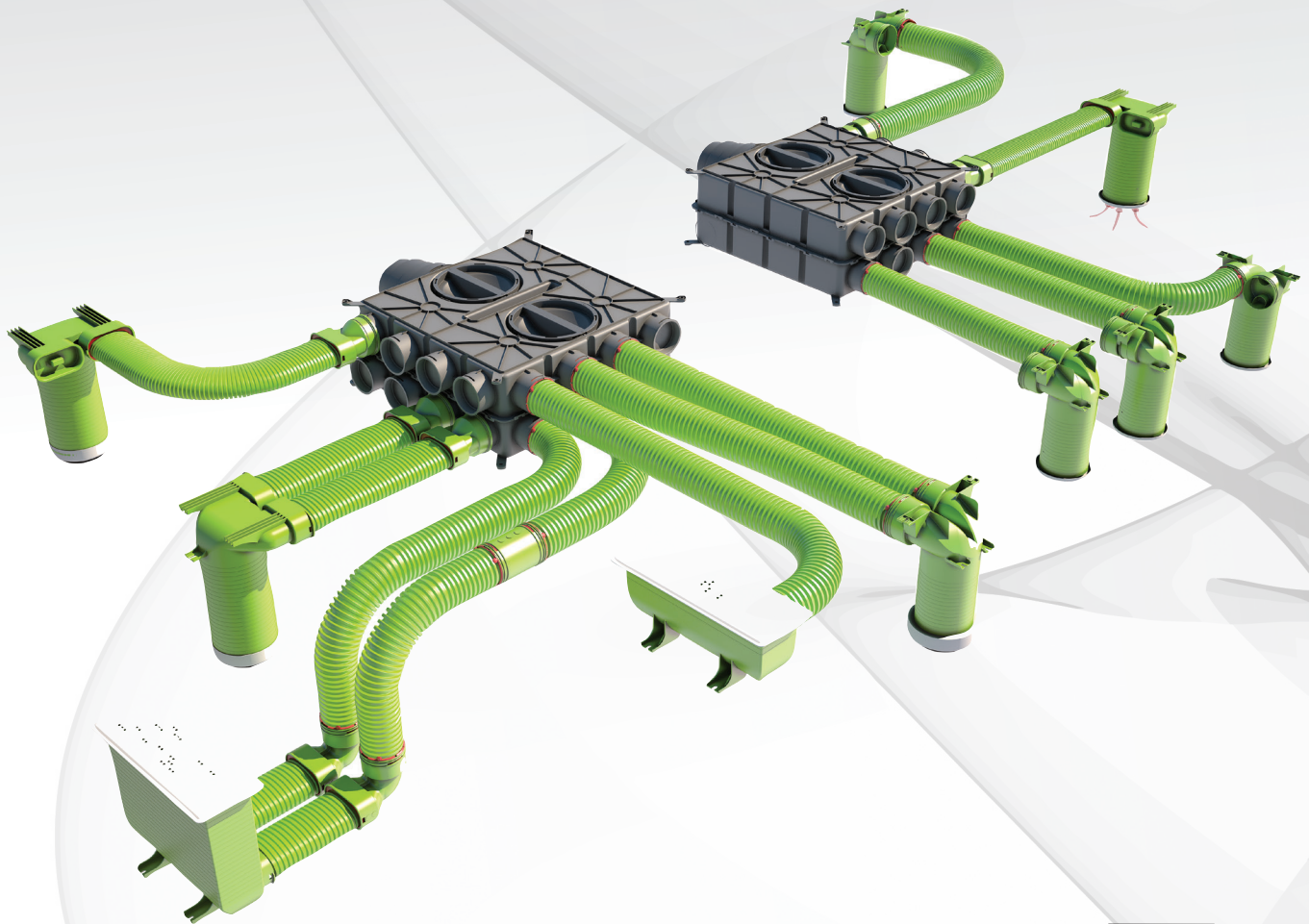


# Vector HRV

Heat Recovery Ventilation



## Air Excellent | AE34C

Technical Datasheets

# Air Excellent

AE34C circular ductwork (DN75/63 mm)

1 | 2

## Introduction

- The Air Excellent circular ductwork ensures efficient air distribution between distribution boxes and the various rooms.
- Due to its circular shape, the Air Excellent ductwork can be installed easily and ensures keeping pressure losses to a minimum.
- A complete set of accessories is available to make a complete air distribution system.
- All ductwork dimensions connect to one universal distribution box.



## Features & benefits

- Lightweight
- Easy and quick to install
- Strong outer surface for damage-free installation
- Smooth inner surface for less pressure drop and a long-term clean system
- Anti-static and anti-bacterial properties
- For all new-build and renovation applications
- Complete set of accessories available
- Mix and match with semi-circular ductwork

## Dimensions

AE34C

Outside (mm)	75
Inside (mm)	63
Surface (m <sup>2</sup> )	0.00312

## Logistical details

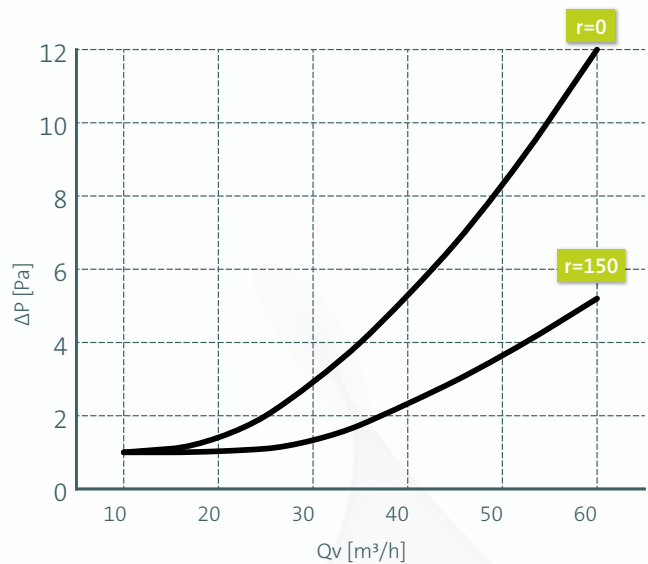
Weight per m (kg)	0.33
Weight per roll   50 m (kg)	16.99
Quantity per roll (m)	50

### Technical details

	1 x AE34C	2 x AE34C
Qv (Volume) [m³/h]	V (Velocity) [m/s]	
10	0.9	0.4
20	1.8	0.9
30	2.7	1.3
40	3.6	1.8
50	4.5	2.2
60	5.3	2.7



AE34C		
Qv (Volume) [m³/h]	ΔP (Pressure loss) [Pa]	
10	1.0	1.0
20	1.2	1.0
30	2.8	1.2
40	5.2	2.3
50	8.2	3.6
60	12.0	5.2
Radius [mm]	0	150
Zeta		0.32



# Air Excellent

## AE34C valve adapters

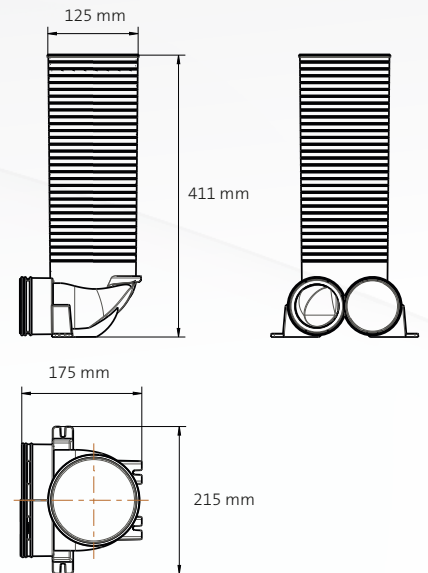
### Features & benefits

- For air supply and air extract
- For installation in ceilings and walls
- For circular AE34C ductwork (DN75/63 mm)
- Easy to shorten to the desired application dimension
- Anti-static and anti-bacterial properties
- Part of the TÜV SÜD certified Air Excellent system

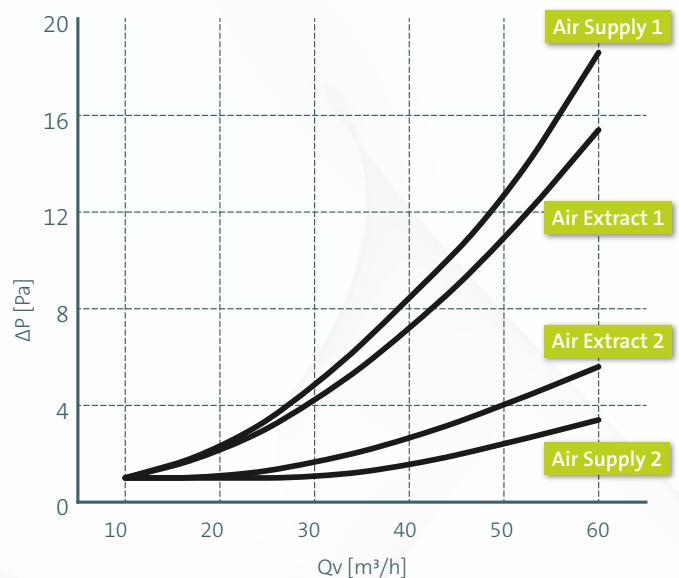


### AE34C 90° valve adapter

The valve adapter is developed for installations in ceilings and walls. It is manufactured in a way that it can cross most common heights and thicknesses such as walls, screed floors or the space behind suspended ceilings. The adapter can be cut to length with normal tools for further assembling with the end-piece of the ventilation system; the supply valve or extract valve. The adapter has two Air Excellent ductwork connections. The valve adapter is delivered with a dust-cap at the 125 mm end. From the two Air Excellent ductwork connections, one is delivered with a detachable closing cap.



	Air Supply		Air Extract	
	Zeta [-]			
Zeta [-]	1.15	0.77	0.97	1.34
Duct runs	1	2	1	2
Qv [m³/h]	ΔP [Pa]	ΔP [Pa]	ΔP [Pa]	ΔP [Pa]
10	1.0	1.0	1.0	1.0
20	2.1	1.0	2.0	1.0
30	4.7	1.0	4.1	1.6
40	8.4	1.5	7.1	2.6
50	12.4	2.4	10.8	4.0
60	18.6	3.4	15.4	5.6



# Air Excellent

## AE34C grill adapters

1 | 1

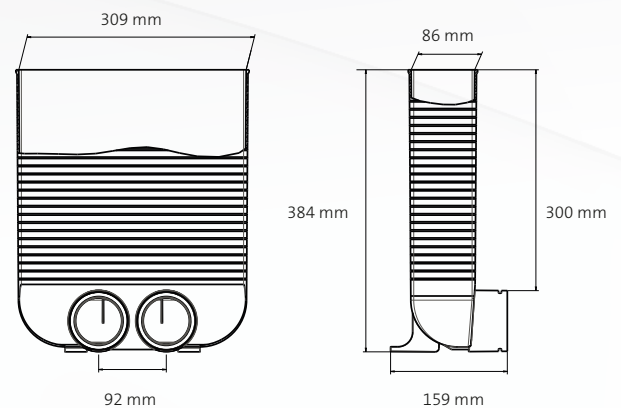
### Features & benefits

- For air supply
- For installation in walls and floors
- For circular AE34C ductwork (DN75/63 mm)
- Easy to shorten to the desired application dimension
- Anti-static and anti-bacterial properties
- Part of the TÜV SÜD certified Air Excellent system

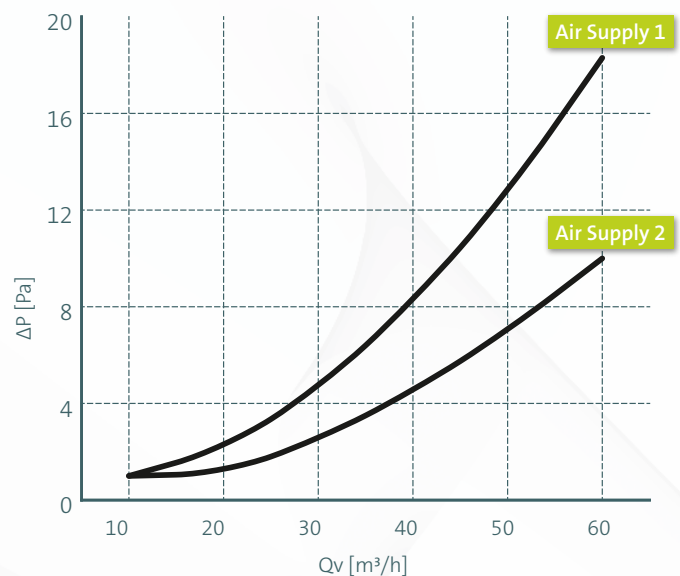


### AE34C grill adapter

The grill adapter is originally designed as air supply only and for floor and wall installations. It can be cut to length with normal tools. Furthermore, the grill adapter can be equipped with an additional grill silencer for further sound elimination which is placed inside. The grill adapter is delivered with a dust-cap at the outlet end.



Air Supply		
Zeta [-]	1.13	2.47
Duct runs	1	2
Qv [m³/h]	ΔP [Pa]	ΔP [Pa]
10	1.0	1.0
20	2.1	1.1
30	4.6	2.5
40	8.2	4.5
50	12.7	7.0
60	18.3	10.0

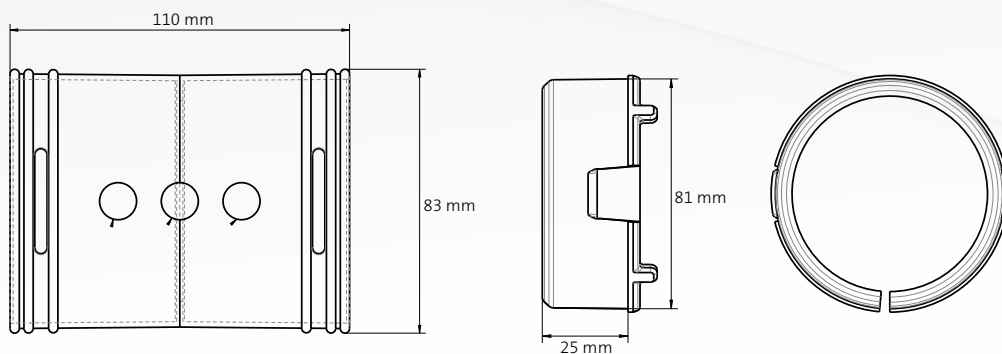


# Air Excellent

## AE34C straight connector & airtightness parts

### Features & benefits

- For connecting straight pieces of ductwork
- For installation in ceilings and walls
- For circular AE34C ductwork (DN75/63 mm)
- Easy to mount with seal-ring and click-ring
- Anti-static and anti-bacterial properties
- Part of the TÜV SÜD certified Air Excellent system



### Airtight seal + click-ring

The seal-ring and click-ring for the circular ductwork are vital components of the Air Excellent system and ensure airtight connections. These components are used to make all mechanical connections between the ductwork, accessories and the distribution boxes.



### Mounting brackets

Mounting brackets ensure a steady installation of the duct. It is advised to use one bracket per 2 meters of duct run. Multiple brackets can be connected with each other enabling compact installations with parallel duct runs.



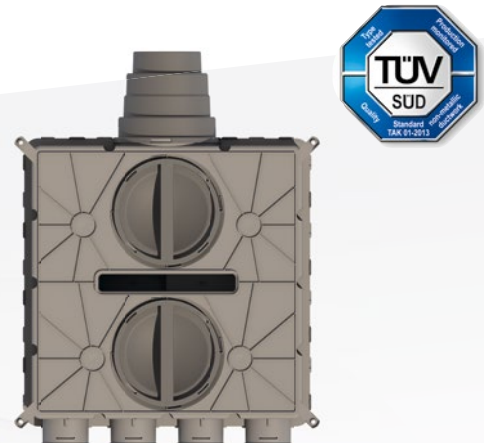
# Air Excellent

## Universal distribution box, 8 connections

1 | 3

The Air Excellent air distribution system is ductwork designed to distribute air for central mechanical ventilation systems with heat recovery used to ventilate residential and small commercial buildings. The ventilation unit is connected to the distribution boxes using insulated mass flow ducts and silencers and the semi-rigid duct is rolled out to supply fresh air to the habitable rooms and extract stale, moist from the wet rooms.

The distribution box is an important part of the air distribution system. It controls the air capacity of the duct runs within the system. To control the air flow per duct run, adjustable air flow restrictors are mounted at the ductwork connections in the distribution box.



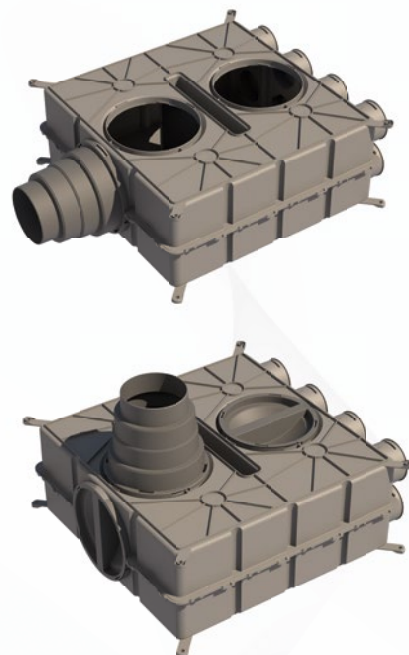
## One for all, all for one

Air Excellent is a comprehensive portfolio of ductwork and parts to make complete, energy-efficient and easy to install ventilation systems. The ductwork is available in various circular and semi-circular dimensions. All ductwork types can connect to one universal distribution box by use of adapters. This eliminates the need to keep stock of numerous box types and limits costs. One box. One solution for all installations.



## Features & performance

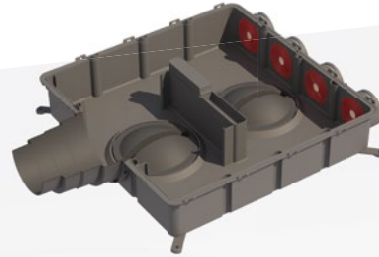
- Superior system performance due to low pressure loss
- 8 duct run connections for all possible installations
- Airtightness class C
- Elimination of cross-talk and HRV-unit sound
- Multiple DN180-based inspection hatches with EPDM seal-ring and bayonet-locking
- Easy to clean the system and re-arrange the flow restrictors (renovation)



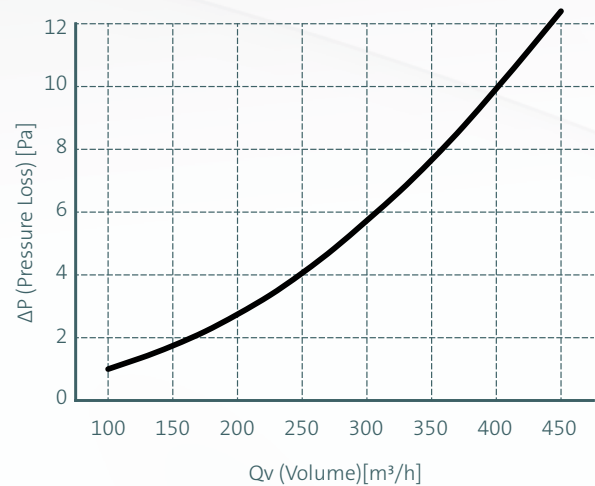
## Universal distribution box, 8 connections

### Ease of installation

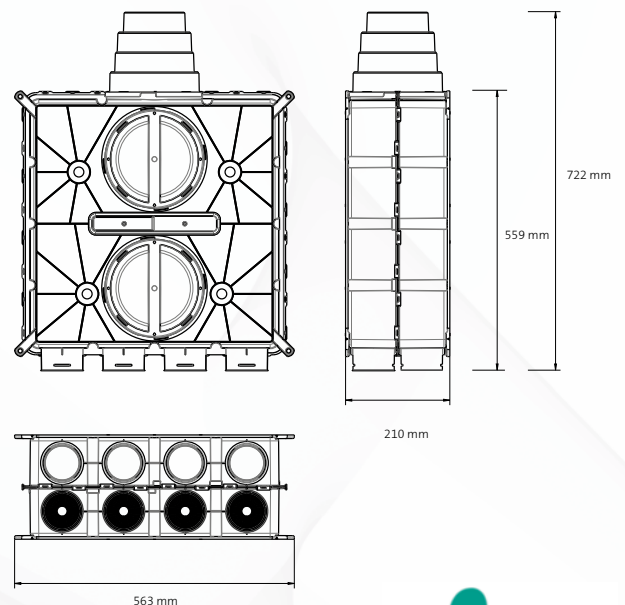
- Extremely lightweight and no sharp edges
- Can be installed on walls, on floors, behind suspended ceilings
- Integrated mounting brackets on both sides
- Mass flow ductwork connection allows vertical and horizontal installations
- Air flow restrictors are easy to place and replace due to good accessibility
- One adaptable mass flow ductwork connection for DN125, DN150, DN160 and DN180



Pressure Loss Dbox	
Qv (Volume) [m³/h]	ΔP (Pressure Loss) [Pa]
100	1.0
150	1.7
200	2.7
250	4.0
300	5.7
350	7.6
400	9.9
450	12.4



Figures are based on measurements by the TÜV SÜD.





### The 12-stage air flow restrictor

The air restrictor helps to set the required air capacity per duct run between distribution boxes, the valves and/or grills. The setting of the multiple restrictors in a ventilation system is determined by a ventilation calculation. The air flow restrictor is placed inside the distribution box and can be removed or altered due to system changes or cleaning purposes. The rings inside the flow restrictors can be easily taken out by cutting.



Ring(s) removed	Zeta	Q <sub>v</sub> [m <sup>3</sup> /h]					
		10	20	30	40	50	60
		ΔP [Pa]					
0	20.01	4.5	17.9	40.2	71.5	111.7	160.9
1	15.98	3.6	14.3	32.1	57.1	89.2	128.5
2	12.45	2.8	11.1	25.0	44.5	69.5	100.1
3	9.41	2.1	8.4	18.9	33.6	52.5	75.7
4	7.32	1.6	6.5	14.7	26.2	40.9	58.9
5	5.30	1.2	4.7	10.7	18.9	29.6	42.6
6	3.63	0.8	3.2	7.3	13.0	20.3	29.2
7	2.62	0.6	2.3	5.3	9.4	14.6	21.1
8	1.82	0.4	1.6	3.7	6.5	10.2	14.6
9	1.24	0.3	1.1	2.5	4.4	6.9	10.0
10	0.77	0.2	0.7	1.5	2.8	4.3	6.2
11	0.41	0.1	0.4	0.8	1.5	2.3	3.3
12	0.18	0.0	0.2	0.4	0.6	1.0	1.4

# Air Excellent

Universal distribution box, 16 connections

1 | 3

The Air Excellent air distribution system is ductwork designed to distribute air for central mechanical ventilation systems with heat recovery used to ventilate residential and small commercial buildings. The ventilation unit is connected to the distribution boxes using insulated mass flow ducts and silencers and the semi-rigid duct is rolled out to supply fresh air to the habitable rooms and extract stale, moist from the wet rooms.

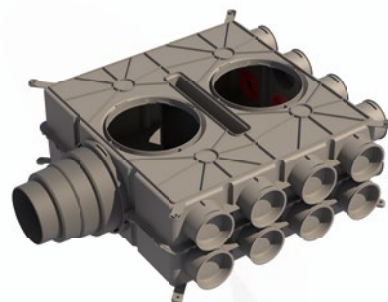
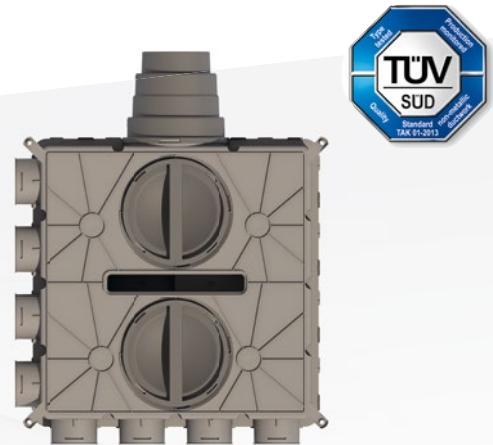
The distribution box is an important part of the air distribution system. It controls the air capacity of the duct runs within the system. To control the air flow per duct run, adjustable air flow restrictors are mounted at the ductwork connections in the distribution box.

## One for all, all for one

Air Excellent is a comprehensive portfolio of ductwork and parts to make complete, energy-efficient and easy to install ventilation systems. The ductwork is available in various circular and semi-circular dimensions. All ductwork types can connect to one universal distribution box by use of adapters. This eliminates the need to keep stock of numerous box types and limits costs. One box. One solution for all installations.

## Features & performance

- Superior system performance due to low pressure loss
- 16 duct run connections for all possible installations
- Airtightness class C
- Elimination of cross-talk and HRV-unit sound
- Multiple DN180-based inspection hatches with EPDM seal-ring and bayonet-locking
- Easy to clean the system and re-arrange the flow restrictors (renovation)

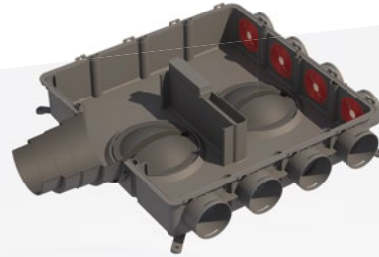


## Universal distribution box, 16 connections

2 | 3

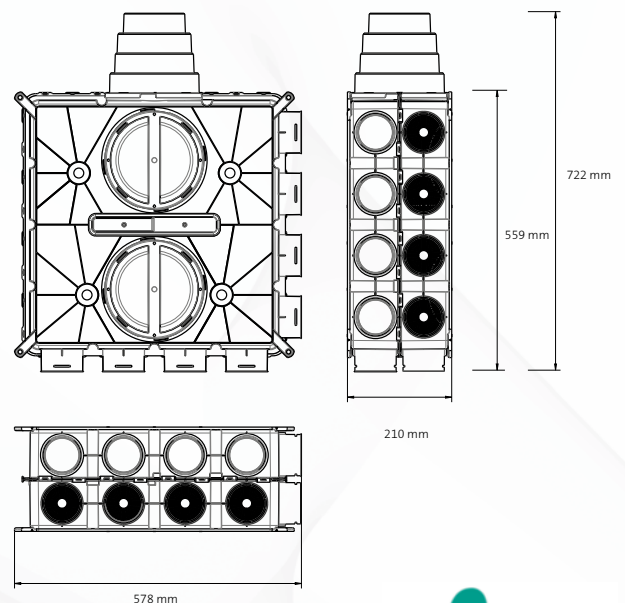
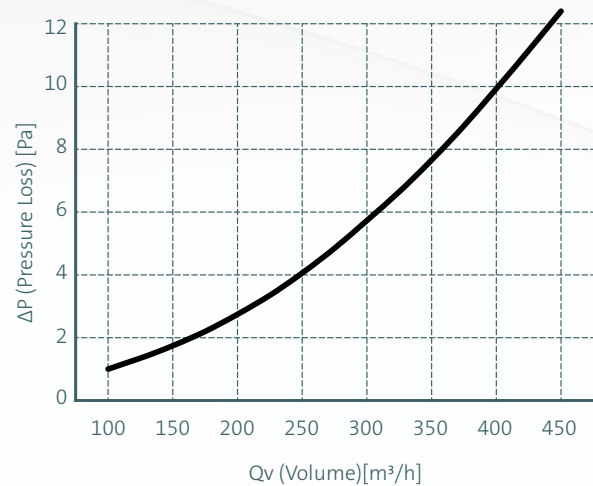
### Ease of installation

- Extremely lightweight and no sharp edges
- Can be installed on walls, on floors, behind suspended ceilings
- Integrated mounting brackets on both sides
- Mass flow ductwork connection allows vertical and horizontal installations
- Air flow restrictors are easy to place and replace due to good accessibility
- One adaptable mass flow ductwork connection for DN125, DN150, DN160 and DN180



Pressure Loss Dbox	
Qv (Volume) [m <sup>3</sup> /h]	ΔP (Pressure Loss) [Pa]
100	1.0
150	1.7
200	2.7
250	4.0
300	5.7
350	7.6
400	9.9
450	12.4

Figures are based on measurements by the TÜV SÜD.



### The 12-stage air flow restrictor

The air restrictor helps to set the required air capacity per duct run between distribution boxes, the valves and/or grills. The setting of the multiple restrictors in a ventilation system is determined by a ventilation calculation. The air flow restrictor is placed inside the distribution box and can be removed or altered due to system changes or cleaning purposes. The rings inside the flow restrictors can be easily taken out by cutting.



Ring(s) removed	Zeta	$Q_v$ [m <sup>3</sup> /h]					
		10	20	30	40	50	60
		$\Delta P$ [Pa]					
0	20.01	4.5	17.9	40.2	71.5	111.7	160.9
1	15.98	3.6	14.3	32.1	57.1	89.2	128.5
2	12.45	2.8	11.1	25.0	44.5	69.5	100.1
3	9.41	2.1	8.4	18.9	33.6	52.5	75.7
4	7.32	1.6	6.5	14.7	26.2	40.9	58.9
5	5.30	1.2	4.7	10.7	18.9	29.6	42.6
6	3.63	0.8	3.2	7.3	13.0	20.3	29.2
7	2.62	0.6	2.3	5.3	9.4	14.6	21.1
8	1.82	0.4	1.6	3.7	6.5	10.2	14.6
9	1.24	0.3	1.1	2.5	4.4	6.9	10.0
10	0.77	0.2	0.7	1.5	2.8	4.3	6.2
11	0.41	0.1	0.4	0.8	1.5	2.3	3.3
12	0.18	0.0	0.2	0.4	0.6	1.0	1.4

# Air Excellent

## Universal distribution box, 24 connections

1 | 3

The Air Excellent air distribution system is ductwork designed to distribute air for central mechanical ventilation systems with heat recovery used to ventilate residential and small commercial buildings. The ventilation unit is connected to the distribution boxes using insulated mass flow ducts and silencers and the semi-rigid duct is rolled out to supply fresh air to the habitable rooms and extract stale, moist from the wet rooms.

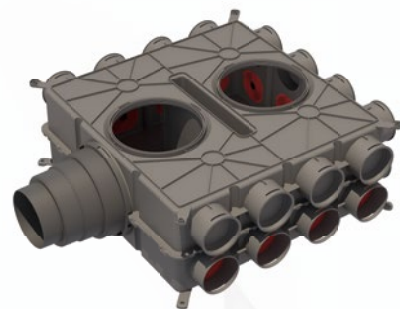
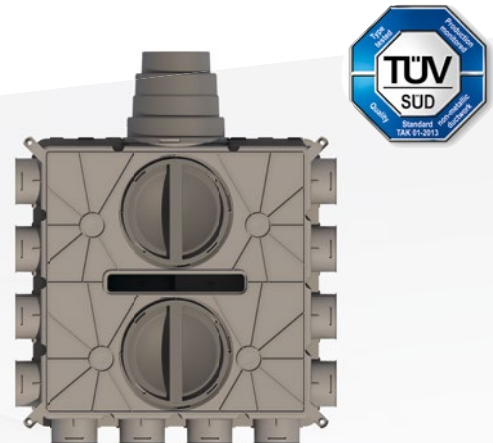
The distribution box is an important part of the air distribution system. It controls the air capacity of the duct runs within the system. To control the air flow per duct run, adjustable air flow restrictors are mounted at the ductwork connections in the distribution box.

### One for all, all for one

Air Excellent is a comprehensive portfolio of ductwork and parts to make complete, energy-efficient and easy to install ventilation systems. The ductwork is available in various circular and semi-circular dimensions. All ductwork types can connect to one universal distribution box by use of adapters. This eliminates the need to keep stock of numerous box types and limits costs. One box. One solution for all installations.

### Features & performance

- Superior system performance due to low pressure loss
- 24 duct run connections for all possible installations
- Airtightness class C
- Elimination of cross-talk and HRV-unit sound
- Multiple DN180-based inspection hatches with EPDM seal-ring and bayonet-locking
- Easy to clean the system and re-arrange the flow restrictors (renovation)

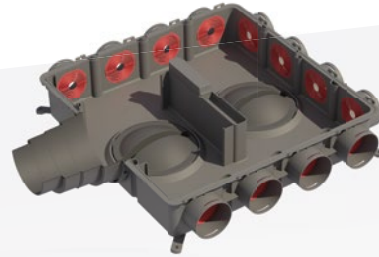


## Universal distribution box, 24 connections

2 | 3

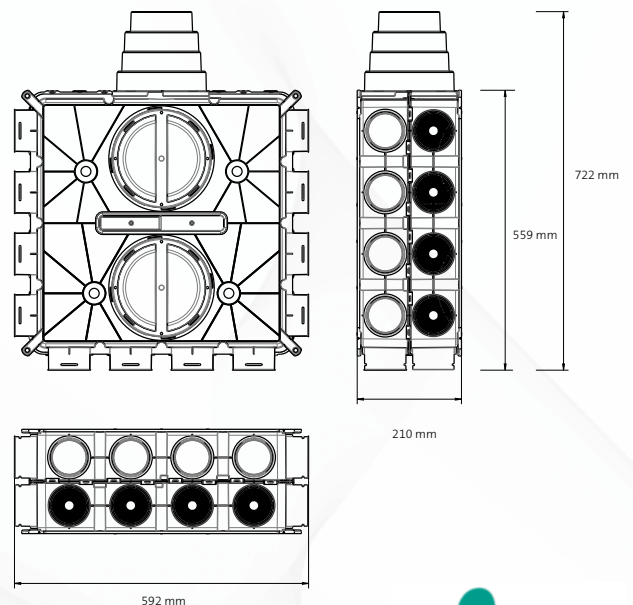
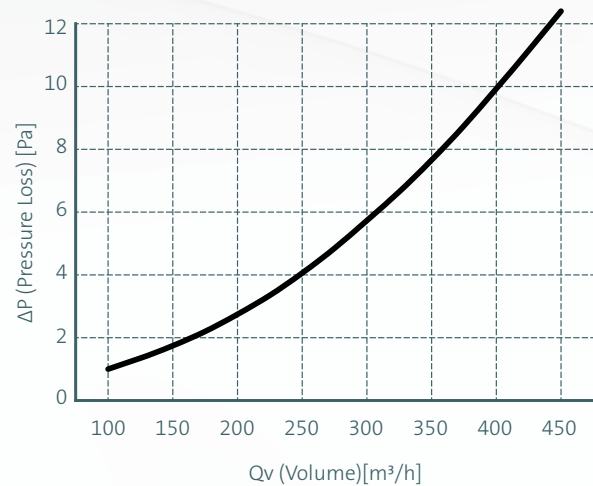
### Ease of installation

- Extremely lightweight and no sharp edges
- Can be installed on walls, on floors, behind suspended ceilings
- Integrated mounting brackets on both sides
- Mass flow ductwork connection allows vertical and horizontal installations
- Air flow restrictors are easy to place and replace due to good accessibility
- One adaptable mass flow ductwork connection for DN125, DN150, DN160 and DN180



Pressure Loss Dbox	
Qv (Volume) [m <sup>3</sup> /h]	ΔP (Pressure Loss) [Pa]
100	1.0
150	1.7
200	2.7
250	4.0
300	5.7
350	7.6
400	9.9
450	12.4

Figures are based on measurements by the TÜV SÜD.



## The 12-stage air flow restrictor

The air restrictor helps to set the required air capacity per duct run between distribution boxes, the valves and/or grills. The setting of the multiple restrictors in a ventilation system is determined by a ventilation calculation. The air flow restrictor is placed inside the distribution box and can be removed or altered due to system changes or cleaning purposes. The rings inside the flow restrictors can be easily taken out by cutting.



Ring(s) removed	Zeta	$Q_v$ [m <sup>3</sup> /h]					
		10	20	30	40	50	60
		$\Delta P$ [Pa]					
0	20.01	4.5	17.9	40.2	71.5	111.7	160.9
1	15.98	3.6	14.3	32.1	57.1	89.2	128.5
2	12.45	2.8	11.1	25.0	44.5	69.5	100.1
3	9.41	2.1	8.4	18.9	33.6	52.5	75.7
4	7.32	1.6	6.5	14.7	26.2	40.9	58.9
5	5.30	1.2	4.7	10.7	18.9	29.6	42.6
6	3.63	0.8	3.2	7.3	13.0	20.3	29.2
7	2.62	0.6	2.3	5.3	9.4	14.6	21.1
8	1.82	0.4	1.6	3.7	6.5	10.2	14.6
9	1.24	0.3	1.1	2.5	4.4	6.9	10.0
10	0.77	0.2	0.7	1.5	2.8	4.3	6.2
11	0.41	0.1	0.4	0.8	1.5	2.3	3.3
12	0.18	0.0	0.2	0.4	0.6	1.0	1.4

# Air Excellent

## AE35SC/AE34C adapting bend

1 | 1

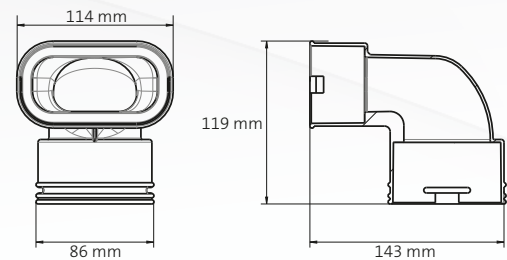
### Features & benefits

- For changing from semi-circular to circular ductwork
- For semi-circular ductwork AE35SC (50 x 102 mm) and for circular AE34C ductwork (DN75/63 mm)
- For installation in walls, floors and ceilings
- Anti-static and anti-bacterial properties
- Part of the TÜV SÜD certified Air Excellent system

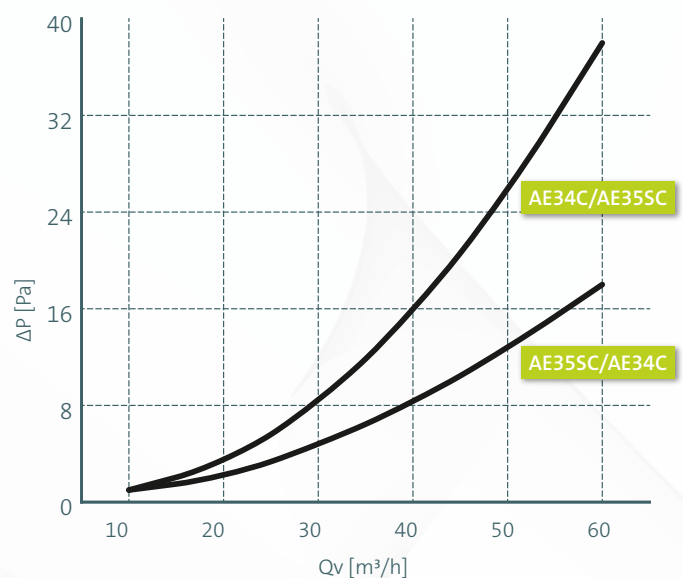


### The adapting bend

The AE35SC/AE34C adapting bend enables installations that are desired to change from circular to semi-circular because of height limitations in for example floors or walls.



	AE34C → AE35SC	AE35SC → AE34C
Zeta [-]	2.38	1.14
Duct runs	1	1
Qv [m³/h]	$\Delta P$ [Pa]	$\Delta P$ [Pa]
10	1.0	1.0
20	3.1	2.0
30	8.1	4.7
40	15.6	8.2
50	25.6	12.7
60	38.0	18.0





# Air Excellent

## AE45SC/AE34C adapting bend

1 | 1

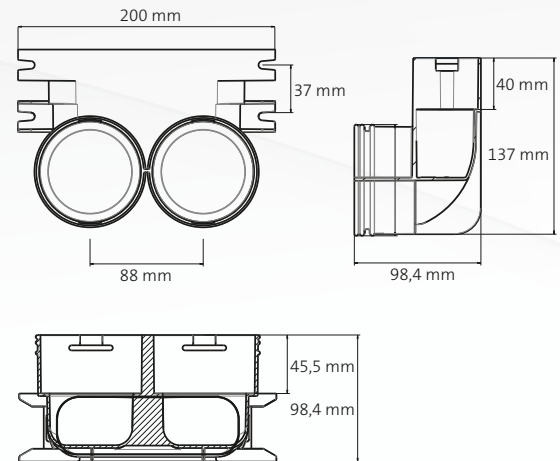
### Features & benefits

- For changing from semi-circular to circular ductwork
- For semi-circular ductwork AE45SC (50 x 140 mm) and for circular AE34C ductwork (DN75/63 mm)
- For installation in walls, floors and ceilings
- Anti-static and anti-bacterial properties
- Part of the TÜV SÜD certified Air Excellent system



### The adapting bend

The AE45SC/AE34C adapting bend enables installations that are desired to change from circular to semi-circular because of height limitations in for example floors or walls. One AE34C connection can be closed meaning only one AE34C connection is used. This depends on the volume required.



Zeta [-]	AE34C → AE45SC		AE45SC → AE34C	
	1.96	2.38	4.72	0.40
Duct runs	1	2	1	2
Qv [m³/h]	ΔP [Pa]	ΔP [Pa]	ΔP [Pa]	ΔP [Pa]
10	1.0	1.0	1.1	1.0
20	3.5	1.1	4.3	1.0
30	7.9	2.4	9.7	1.0
40	14.1	4.3	17.2	1.5
50	22.0	6.7	26.9	2.3
60	31.7	9.6	38.8	3.3

