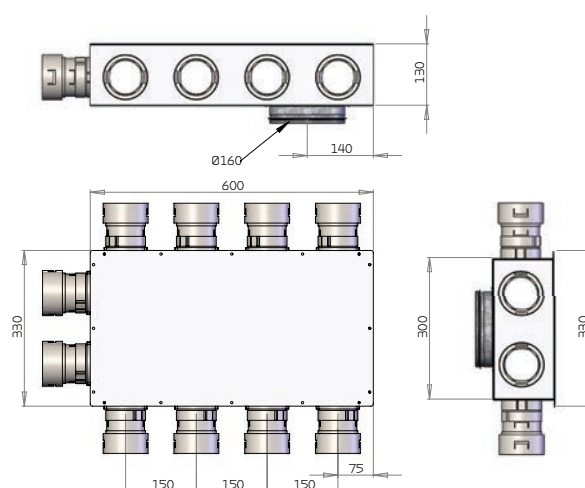
Combox 6 connectors - Art.no. 8528205 (up to 180 m³/h)

Sizes

For use in flats, are distribution manifold with 6 or 10 connectors available. For larger projects, the distribution box can be adapted to each project.

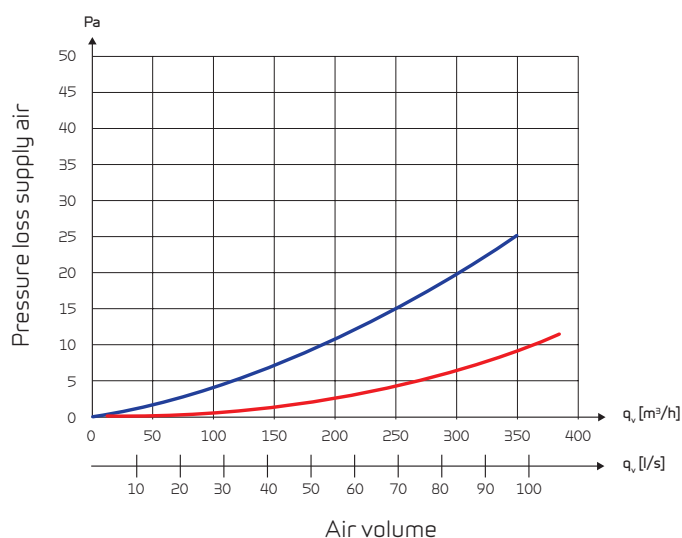
The connectors that are not used are sealed off with a cover.

Material	0,9 mm Aluzinc steel plate
Insulation	25 mm sound and condensate insulation
Connectors	Pure PE-HD



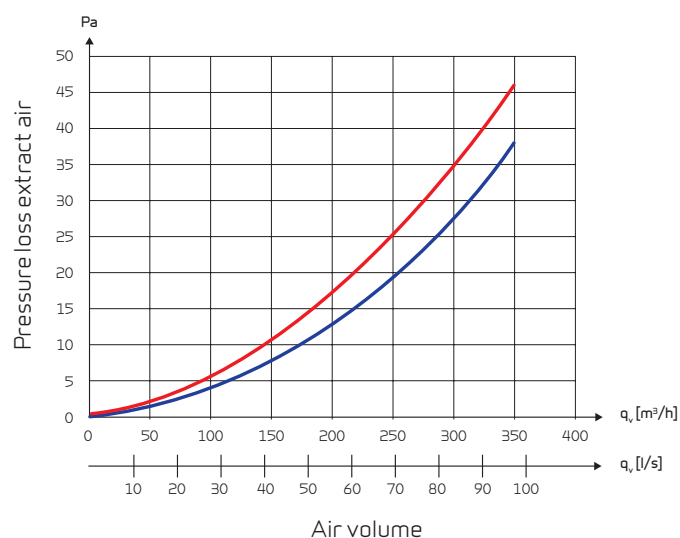
Combox 10 connectors - Art.no. DK431010 (up to 300 m³/h)

Pressure loss supply air



Combox 6 connectors - Art.no. 8528205

Pressure loss extract air



Combox 10 connectors - Art.no. DK431010

SUPPLY AIR BOXES LOW FOR GRID

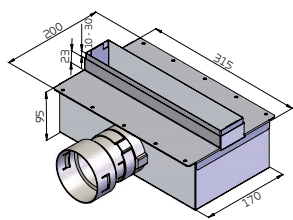
Use

Supply air boxes for grille can be mounted in ceilings, walls or floors. Can be ordered with 1, 2 or 3 connectors, depending on the air volume required.

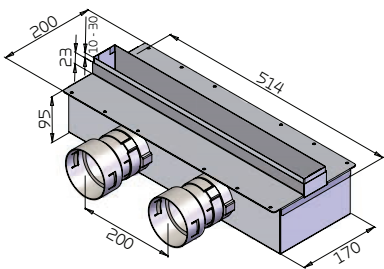
Suitable for both Ø75 mm og Ø90 mm tube.

A regulation element may be mounted to regulate the supply air volume in the individual box. The regulation element has seven settings and can be set by turning and clicking the inner element.
(page 19)

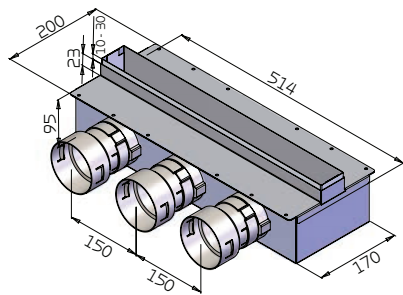
Material	0,9 mm Aluzinc steel plate
Connectors	Pure PE-HD
Grille sizes	1 connector (300 x 50 mm)
Grille sizes	2 or 3 connectors (500 x 50 mm)



1 connector - Art.no. DK409001

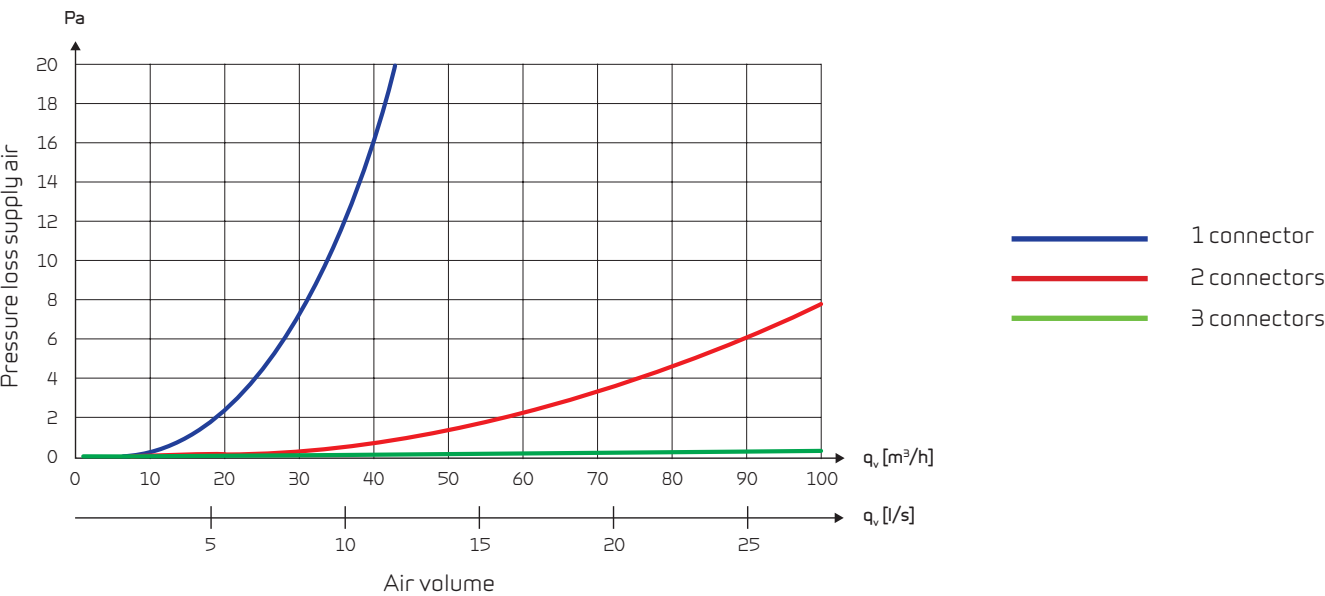


2 connectors - Art.no. DK409002



3 connectors - Art.no. DK409003

Pressure loss



SUPPLY AIR BOXES HIGH FOR GRID

Use

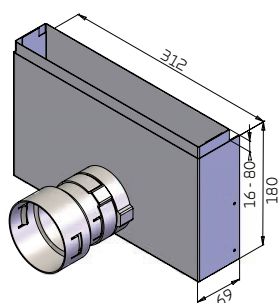
Supply air boxes for grille can be mounted in ceilings, walls or floors. May be ordered with 1, 2 or 3 connectors, depending on the air volume required.

Suitable for both Ø75 mm og Ø90 mm tube.

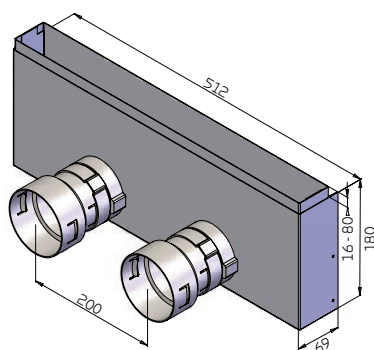
The size matches a brick section for mounting in a brick wall. The robust materials make them suitable for embedding without any risk of deformation.

Material	0,9 mm Aluzinc steel plate
Connectors	Pure PE-HD
Grille sizes	1 connector (300 x 50 mm)
Grille sizes	2 or 3 connectors (500 x 50 mm)

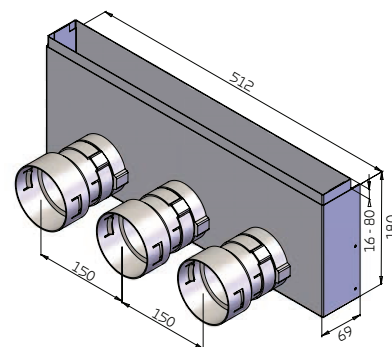
An adjustment component for grille box may be mounted to regulate the air supply volume in the individual box. The regulation element has seven settings and can be set by turning and clicking the inner element. (page 19)



1 connector - Art.no. DK408001

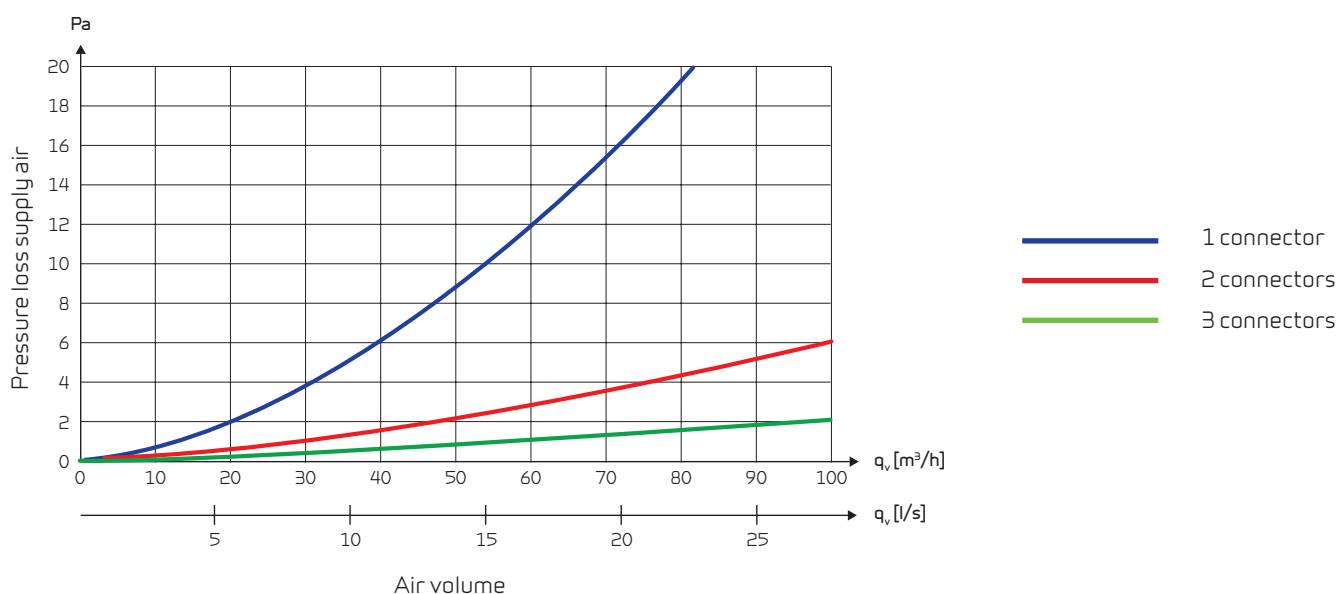


2 connectors - Art.no. DK408002



3 connectors - Art.no. DK408003

Pressure loss



SUPPLY AIR BOXES FOR VALVE

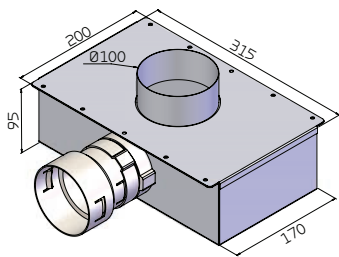
Use

Supply air boxes for mounting of valves for the supply air into a room. The valves are available in white-painted metal (page 14).

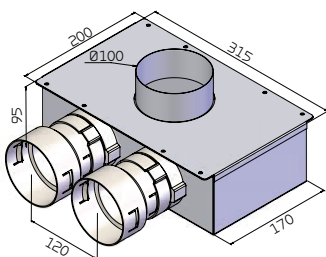
For ceiling or wall mounting. Can be ordered with 1, 2 or 3 connectors, depending on required volume.

Suitable for both Ø75 mm and Ø90 mm tubes.

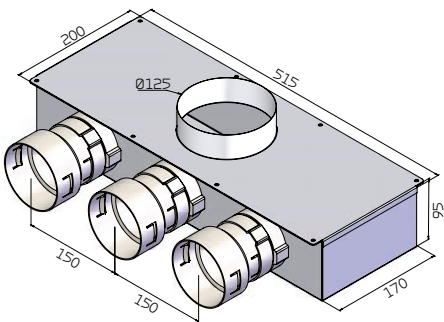
Material	0,9 mm Aluzinc steel plate
Connectors	Pure PE-HD
Valve for 1 or 2 connectors	Ø100 mm
Valve for 3 connectors	Ø125 mm



1 connector - Art.no. DK412001

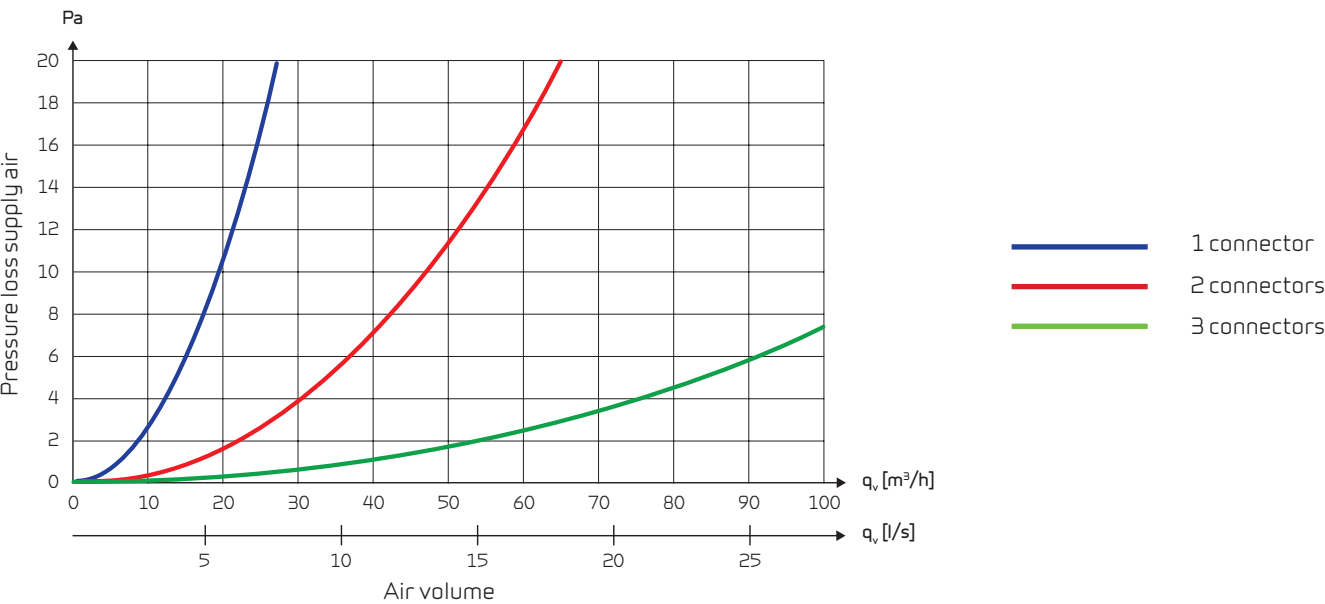


2 connectors - Art.no. DK412002



3 connectors - Art.no. DK412003

Pressure loss



EXTRACT AIR BOXES FOR VALVE

NILA/R BY NILAN

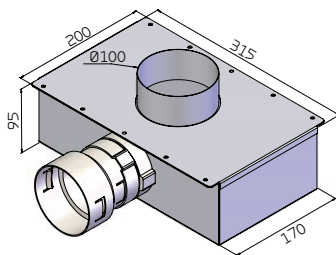
Use

Extract air boxes for mounting of valves for air extraction from rooms exposed to moisture. The valves are available in white-painted metal (page 14).

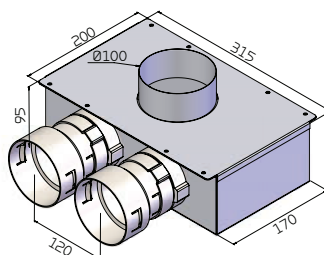
For ceiling or wall mounting. Can be ordered with 1, 2 or 3 connectors, depending on required volume.

Suitable for both Ø75 mm and Ø90 mm tubes.

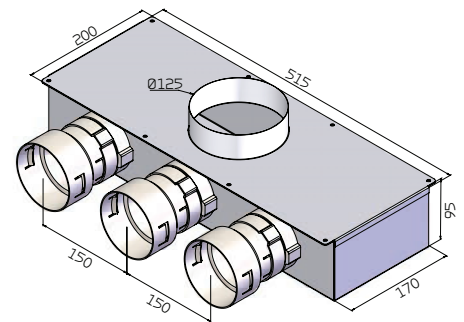
Material	0,9 mm Aluzinc steel plate
Connectors	Pure PE-HD
Valve for 1 or 2 connectors	Ø100 mm
Valve for 3 connectors	Ø125 mm



1 connector - Art.no. DK412001

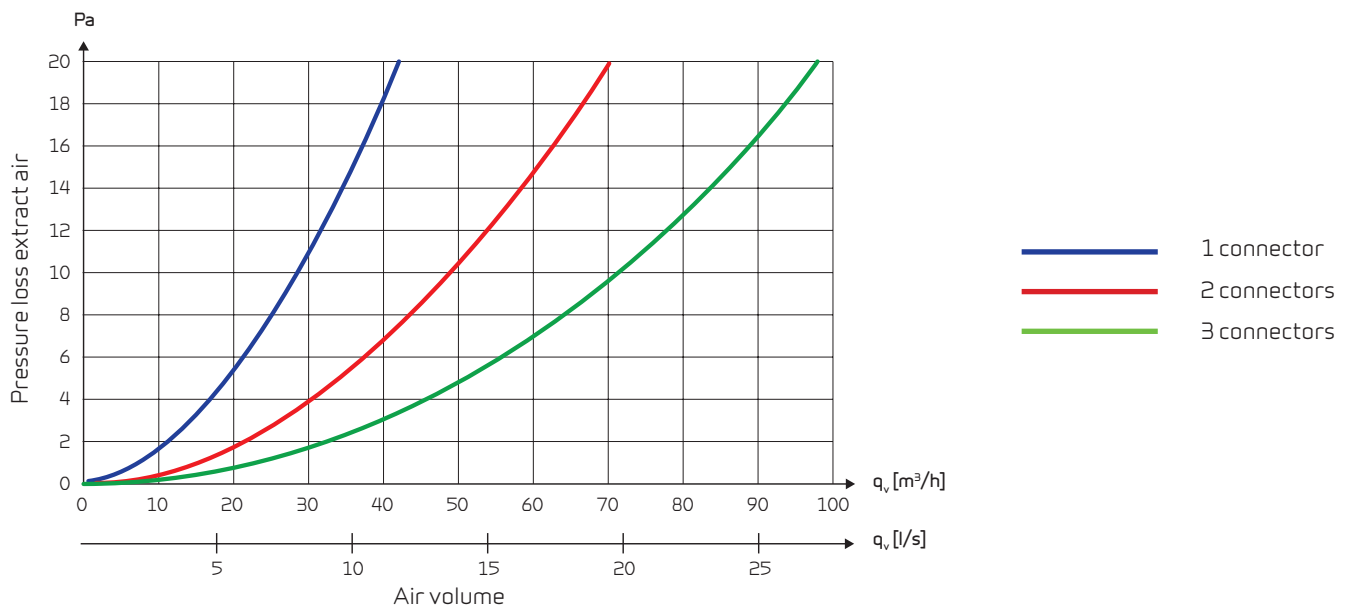


2 connectors - Art.no. DK412002



3 connectors - Art.no. DK412003

Pressure loss



SUPPLY AIR BOXES FOR VALVE ABOVE DOOR

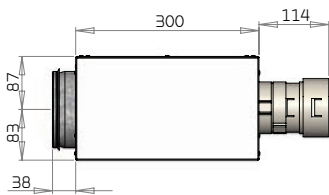
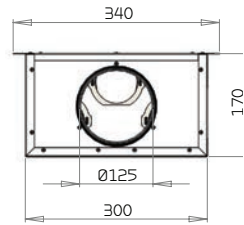
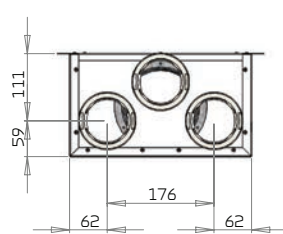
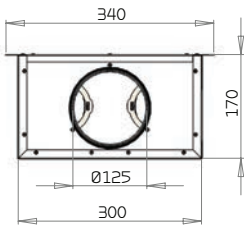
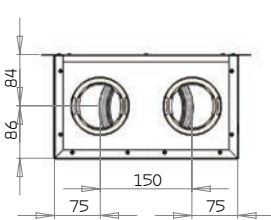
Use

Supply air boxes for mounting of valves to the supply air above a door.

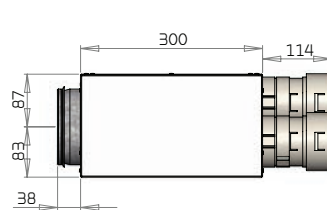
For wall-mounting. Can be ordered with 2 or 3 connectors, depending on required volume.

Suitable for both Ø75 mm and Ø90 mm tubes.

Material	0,9 mm Aluzinc steel plate
Connectors	Pure PE-HD
Valve	Ø125 mm

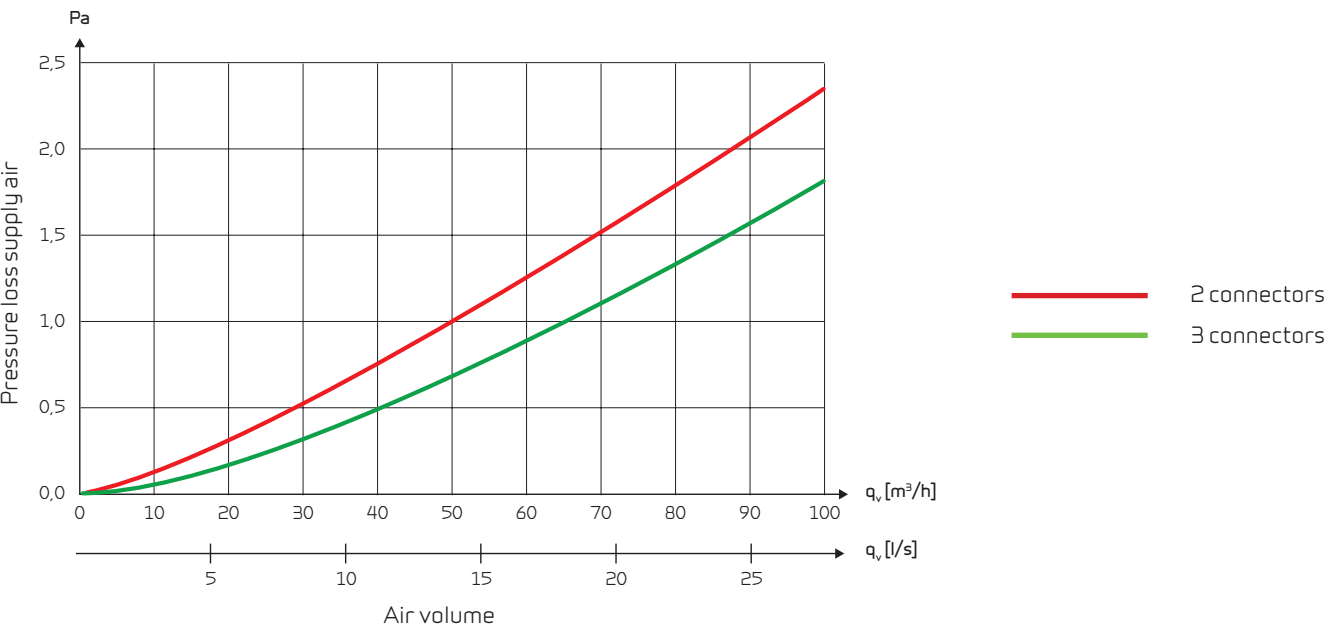


2 connectors - Art.no. 8528204



3 connectors - Art.no. 8528203

Pressure loss



EXTRACT AIR BOXES FOR VALVE ABOVE DOOR

NILAIR BY NILAN

Use

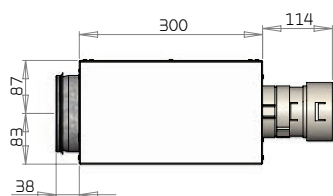
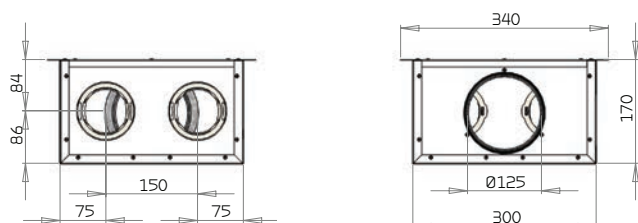
Extract air boxes for mounting of valves to extract air above a door.

For wall-mounting. Can be ordered with 2 or 3 connectors, depending on the air volume required.

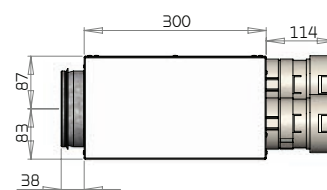
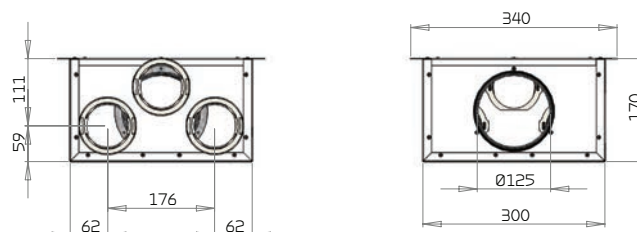
Suitable for both $\varnothing 75$ mm and $\varnothing 90$ mm tubes.

Materiale	0,9 mm galvaniseret stål
Stutse	Pure PE-HD
Ventil	$\varnothing 125$ mm

The box may also be installed after an EM-box. In this way, tubes for extracted air can be connected to the system.

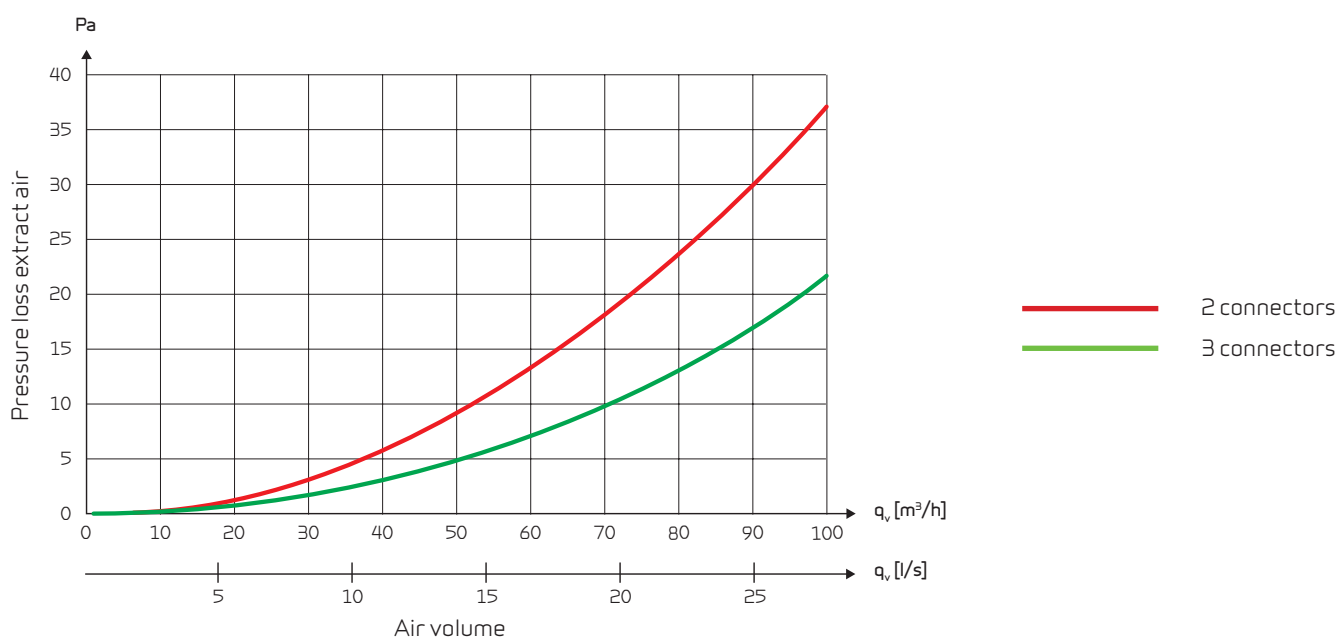


2 connectors - Art.no. 8528204



3 connectors - Art.no. 8528203

Pressure loss



VALVES

Discreet valves

NilAIR valves are barely visible in the room. They have a low height, thus giving a good quanda effect.

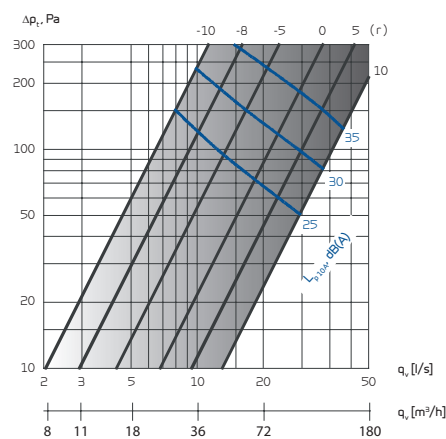
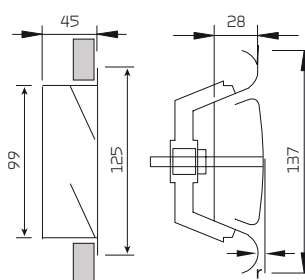
The KIR model makes it possible to determine the supply air direction, thereby avoiding draughts at exposed points.

The valves are mounted in the supply or extract air boxes (pages 10 to 13) in both ceiling and wall.

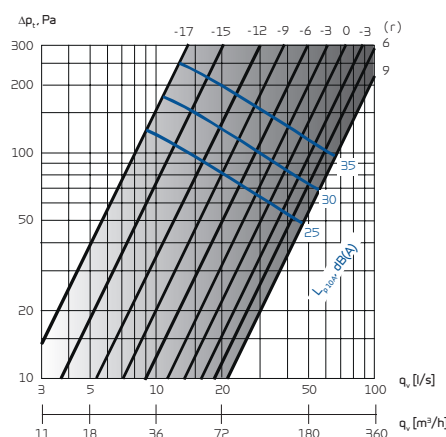
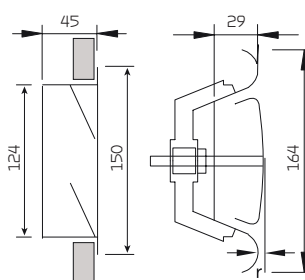
Material	Steel, white powder coating RAL 9010
Sizes	Ø100 mm and Ø125 mm
Valve frame	Attached

KU - Extraction valve

Ø100 mm - Art.no. 86891



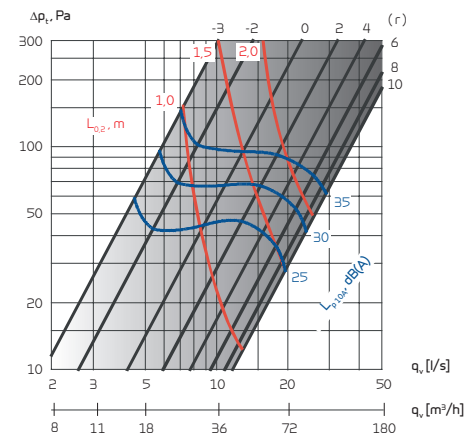
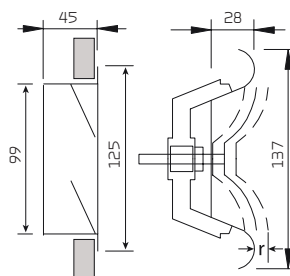
Ø125 mm - Art.no. 86911



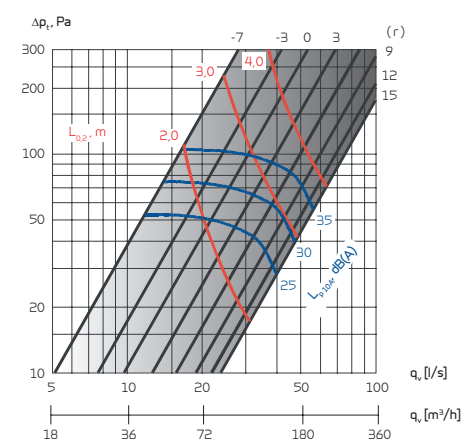
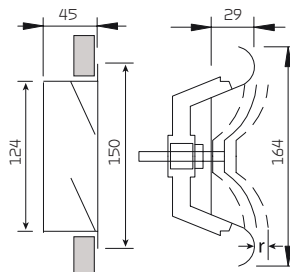
KI - Air supply valve



Ø100 mm - Art.no. 86591



Ø125 mm - Art.no. 86611

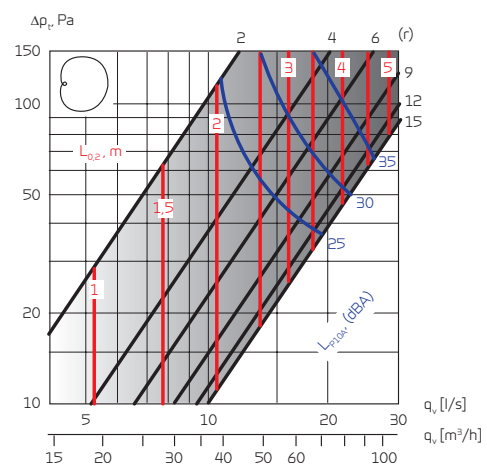
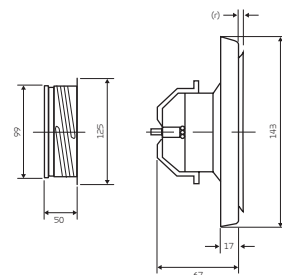


KIR - Air supply valve

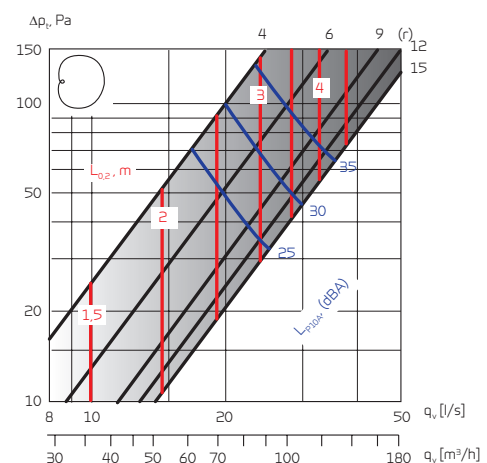
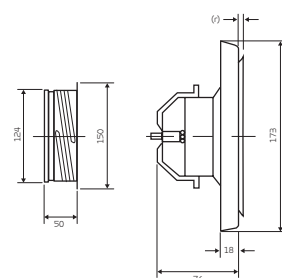
With a sector plate for directional air supply.



Ø100 mm - Art.no. 8675



Ø125 mm - Art.no. 8677



GRILLES

Elegant grilles

The elegant latticed air injection grids emphasise the home's stylish architecture with a modern ventilation system.

The grid is mounted in the supply air boxes (pages 8 and 9) in ceiling, wall or floor.

The air supply grilles are available in two qualities: Elegance and basic.



Elegance

The supply air grille has a 2 mm high and 15 mm wide frame with a straight edge.

Material	Silver-anodised aluminium
For Grille with 1 connection	300 x 50 mm
For Grille with 2 or 3 connections	500 x 50 mm

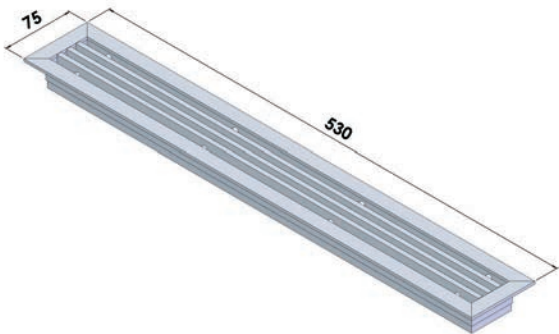
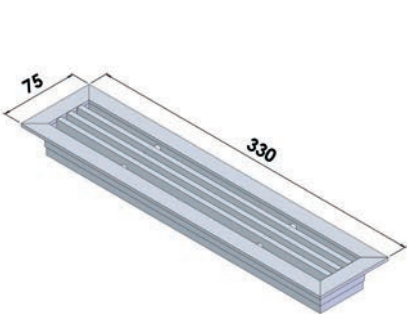


Art.no: W043001 Elegance Silver-anodised (300 x 50 mm)



Art.no.: W045001 Silver-anodised (500 x 50 mm)

Dimensional drawing



Basic

The supply air grille has a 4 mm high and 20 mm wide frame with a round off edge.

Material	Silver-anodised aluminium
Basic white	White powder coating RAL 9010
For Grille with 1 connection	300 x 50 mm
For Grille with 2 or 3 connections	500 x 50 mm



Art.no: W043002 Basic Silver-anodised (300 x 50 mm)



Art.no: W045003 Basic Silver-anodised (500 x 50 mm)

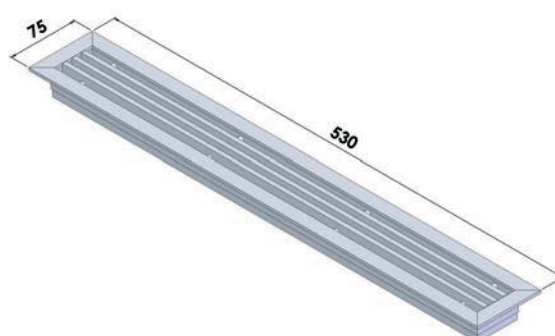
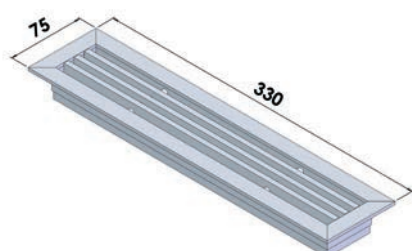


Art.no: W043003 Basic white (300 x 50 mm)



Art.no: W045004 Basic white (500 x 50 mm)

Dimensional drawing



SOUNDFLEX

Flexible silencing

Flexible duct connection, with thermal-acoustic insulation. A simple and easy connection between the unit and distribution manifolds. Is also useable between the unit and discharge air and outdoor air intake.

The perforated internal duct allows the insulating layer to damp and absorb the noise created in ventilation units.

A protection film covers the insulating mat to avoid its erosion. Furthermore it limits the thermal exchange between the carried air and the external environment and avoids the formation of condensate during cooling.



Construction	
Internal duct	Perforated laminated aluminium-polyester
Anti erosion barrier	Closed polyester film
Spiral	Harmonic wire pitch 36 mm
Insulating material	glass wool thick 25 mm, density 16 kg/m ³
External duct	Laminated aluminium-polyester, reinforced with glass fibre
Characteristics	
Operating temperature	-30 / 140 °C
Max. pressure	2500 Pa
Max. velocity	30 m/s
Min. bending radius	25 + (0,54 x Ø) mm

Meets all demands according to EN 13180

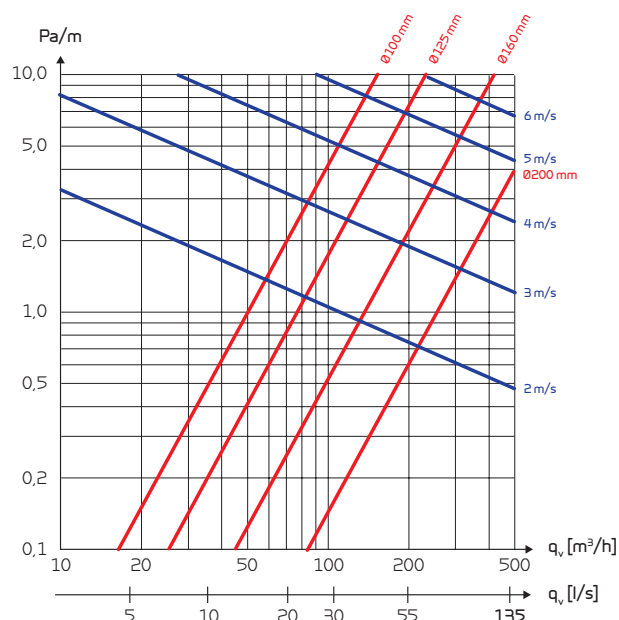
Sizes

Ø100 mm (length 6 m) - Art.no. 854801
 Ø125 mm (length 6 m) - Art.no. 855101
 Ø160 mm (length 8 m) - Art.no. 855301
 Ø200 mm (length 6 m) - Art.no. 855401

Silencing (dB) 1 m tube

Hz	Ø100	Ø125	Ø160	Ø200
125	9	12	17	7
250	19	20	22	15
500	32	21	22	17
1.000	37	25	27	20
2.000	31	29	19	16
4.000	21	17	14	13

Pressure loss per meter



Silencing (dB) 2 m tube

Hz	Ø100	Ø125	Ø160	Ø200
125	19	17	31	20
250	33	31	39	34
500	52	44	34	32
1.000	53	45	38	35
2.000	49	46	31	30
4.000	36	26	20	22

Silencing (dB) 3 m tube

Hz	Ø100	Ø125	Ø160	Ø200
125	25	23	29	18
250	39	46	43	40
500	50	44	41	38
1.000	52	47	46	41
2.000	54	51	39	39
4.000	40	34	27	30

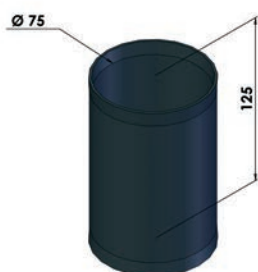


End cap

To seal any unused connectors in the distribution box.

The cover can also be used to protect from building dust and rain water when mounted on tubes or distribution boxes.

Art.no. W429090

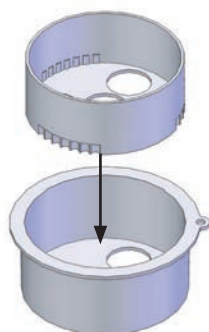


Duct-to-duct connector

Used to connect tubes, in the cases where there is a need to extend a tube.

Ø75 mm - Art.no. W441001

Ø90 mm - Art.no. W541001



Adjustment component for grille box

Regulation of the air volume, with 7 settings. Primarily used in boxes for grilles.

Art.no. W041100

EM-BOX

Use

The EM-box can be connected to Nilan's ventilation units. An EM-box enables heat recovery via the home's cooker hood, utilising the heat generated from cooking.

When the cooker hood is switched off, the basic ventilation takes place via the hood. When more powerful extraction is needed, e.g. during cooking, a damper in the hood is opened. At the same time, the damper in the EM-box will regulate the air extraction from other rooms as a part of the basic ventilation, so that the primary air extraction takes place via the hood.

If a larger air volume is needed for the hood to provide effective extraction, the ventilation unit will increase the air volume. When the hood is switched off, ventilation will return to normal operation.

The EM-box can be placed above the extraction hood, or at any point between the aggregate and hood.

Material	0,9 mm Aluzinc steel plate
Weight	6 kg
Filter class	Metal grease filter
Duct connections	2 x Ø160 mm og 2 x Ø125 mm
Supply voltage	230V

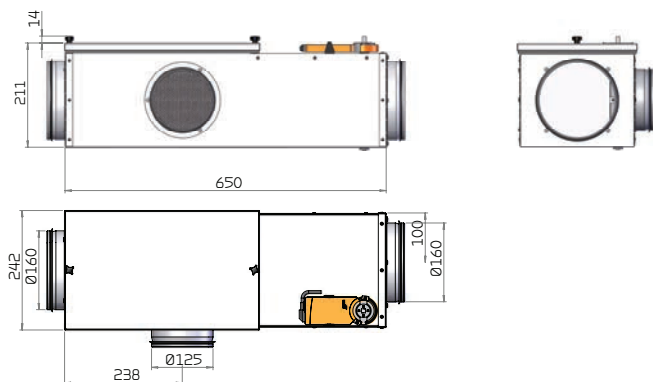
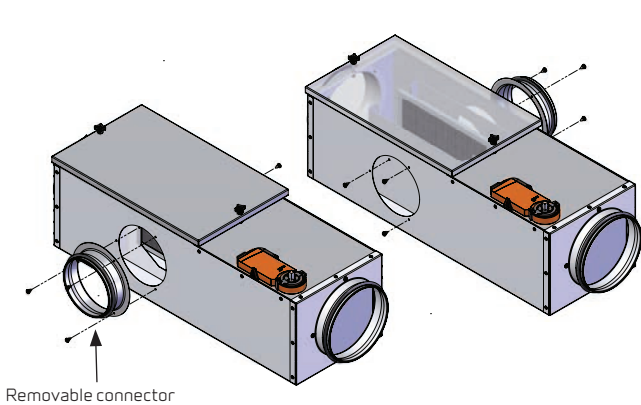
Range hood filter box

If the EM box cannot be optimally located, a range hood filter box can be used instead. The range hood filter box takes up less space and can be located adjacent to the hood. For the range hood filter box solution a DTBU damper must be placed in the extract air duct before the range hood.

Dimensional drawing

All dimensions are in mm.

EM-box

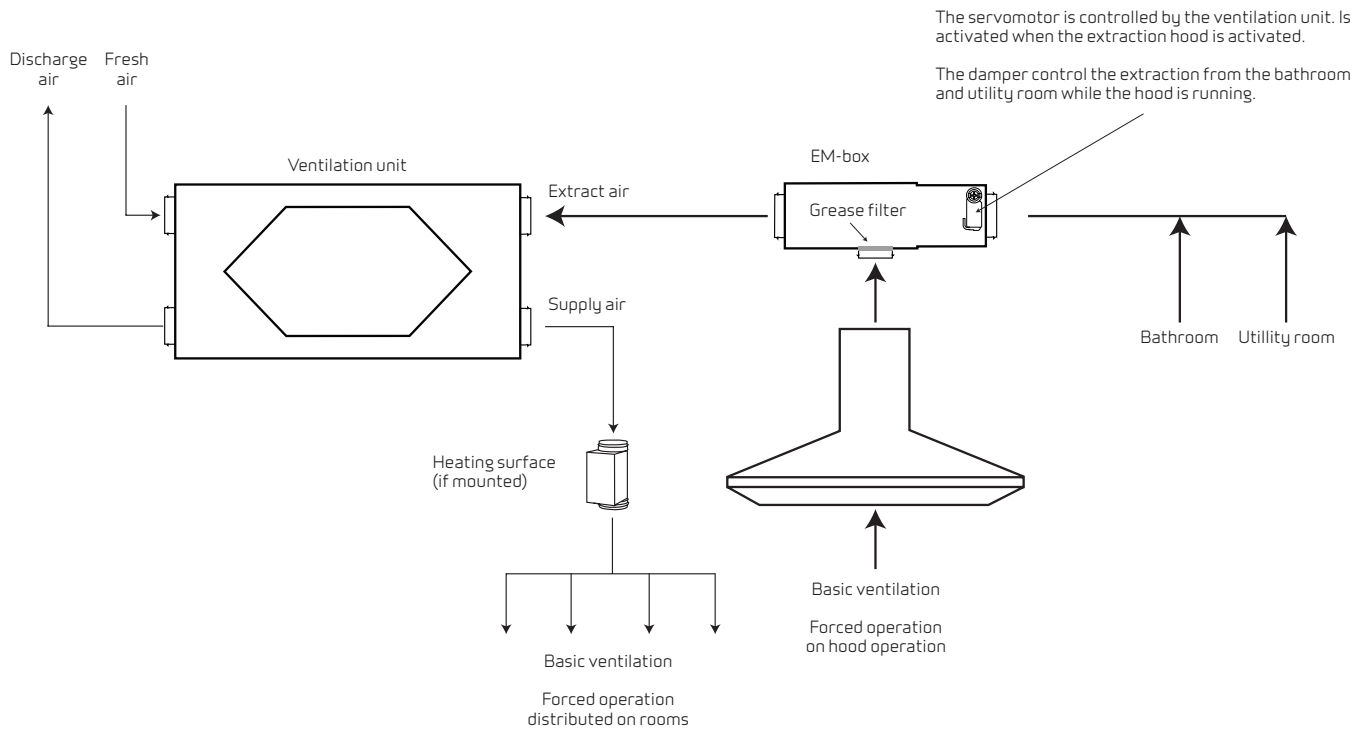


Range hood filter box

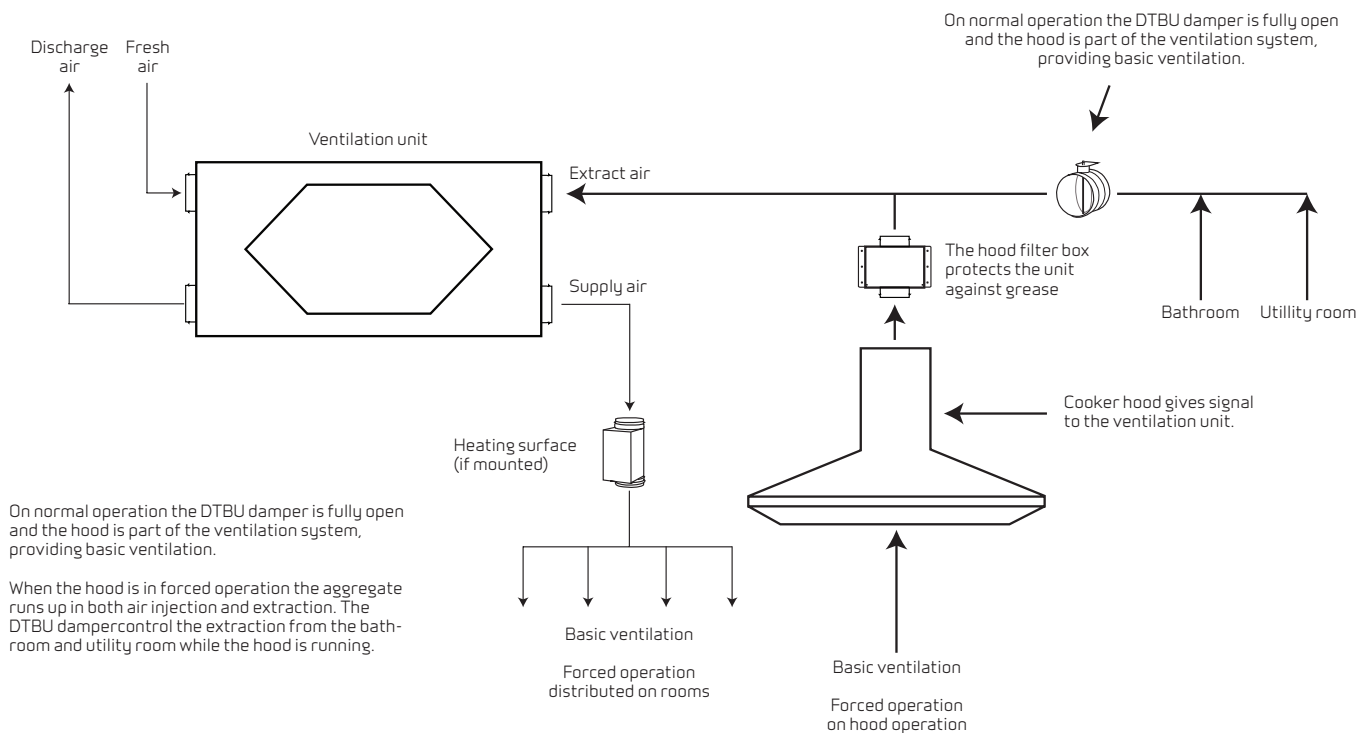


Schematic diagrams

EM-box



Range hood filter box



INSTALLATION EXAMPLES

One storey house

A one storey family house with Comfort 300 ventilation unit mounted with NilA/R air distribution system.

The air distribution are mounted in the ceiling.



Scan the QR-code to view an animation of NilA/R used in a one storey house.

Two storey house

A two storey family house with Compact P ventilatio nunit mounted with NilA/R air distribution system.

The air distribution are mounted in the storey of the building.



Scan the QR-code to view an animation of NilA/R used in a two storey house.

Appartment

An apartment with Comfort 300 Top ventilation unit mounted with EM-box and NilA/R air distribution system.

The air distributions are mounted in the ceiling.



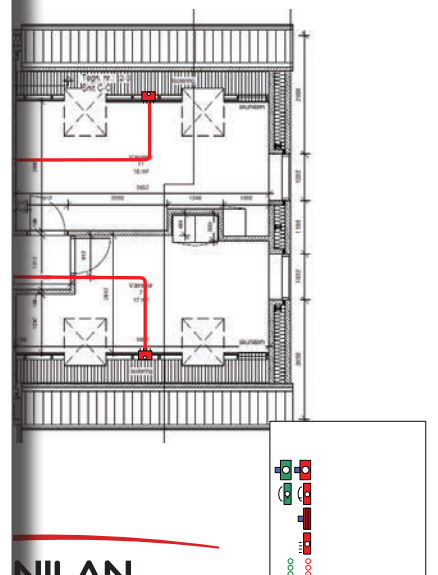
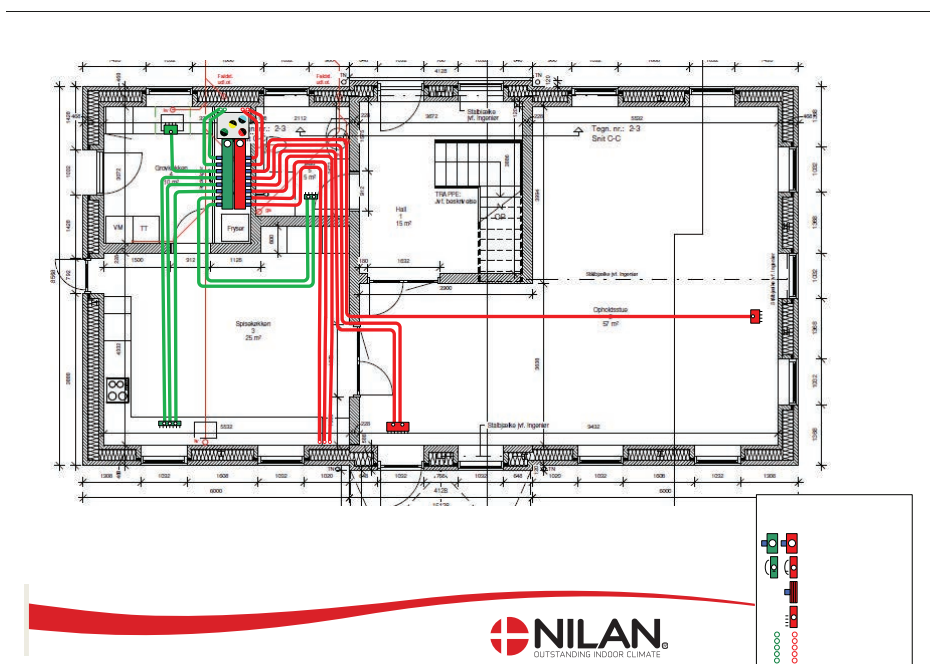
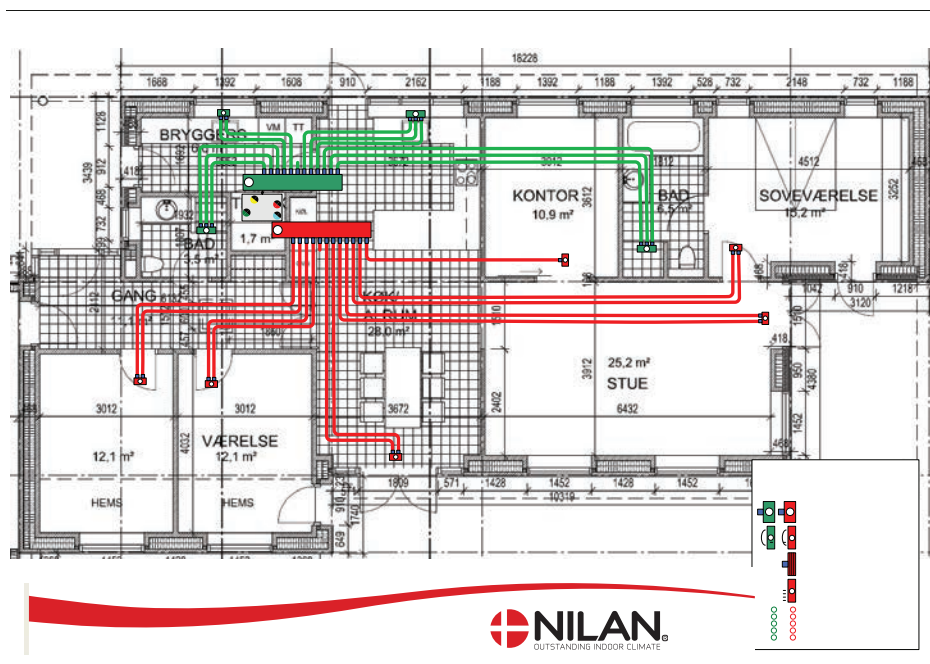
Scan the QR-code to view an animation of NilA/R used in an apartment

NilAIR drawing

Nilan offers to provide drawings of the ventilation system installed in a one or two-storey house. A minimal fee is charged for this service.

The drawing gives the installer a clear overview of the location of the various supply and extract air valves and grilles, and the NilAIR tubes.

Once the drawing is approved, a part list is supplied.



INFORMATION FROM A TO Z

Nilan develops and manufactures premium-quality, energy-saving ventilation and heat pump solutions that provide a healthy indoor climate and low-level energy consumption with the greatest consideration for the environment. In order to facilitate each step in the construction process - from choosing the solution through to planning, installation and maintenance - we have created a series of information material which is available for download at www.nilan.dk.



Brochure

General information about the solution and its benefits.



Product data

Technical information to ensure correct choice of solution.



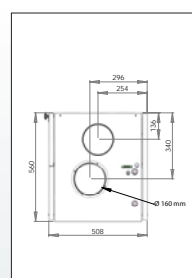
Installation instructions

Detailed guide for installation and initial adjustment of the solution.



User manual

Detailed guide for regulation of the solution to ensure optimum day-to-day operation.



Drawings

Tender documents and 3D drawings are available to download for planning purposes.

WWW.NILAN.DK

Visit us at www.nilan.dk to find out more about our company and solutions, download further information and find your nearest dealer.



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