



THE AIR DISTRIBUTION SYSTEM OF THE FUTURE FOR HOMES WITH COMFORT VENTILATION



**NilAIR**

Flexible and space-saving  
air distribution system

# Maximum air quality in a minimum amount of space and time



NilAIR is a space-saving, flexible, sound-absorbent and easily cleaned and installed air distribution system for use in everything from detached houses to apartment complexes and office buildings. NilAIR is based on matching and standardised coordinated components which together provide a complete and perfect air distribution solution.

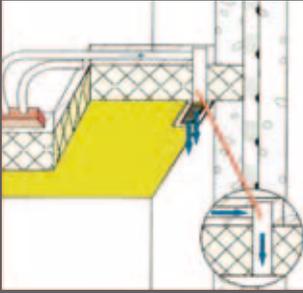
In modern design, architects, engineers and construction companies often face insoluble ventilation problems as traditional air distribution systems take up too much space and often make special structures impossible.

Especially the demand for houses with beamed ceilings is now so great that most new houses have beamed ceilings, which has made installation of more space-hungry systems almost impossible. The NilAIR system largely eliminates this problem.

The NilAIR system is installed with a Nilan ventilation system and thereby ensures 100% fresh air in the home, which means that air pollution such as pollen, dust and bacteria are removed.

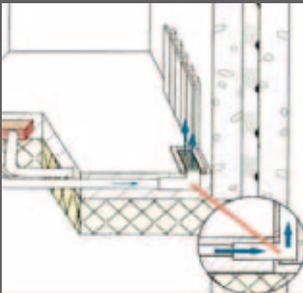
The NilAIR system has been sound- and pressure tested.

The front page picture shows a typical detached house with a NilAIR air distribution system installed. Outside air is drawn in through the intake and led through the Nilan ventilation system. With the Nilan system outside air is heated with the warm energy collected from the warm and wet zones of the home. The warm intake air is blown directly into a NilAIR distribution box which distributes the air to each NilAIR fitting box. The system is used for the exhaust air as well - in the reverse order.



### Elegance grilles in the ceiling

Solution with an Elegance grille in the ceiling. Where cover elements are used, there would usually be a requirement for line recesses to make room for the pipes. NilAIR, which only requires a diameter of 75 mm (fitting box H105 mm), is easy to fit into the blinding concrete above the cover element which saves time and money on the construction of recesses. The flexible NilAIR pipes and the special air distribution boxes make NilAIR usable in all well-known constructions and opens up the option of more original building solutions.



### Valves in floors and walls

NilAIR can also be located using valves in floors and walls. This is entirely up to what the client and the planners want. But a good starting point is to locate exhaust air fittings in ceilings and walls and intake air fittings in floors - for example in front of windows or window breasts.

## NilAIR pipes, distribution and fitting boxes

Air distribution between system and fitting takes place in highly flexible and installation-friendly NilAIR pipes. The pipes are constructed in two layers: an external grooved surface increases strength and flexibility and the internal smooth surface prevents the build-up of dirt and makes it easier to clean. NilAIR pipes are made of new, environmentally friendly and recyclable PE-HD. NilAIR pipes have an external diameter of 75 mm, which makes them easy to install under loft insulation, in terrain cover or recesses above the cover element on the first floor. The latter can be seen on the illustration below left.

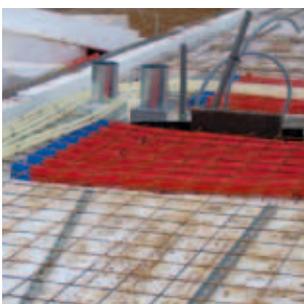
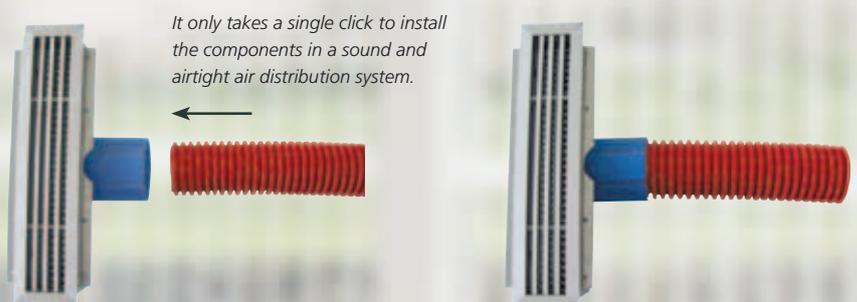
NilAIR pipes can be installed in floors, walls or ceilings. Thanks to their high level of flexibility NilAIR pipes can be installed in difficult structures where space is at a premium without the use of various form or adaptation modules. The smooth internal surface and the constant pipe dimension guarantee minimal loss of pressure. The NilAIR system can also be laid quickly and installed entirely without the use of specialist tools.

## The Clickable System

With the patented NilAIR Clickable System the installation of NilAIR pipes can be carried out without the use of tools. The Clickable System also means guaranteed high level of tightness and very fast workflows.

Home ventilation usually requires relatively small volumes of air, which means that leakages should be avoided at all costs. As each pipe is installed from the distribution box and is led directly to each fitting box, this also means a high level of tightness and minimum sound transfer (telephony).

The NilAIR system only comprises of a few main components and the NilAIR pipes are supplied in rolls. The system requires very little construction space and reduces transport costs.



Example of NilAIR installed in the floor (ground cover) of a detached house.

*NilAIR is the perfect air distribution solution for the distinctive building style with beamed ceilings and other unorthodox building solutions.*



### **Maintenance/cleaning**

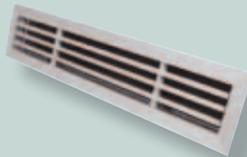
Due to the long life of the air distribution system it is important that it is easy to clean. To ensure this - sharp bends, joints, obstacles and pipe dimension changes should be avoided. The Nilair system is accessible from start to finish thereby facilitating thorough cleaning.

### **Sound absorption**

The NilAIR air distribution system absorbs sound and prevents the transfer of sound from room to room which is a well-known and significant problem in traditional air distribution systems. As each air intake and exhaust is individually connected to the distribution box, no sound can be transferred between rooms. Sound from the ventilation system is dampened up to three times via the NilAIR system – first through the NilAIR sound absorber, then through the distribution box which is covered with sound-absorbent material and lastly through the NilAIR pipes.

## **NilAIR grilles/valves**

The choice of grilles/valves for a ventilation solution is important, as this is the only visible proof that time and care have been taken in the installation of the ventilation solution. It is often solved by using valves which is an economical and sensible solution. However, architecturally this does not match sophisticated buildings and interior design. That is why we have designed the NilAir system to match our stylish Elegance or Classic diffusion grilles. Especially the Elegance grille has been designed for contemporary building construction and for those who prefer the use of aluminium in today's design. The Elegance and Classic grilles are installed using a spring solution, which completes the NilAir system's ease of installation and does not leave unsightly installation holes.



### **Elegance grille**

The NilAIR system includes the finely processed and elegant NilAIR Elegance grilles. The Elegance grilles are supplied as standard in a stylish aluminium design. The Elegance grilles have been adapted to the NilAIR fitting box and can be installed without the need for tools. The NilAIR Elegance grilles can be used both for intake and exhaust air and can be fitted in ceilings, floors and walls.



### **Classic grille**

For a more affordable solution we recommend the NilAIR Classic grille. The Classic grille has a more rustic look, a wider profile and is not as detailed as the Elegance grille. Classic grilles are supplied as standard in white, Ral 9010. NilAIR Classic grilles can be used for both intake and exhaust air and can be installed in ceilings and walls.



### **T-Vent (intake/exhaust air)**

T-Vent can be installed in ceilings and walls. T-Vent requires adjustment which should be taken into consideration in any price comparison.

## **Adjustment**

Traditional air distribution systems with valve solutions require adjustment in order to balance air intake volumes. A NilAIR solution with Elegance or Classic grilles does not require this expensive adjustment. Air volumes for each room are adapted through the distribution box and the length of the NilAIR pipes. For further adjustment all NilAIR fitting boxes have a built-in orifice plate which can further adjust air volumes.

NilAIR is  
well-suited to  
individual building styles



## The components of the NilAIR system in all their simplicity

The idea behind NilAIR air distribution systems is with as few components as possible to create a complete air distribution system which is flexible to use and easy to install (without the use of special tools). This forms the basis of an efficient and simple design. The NilAIR system has already been installed in thousands of European homes and has since its introduction more than 10 years ago steadily become popular with users due to its simplicity and not least its stylish grille solutions.

All NilAIR components are made of 0.9 mm aluzinc which means that they are corrosion-resistant and extremely dimensionally stable. The tightness of the system is unique, and everything has been designed to withstand possible embedding in concrete.



### NilAIR pipes

Ventilation pipes that are grooved on the outside and smooth on the inside. NilAIR pipes are ultra-light, flexible and fast to lay. Because of its flexibility, the pipe can be pulled through very difficult constructions. NilAIR pipes are stable and can be laid in concrete. NilAIR pipes are made of new, pure PE-HD which means that they are environmentally friendly and recyclable. NilAIR pipes are made of new environmentally friendly and recyclable PE-HD.



### NilAIR muff

Connectors for the joining of two NilAIR pipes. The NilAIR muff minimises waste and the junction between two pipes retains the pipe dimension which makes the pipes easier to clean and reduces pressure loss. The NilAIR Clickable System can be installed without the use of tools.



### NilAIR end cap

NilAIR end caps can be fitted on NilAIR pipes during installation for protection against building dust and rainwater. Ensures water and dustproof sealing.

### NilAIR fitting boxes

The fitting boxes are designed for the various grille/nozzle solutions offered by the NilAIR system. The clickable connection pieces optimise the workflow. The distribution boxes for intake air have built-in orifice plates to allow adjustment of air flow as required.



**NilAIR fitting boxes Type G** for installation in floors designed for our Elegance grille. Supplied with slide piece for height adjustment. Suitable for intake air.



**NilAIR fitting boxes type L** for installation in ceilings or walls designed for Elegance and Classic grilles. Suitable for intake and exhaust air.



**NilAIR fitting boxes Type LV** for installation in ceilings or walls designed for T-Vent valves. Suitable for intake and exhaust air.



8 connection pieces



12 connection pieces

### NilAIR distribution boxes

NilAIR air distribution boxes for exhaust and intake air designed for installation in ceilings and floors. The distribution boxes are sound-absorbent and prevent sound transfer from room to room through the ventilation system (telephony). The air distribution box is available in two sizes, and Nilan provides building drawings and advice in choosing the right one. The air distribution box is 105 mm high and is thereby ideal for demanding building technology solutions. The air distribution box is, of course, equipped with the patented NilAIR 'clickable' connection pieces to ensure quick installation without the need for tools.

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