



ubbink

Air Excellent



**➤ Straightforward,
effective air distribution**



As buildings become better insulated and airtight, purpose-provided ventilation is required to create and sustain a healthy and comfortable indoor air quality. The effectiveness of central mechanical ventilation systems with heat recovery is largely dependent upon the system used to distribute the air and the ductwork are the blood vessels in modern, energy-efficient buildings. However, A poorly designed or installed air distribution system will waste energy through unnecessary pressure loss and/or air leakage because the ventilation unit will have to work harder to ventilate at the required rates, which may also cause unnecessary noise hindrance.

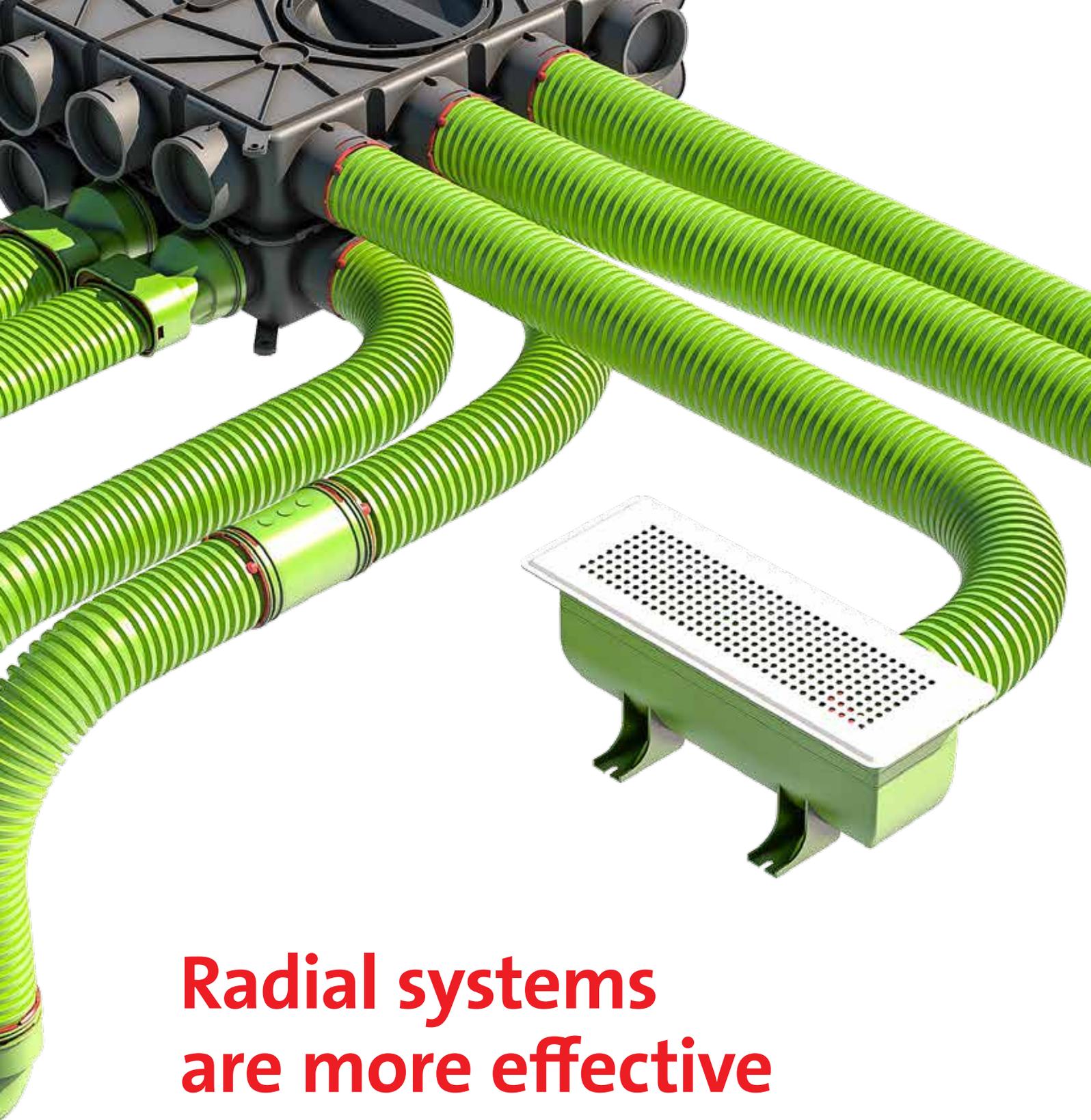
➤ *“We are a specialist in ventilation ductwork and we have developed air distribution systems which help create and sustain healthy and comfortable indoor climates”*



Air Excellent in a nutshell

- Hassle-free design
- Straightforward layout and realization
- Comfortable indoor climate





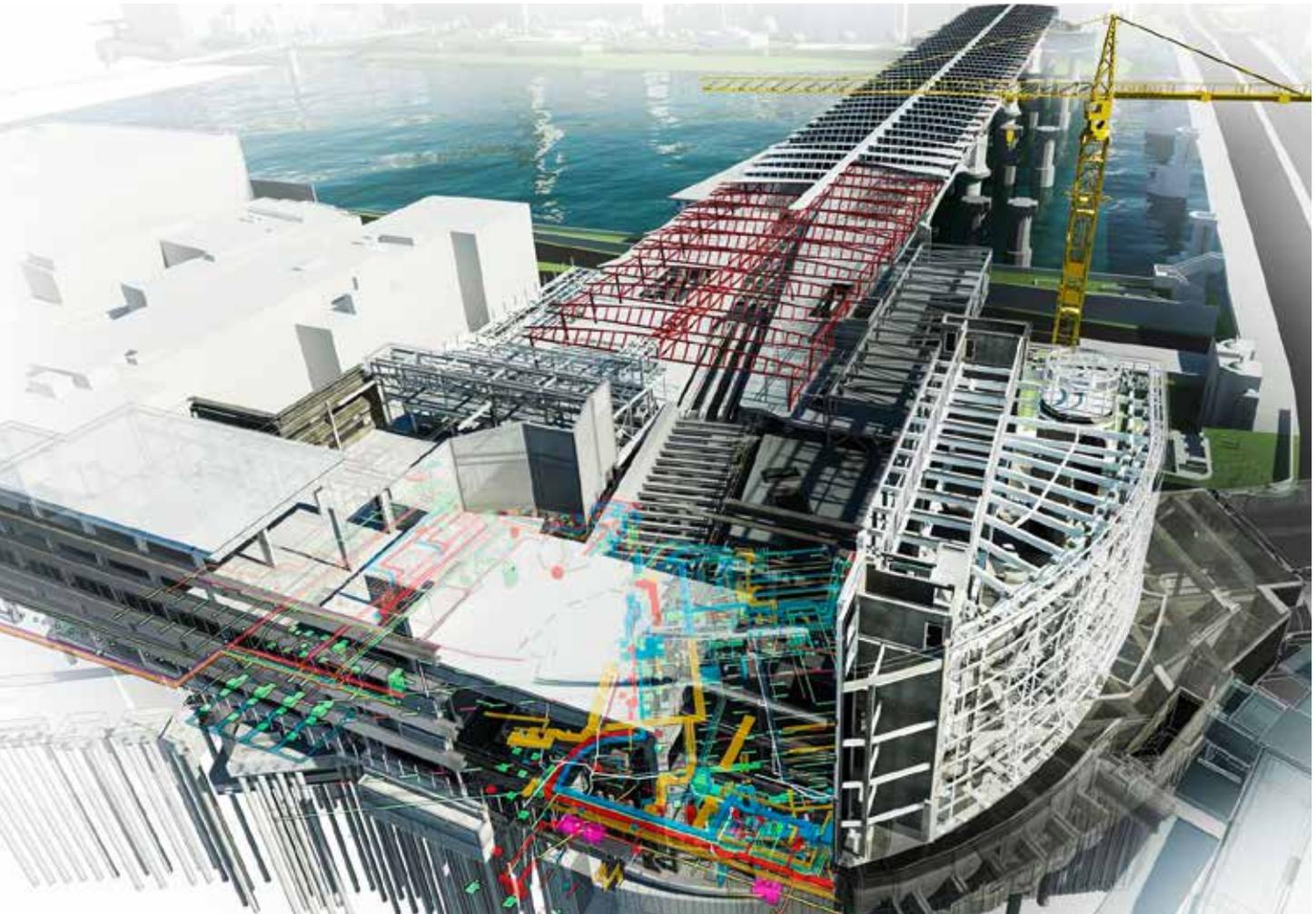
Radial systems are more effective

Radial ductwork systems differ from traditional trunk and branch ductwork systems by running ducts between a distribution box and each habitable and wet room. The distribution box is then connected to a ventilation unit using mass flow ductwork and a silencer.

- The system pressure drop is lower as a result
- Continuous duct runs with mechanical connections at either end also mean less air leakage
- The ventilation rates can be controlled by flow restrictors in the distribution box
- Cross-talk between rooms is reduced to an absolute minimum

Full control

Air Excellent has been developed to speed up design, installation and commissioning.



➤ *“Air Excellent is BIM-ready and continuously being updated and optimized”*

> Design

All Air Excellent parts are available as Autodesk AutoCAD and Autodesk Revit files enabling a fully automated and BIM-ready project planning. This not only helps create an accurate bill of material, but more importantly tackles potential problems off-site, i.e. before installation.



AUTODESK
REVIT





➤ *“Easy commissioning with an intuitive tool”*

➤ Balancing

The Air Excellent system comes with an online commissioning tool, which provides detailed information about the system pressure, a bill of material and last but not least the flow restrictor settings per duct run. The flow restrictors are an essential part of the Air Excellent system since it is the tool to adjust the right air flow to the right room of the building. The Air Excellent commissioning tool calculates how to alter the restrictor. The calculation can be amended on-site if the installed-system differs from its original design.







➤ Installation

Ductwork on a roll is easy to lay out, cut to length and bend around obstacles. Mechanical connections, deliver quick, clean and consistent quality air-tight connections, which makes Air Excellent ideal for pre-fabricated construction. The ductwork can be laid under screed floors, suspended under ceilings and hung in walls.



➤ *“For all new-build and renovation applications”*

**Flexible polyethylene
outer layer**

- For easy lay out
- For effortless bending
around obstacles



Ductwork details

AE23C, DN63/52 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
23	3,0	46	1,5
30,5	4,0	61	2,0

AE35SC, 50 x 102 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
33	3,0	66	1,5
44	4,0	88	2,0

AE34C, DN75/63 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
34	3,0	68	1,5
45	4,0	90	2,0

AE45SC, 50 x 140 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
47	3,0	94	1,5
63	4,0	126	2,0

AE48C, DN90/75 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
48	3,0	96	1,5
64	4,0	128	2,0

AE55SC, 60 x 132 mm

Volume [m³/h]	Velocity [m/s]	Volume [m³/h]	Velocity [m/s]
58	3,0	116	1,5
79	4,0	158	2,0

More details are available in separate datasheets.

Parts & accessories



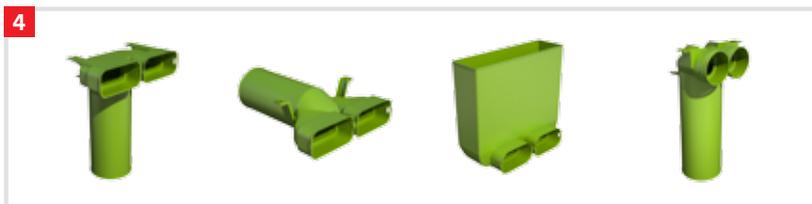
90° bends and adapters for mixing circular and semi-circular ductwork



Seals and click rings for airtight connections between ductwork components



Air flow restrictor



90° and 180° valve and grill adapters



Examples of valves and grills



Various distribution boxes

Mass flow ductwork

Although not part of the Air Excellent portfolio, mass flow ductwork and silencers are essential parts of the ventilation system. Insulated mass flow ducts in air distribution systems used for ventilation, heating or cooling is often required to minimise heat loss or prevent condensation on or inside the duct. Silencers, which are placed between the ventilation unit and the distribution boxes, minimize the transfer of sound produced by the ventilation unit.

We have developed a complete range of insulated mass-flow ductwork, which is extremely easy to install. They are available in a large range of diameters. Several accessories including terminals and airtightness seals complete the program.



► Features and benefits

- well insulated duct
- low pressure loss due to the very smooth inner surface
- light, easy to cut and pliable, impact resistant (i. e. no dents)
- doesn't rust
- comes in duct lengths of 2.00 m and in diameters 125, 150, 160 and 180 mm
- mechanical connections (i. e. no tape required)
- easy to dismantle, which makes maintenance very easy

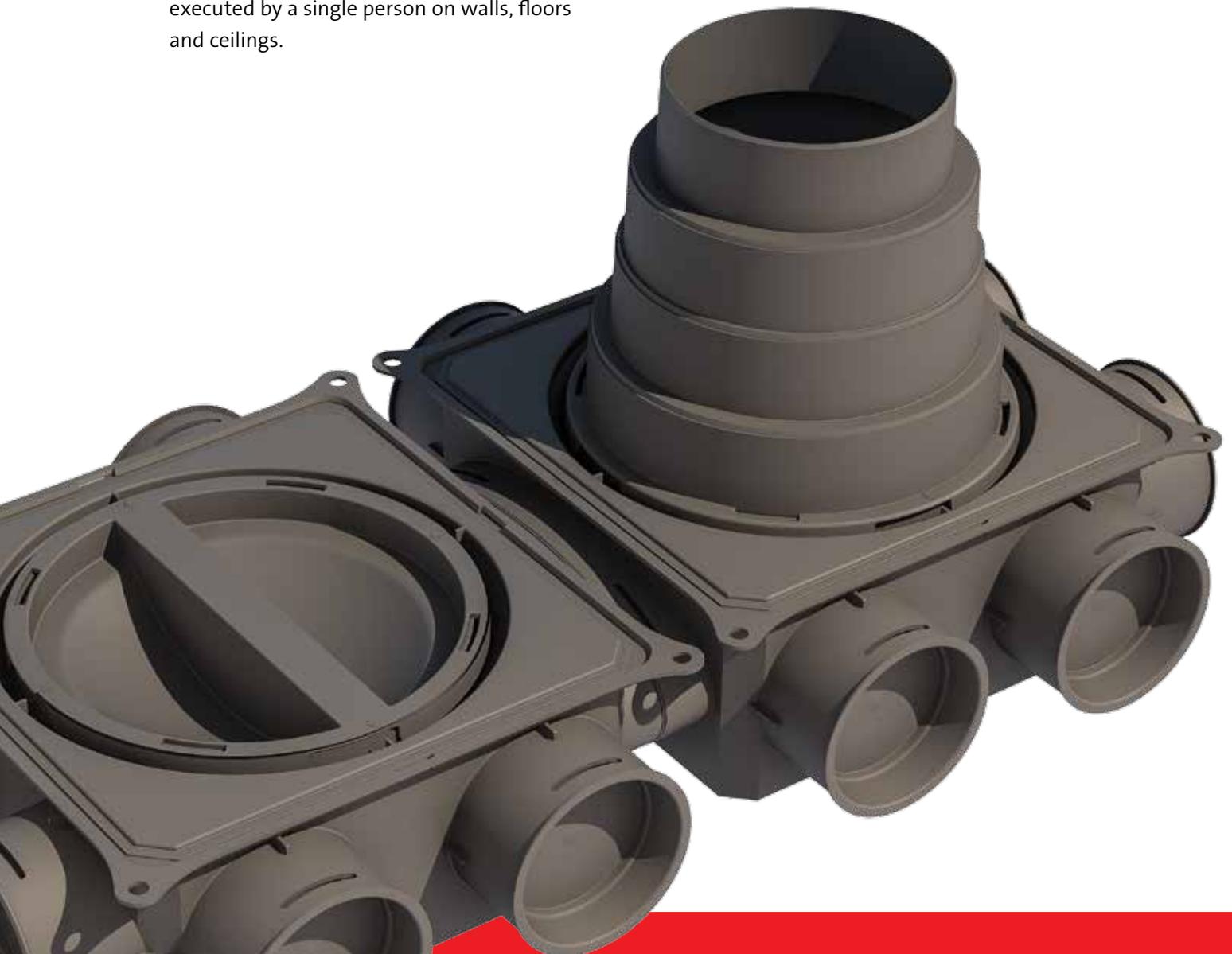


Distribution boxes

The distribution box is an important part of radial ventilation systems, like Air Excellent. It connects between the ventilation unit and the valves that are installed in the habitable and wet rooms. Within the distribution boxes, the air capacity to the duct runs can be adjusted by air flow restrictors that are mounted in the ductwork connections of the distribution box. The type of distribution box required, depends on the total volume required, the number of duct runs and the desired system performance. The Air Excellent online configurator is a great help for determining a complete system.

➤ The 200 Series distribution boxes

The 200 Series distribution boxes are a modular system that can be characterized by functional partitioning into scalable and reusable modules, interfacing with a constant changing building environment. The system consists of basic box configurations, extension kits and adapters that can be merged to function as one system. This allows tailor-made solutions for any installation and prevents over-sized installations. Its small dimensions make it ideal for residential buildings that require lower air volumes or buildings that have limited installation space. Installations do not require separate mounting brackets and can be executed by a single person on walls, floors and ceilings.



➤ The DB208 distribution box

The DB208 distribution box comes standard with 8 ductwork connections for the basic box with two ductwork connection on each side. Mass flow ductwork can be connected vertically with stepped adapters for 100/125 mm and 125/150/160 and 180 mm mass flow ductwork.



DB208 with 100/125 mm stepped mass flow adapter



DB208 with 125/150/160/180 mm stepped mass flow adapter

➤ The DB206 distribution box

The DB206 distribution box comes standard with 6 ductwork connections for the basic box and an oval side connection that can be used for inspection, cleaning, changing flow restrictors or connecting mass flow ductwork. Mass flow ductwork can also be connected vertically offering several installation possibilities.



DB206 with 100 mm mass flow adapter



DB206 with 125 mm mass flow adapter



DB206 with 100/125 mm stepped mass flow adapter



DB206 with 125/150/160/180 mm stepped mass flow adapter

➤ Horizontal and vertical extensions

A keen feature of the 200 Series is the possibility of connecting multiple boxes. Both the DB206 and DB208 can be vertically extended becoming a stacked-configuration with 12 ductwork connections for the DB206 and 16 connections for the DB208. The oval side connection from the DB206 allows connecting to another DB206 as well, again offering a 12-connection horizontally extended configuration. This makes the 200 Series a very scalable solution.



DB206, horizontally extended



DB206, vertically extended



DB206, vertically extended



DB808

➤ The 800 Series universal distribution boxes

The 800 Series distribution boxes are a universal “one for all” solution for many installations and come in three fixed configurations. The DB808 has 8 ductwork connections, the DB816 has 16 connections and the DB824 delivers the logical 24 connections for maximum installation freedom.

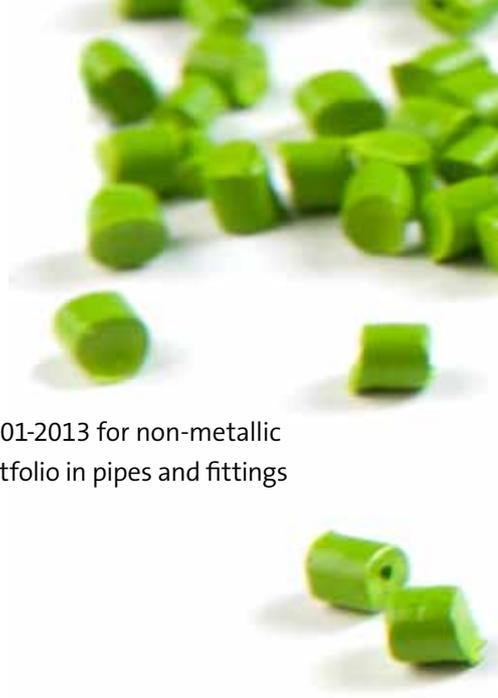
Mass flow ductwork is connected by the use of a stepped mass flow adaptor that connects the diameters of 125, 150, 160 and 180 mm. Connections can be done vertically or horizontally. Additionally, the 800 Series distribution boxes can be upgraded with a sound damping kit to further enhance system performance by absorbing system noise caused by for instance the ventilation unit or cross talk.

Its larger dimensions make it ideal for residential buildings that require higher air volumes. Installations do not require separate mounting brackets and can be executed by a single person on walls, floors and ceilings.



DB824 with mass flow adaptor vertically mounted

Going beyond with Air Excellent



Air Excellent has been awarded with, the industry-first, TÜV SÜD quality mark TAK-01-2013 for non-metallic ductwork systems and is the only system in the market that provides a complete portfolio in pipes and fittings for a complete ventilation system.

➤ Materials

The Air Excellent ductwork is made of Polyethylene (PE), which gives the ductwork its characteristic semi-rigid behavior. The accessories such as the valve adapters, the bends and the connectors are manufactured of PP to give it stronger rigid properties. The 2K molded seals belonging to the semi-circular ductwork types include TPE material to warrant flexibility and airtightness. The ductwork can be supplied with anti-static and anti-bacterial properties. All Air Excellent parts are manufactured using virgin raw materials.

➤ Warranting excellence

Exceptional efforts are spent to reach a high quality level for production, premium product features and a high performance level. The duct has a very smooth inner-layer to keep pressure drop to a minimum offering a high-efficient air distribution system. Furthermore, we work closely with several renowned laboratories and notified bodies to have our products independently tested, qualified and certified.





➤ Air Excellent is TÜV SÜD certified

The following is included in the TÜV SÜD quality mark TAK-01-2013 for non-metallic ductwork systems:

Typical working pressure ¹	-500 Pa up +500 Pa
Ring stiffness	Tested according to ISO9969
Airtightness Class	<p>AE23C, AE34C, AE48C, AE35SC & AE55SC Airtightness Class D for Air Excellent ductwork, Air Excellent ductwork accessories and the Air Excellent plastic distribution boxes. Tested at system pressure: +2000 Pa/-2000 Pa</p> <p>AE45SC Airtightness Class C for Air Excellent ductwork, Air Excellent ductwork accessories and the Air Excellent plastic distribution boxes. Tested at system pressure: +2000 Pa/-2000 Pa</p>
Operating temperature range	-20 °C up to +60 °C
Reaction to fire ²	Class E (according to European standard EN 13501-1)
External pressure resistance	All ductwork can be applied into concrete work, holding a maximum concrete height of 200 mm above the ductwork.
Bending radii ³	<p>AE23C, AE34C and AE48C Radius: 150 mm</p> <p>AE35SC & AE45SC Radius: 150 mm (vertical) and 200 mm (horizontal)</p> <p>AE55SC Radius: 200 mm (vertical) and 400 mm (horizontal)</p>

¹ Air Excellent can operate under a higher range depending on the installation

² Tested by EFECTIS in The Netherlands

³ Technical datasheets with more details available upon request

⁴ For installation under cold circumstances, we advise to warm up the ductwork with warm air

⁵ Tested by ISEGA



Mechanical connector strength	Individual mechanical connections can hold 10m duct run (during installation)
Flexibility check ⁴	Bendable without tools and without duct damaging
Duct stiffness	One mounting bracket per 2 m duct run avoid bending is recommended (ceiling installations)
Microbial resistance ⁵	99,9% of bacteria died during tests with typical bacteria
Food compatibleness ⁵	No harmful substances are released to the air
Anti-static function	Surface resistance is <math> < 10^{12}</math> Ohm
Cleaning treatment	No damages after cleaning according to prescribed methods





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