

# MECHANICAL VENTILATION



# OUR MISSION

Creating healthy spaces



Paul Renson

Renson® specialises in ventilation, sun protection and terrace coverings. With experience dating back to 1909 and a team of more than 1600 employees, we develop solutions with which we strive for a healthy and comfortable living and working environment for the consumer. In doing so, we take the requirements into account regarding energy efficiency and the use of renewable energy, as well as ease of maintenance. We offer total solutions that can turn every home into a healthy and comfortable environment. This leads us to our baseline "Creating Healthy Spaces".

"Additionally, we also consider the aesthetic value of each building. This way, our ventilation and sun protection systems can be integrated almost invisibly. The terrace coverings and aluminium blinds for the wall cladding set clear visible accents, which give added value to the architecture. On the inside, we ensure invisible integration of the doors without distracting frames or visible hinges."

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**Discover how Renson® products can optimize the comfort experience within a contemporary design.**

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*"We not only develop innovative solutions, but also think about the aesthetic added value of each building."*



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**[\*] These configurations are only valid for the territory of Belgium.**

# RANGE OVERVIEW

		System C	System C*					
Box		Cbase	Cube®	Xtravent Ecomodus Compact	Healthbox® 3.0			
Configuration		-	-	-	Smart -0,90	SmartZone -0,61	SmartZone -0,50	SmartZone -0,43
Reduction factors BA ≤ 2015	Heat	1,00	0,74	0,94	1,00*	1,00*	1,00*	1,00*
	Cool	1,00	0,74	0,94	1,00*	1,00*	1,00*	1,00*
	Overheat	1,00	0,74	0,94	1,00*	1,00*	1,00*	1,00*
Reduction factors BA ≥ 2015	Heat	1,00	1,00	0,90	0,90	0,61	0,50	0,43
	Cool	1,00	1,00	0,90	1,00	1,00	1,00	1,00
	Overheat	1,00	1,00	0,90	1,00	1,00	1,00	1,00
Page		11-15	17-21	22-25	30-31	34-47	35-47	36-47
Control	Kitchen	-	CO <sub>2</sub> RH central	RH presence	CO <sub>2</sub>			
	Bathroom [with or without toilet]	-	RH central presence	RH presence	RH VOC			
	Toilet	-	RH central presence	RH presence	VOC			
	Other wet rooms	-	RH central	RH central	RH			
	Living room [open kitchen]	-	-	-	-			
	Living room [closed kitchen]	-	-	-	-			
	Main bedroom	-	-	-	-	CO <sub>2</sub> central	CO <sub>2</sub>	
	Other bedrooms	-	-	-	-	CO <sub>2</sub> central	CO <sub>2</sub>	
	Other dry rooms	-	-	-	-			
	Proposed natural supply	Self-regulating vents Renson P3/P4	Self-regulating vents Renson P3/P4	Self-regulating vents Renson P3/P4	Self-regulating vents Renson P3/P4			
Lining-up	Manually	Manually	Manually	Self-regulating				

\*Healthbox 3.0 has no ATG-E for building applications before 2015. Healthbox II must be used for this.

		System D*			
Extraction		Endura® Delta			
Configuration		Smart -0,93	Sense -0,87	Sense -0,70	Sense -0,61
Reduction factors BA ≤ 2015	Heat	1,00	1,00	1,00	1,00
	Cool	1,00	1,00	1,00	1,00
	Overheat	1,00	1,00	1,00	1,00
Reduction factors BA ≥ 2015	Heat	0,93	0,87	0,70	0,61
	Cool	1,00	1,00	1,00	1,00
	Overheat	1,00	1,00	1,00	1,00
Page		50-71	52-71	54-71	56-71
Control	Kitchen	VOC central Central RH CO <sub>2</sub> central			
	Bathroom (with or without toilet)				
	Toilet				
	Other wet rooms				
	Living room (open kitchen)				
	Living room (closed kitchen)	-	CO <sub>2</sub>	-	CO <sub>2</sub>
	Main bedroom	-	CO <sub>2</sub>		
	Other bedrooms	-	CO <sub>2</sub>		
	Other dry rooms	-	CO <sub>2</sub>		
	Proposed natural supply	-			
Lining-up	Manually				



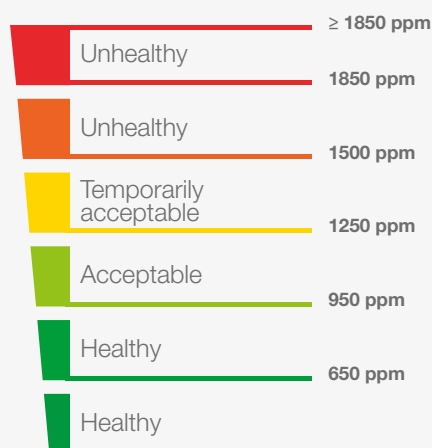
# WHY VENTILATE?

Contrary to what many people think, the inside air quality is on average 10 times worse than the outdoor air quality. Cooking, showering, heating, cleaning and even breathing and sweating ensure polluted air. Too much moisture inside also leads to odours, condensation and mould, especially in well insulated or insufficiently ventilated houses. And then there is the house itself, that, with volatile organic compounds [such as formaldehyde] in the building materials used, also has a bad effect on indoor air quality.

## GOOD FOR THE OCCUPANT AND THE HOME

Many people are convinced that occasionally opening the windows is enough to provide the necessary ventilation. However, the effect achieved is temporary and local. Moreover, ventilation through open windows is not controlled, resulting in costly energy loss. Open windows are also accompanied by noise nuisance and are an invitation to burglars and annoying insects.

Continuous and controlled ventilation is your only guarantee of a healthy indoor climate. The polluted inside air is discharged and continuously replaced by fresh outside air. The house will, as a result, be 'rinsed' with fresh air.



In the long run, a poor indoor climate can damage the residents' health. Respiratory problems, dry throat, eye irritation, headache, allergies, concentration loss, energy shortage or drowsiness are just some of the possible consequences. That is why it is extremely important to maintain thorough ventilation on a regular basis.

## CO<sub>2</sub> MONITOR

The CO<sub>2</sub> concentration is an important indicator for good indoor air quality and can be measured with the Renson® CO<sub>2</sub>-monitor. The air quality becomes expressed in CO<sub>2</sub> particles per million air particles. [ppm = parts per million].





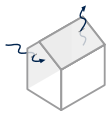


# VENTILATION SYSTEMS

Continuous and controlled ventilation is a must, especially in increasingly well insulated and airtight finished houses, offices and schools. Whether for a renovation or new buildings, the predetermined energy requirements, whether user-friendly and maintenance-friendly it should be and how fresh air is supplied, there is a suitable ventilation system for each project that meets the personal needs of the residents or users.

## THE DIFFERENT VENTILATION SYSTEMS

The ventilation standards NBN D50-001 and NEN 1087/8088 define 4 systems: A, B, C and D



**System A:** Natural supply,  
natural extraction



**System B:** Mechanical supply,  
natural extraction



**System C:** Natural supply,  
mechanical extraction



**System D:** Mechanical supply,  
mechanical extraction

Next to these systems, Renson® offers demand-controlled ventilation under the names: **System C+®** and **System D+®**



**System C+®:** Natural supply,  
demand-controlled extraction  
per room



**System D+®:**  
Demand-controlled supply &  
extraction with heat recovery



# SYSTEM C

**Cbase:** not demand-controlled, central extraction of polluted air

The Renson® C system uses a combination of self-regulating Invisivent window ventilations and a discharge fan to create a pleasant and healthy indoor climate.



- Fresh outdoor air supply
- Drainage of polluted indoor air
- Fresh outdoor air for nightcooling
- Outdoor sun protection



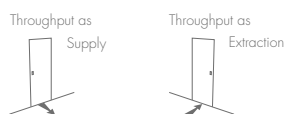
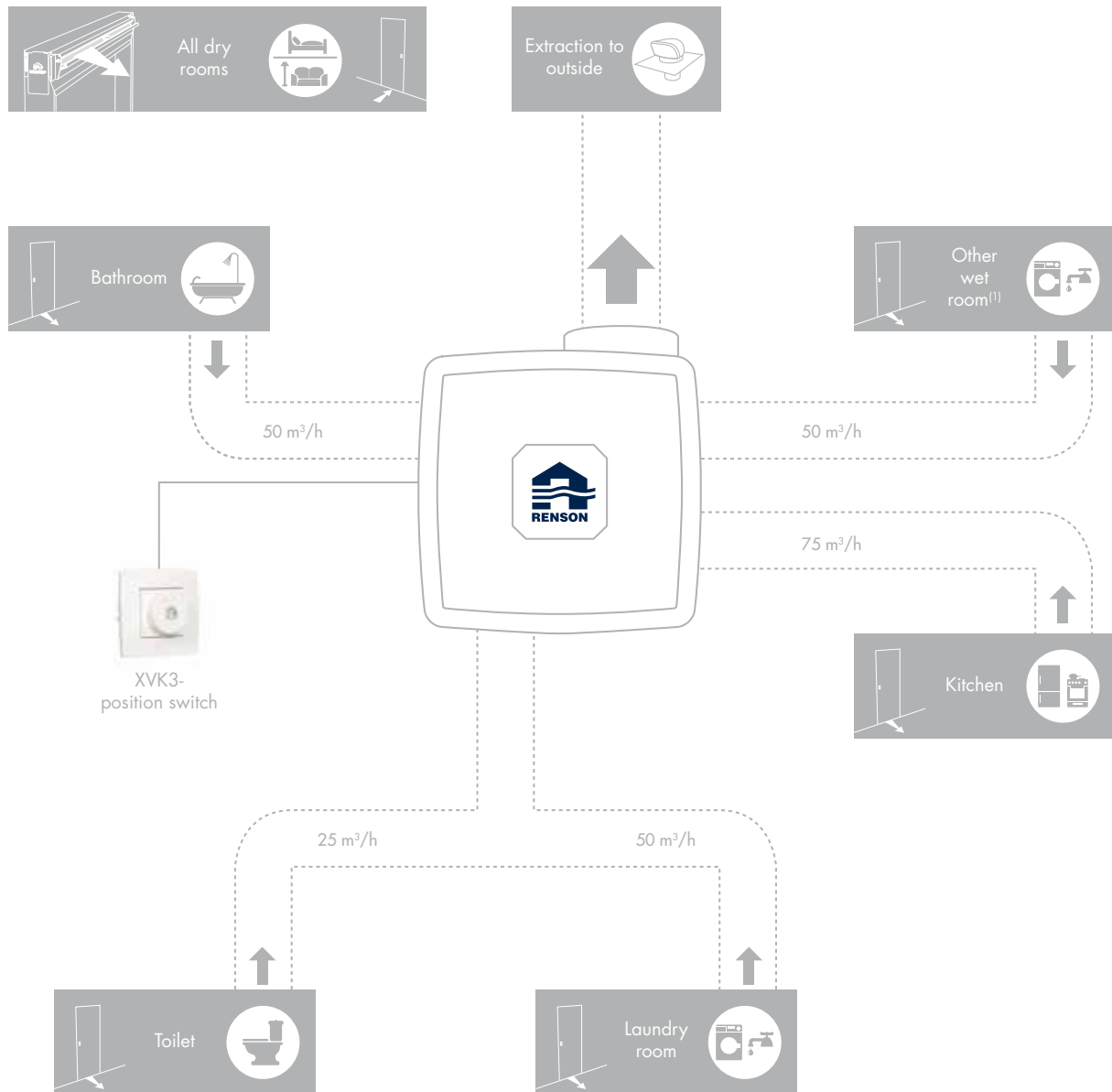
## Cbase

**Central** extraction of polluted air from the home.

# SYSTEM C

**Cbase:** not demand-controlled, central extraction of polluted air

1,0



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 1,00
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
<sup>(1)</sup> Laundry room, drying room or analogue room

## Basis package Cbase

### Kit

1 x motor unit EX330CB  
4 x cover cap and/or Red Ø125 > Ø80  
2 x cover cap Ø125  
1 x adaptor 125-150 mm (exhaust)  
1 x power cord

**66034200**



## Position switch

### XVK3 position switch

incl. rotary knob – central plate – cover plate

**66014009**

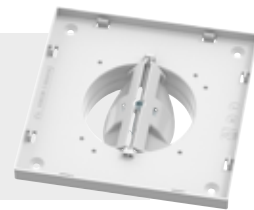


## Modular grill frame

Ø80  
Ø125

1 x grill frame  
1 x plaster cardboard

**66031624**  
**66031625**



## Cover plate

Cover plate Puro Ø80  
Cover plate Puro Ø125

**66031630**  
**66031631**

Cover plate Square Ø80  
Cover plate Square Ø125

**66031632**  
**66031633**

Cover plate Diagonal Ø80  
Cover plate Diagonal Ø125

**66031634**  
**66031635**

Cover plate Aqua Ø80  
Cover plate Aqua Ø125

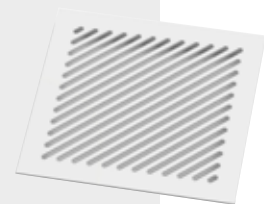
**66031636**  
**66031637**

Cover plate Artist Ø80  
Cover plate Artist Ø125

**66031638**  
**66031639**

Cover plate Deco Ø80  
Cover plate Deco Ø125

**66031642**  
**66031643**



## Design valves

SQair extraction valve [Deluxe]  
SQair extraction valve [Basic]

**76050401**  
**76050404**



# SYSTEM C

**Cbase:** not demand-controlled, central extraction of polluted air



# SYSTEM C

## Technical data sheet Cbase

### PRODUCT SPECIFICATIONS

- 0-10V silent, vibration-free EC motor
- Variable airflow and pressure level according to the chosen voltage [0-10V], maximum airflow of 262 m<sup>3</sup>/h at 100Pa
- Continuous adjustment
- 3 stage switch [sold separatly]
- Possibility to connect up to 6 wet rooms thanks to 6 extraction inlets on the ventilation unit [branching ducts is possible]
- Standardly 4 inlet points are equipped with adjustable air canal joints Ø125 en Ø80 / 2 inlets are closed off with a stop
- Extraction Ø125 mm [with adaptor to Ø150 mm]
- Recyclable plastic housing [polypropylene]
- Compact: easy to integrate in a technical room, attic or suspended ceiling
- Mounted horizontally or vertically by means of 4 screws
- Easy maintenance of the ventilation unit thanks to the removable cover
- Whisper quiet motor

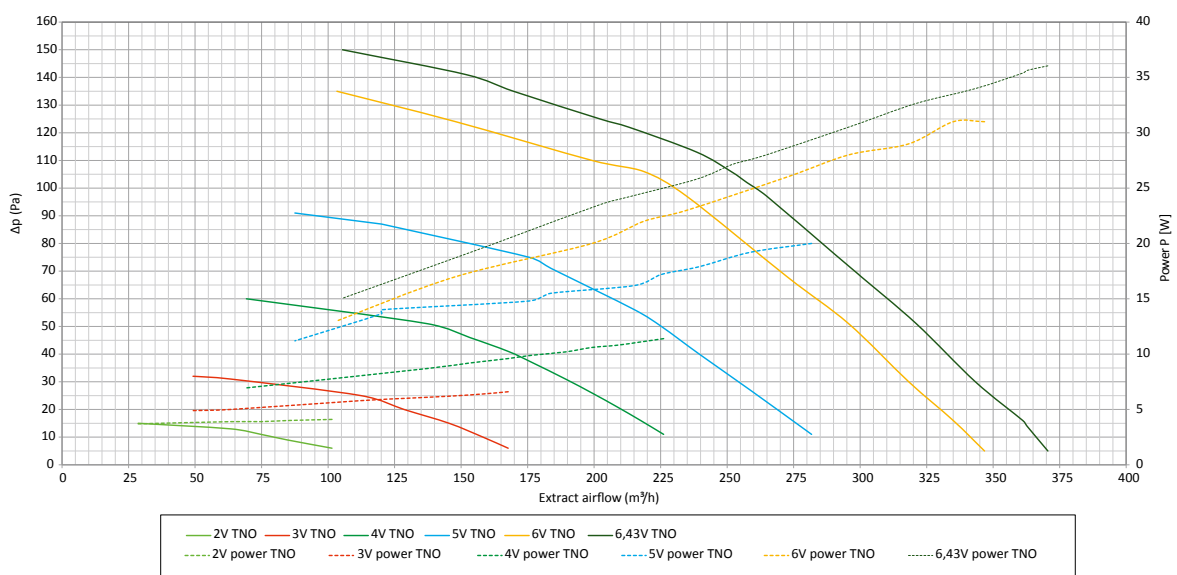


45 dB(A) 262 m<sup>3</sup>/h

### TECHNICAL SPECIFICATIONS

- Dimensions: 320 x 320 x 180 mm [LxWxH]
- Weight: 3,370 Kg
- Voltage: 1 x 230V/50Hz
- Average power consumption: depends on the chosen ventilation stage
- Maximum power consumption: 28 W

### FAN CURVES







# SYSTEM C+®

**Cube®:** Demand-controlled, central extraction of polluted air

**Xtravent:** demand & zone controlled extraction of polluted air

Renson® C+ systems use a combination of self-regulating Invisivent window ventilations and demand-controlled discharge ventilation [using **room sensors**] to create a pleasant and healthy indoor climate.



- Fresh outdoor air supply
- Drainage of polluted indoor air
- Fresh outdoor air for nightcooling
- Outdoor sun protection



**Cube®**

Demand-controlled, **central** extraction of polluted air from the home.

See page 18



**Xtravent Ecomodus Compact**

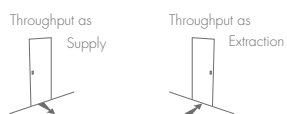
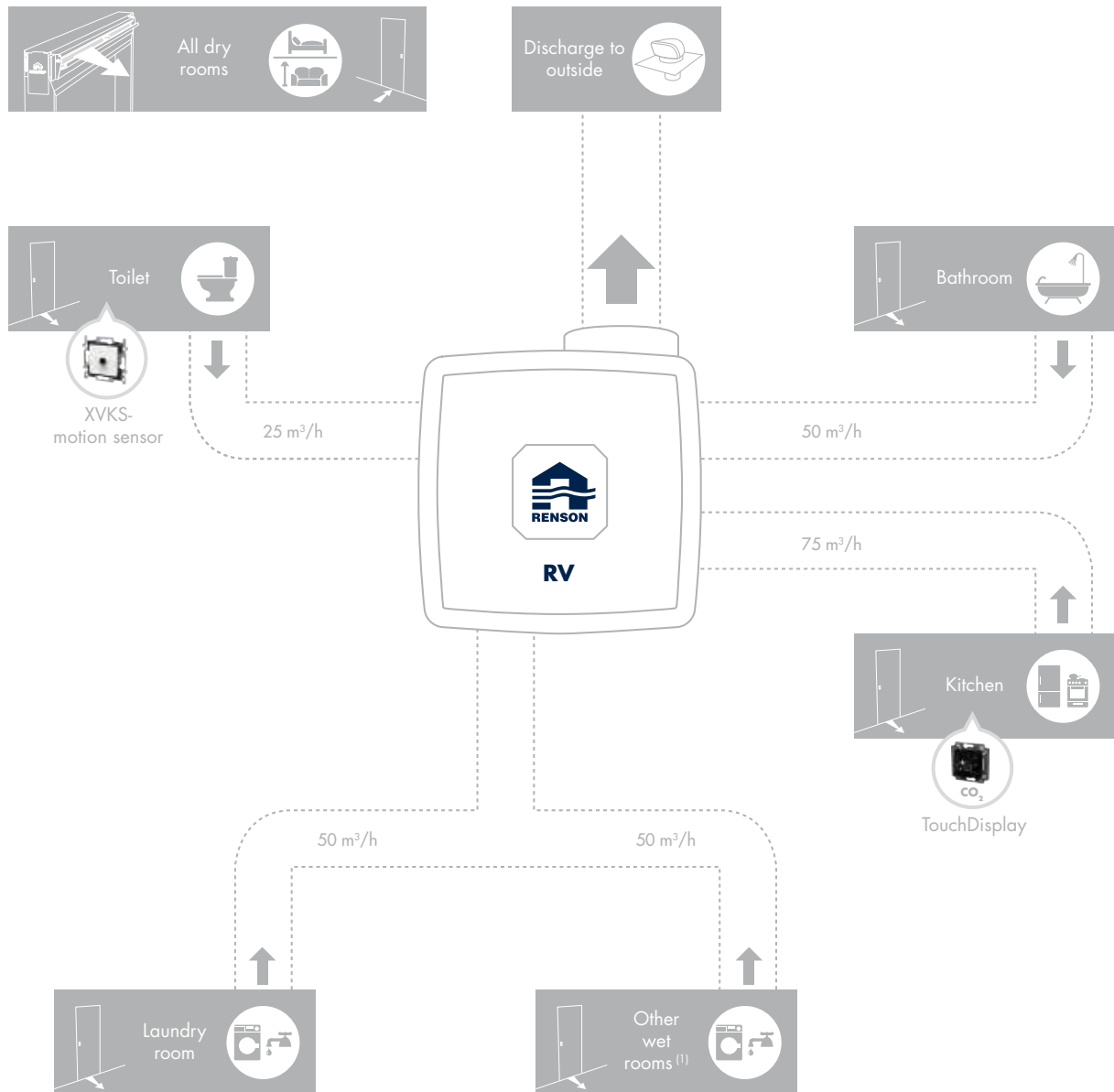
Demand-controlled **local** extraction of polluted air from the home.

See page 22

# SYSTEM C+®

**Cube®:** Demand-controlled, central extraction of polluted air

1,0



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 1,00
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

RV = Relative humidity detection (central in the unit) CO<sub>2</sub> = Carbon dioxide detection  
 The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 ¹) Laundry room, drying room or analogue room

Building application from  
 2015 onwards

## Basic package Cube®

### Kit

66034300

1 x motor unit EX425CU  
1 x XVKS motion sensor  
1 x TouchDisplay with CO<sub>2</sub> sensor

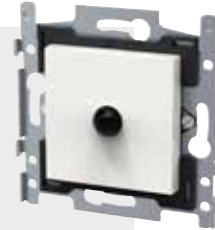


## Motion sensor

### XVKS

66031720

1 x XVKS-sensor white  
Compatible with Cube  
Cover plate not included



## TouchDisplay

With integrated CO<sub>2</sub> sensor  
Sensorless control

66032202

66032203



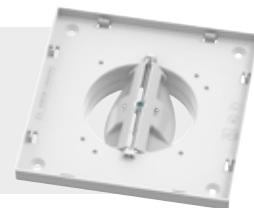
## Modular grill frame

Ø80  
Ø125

66031624

66031625

1 x grill frame  
1 x plaster cardboard



## Cover plate

Cover plate Puro Ø80  
Cover plate Puro Ø125

66031630

66031631

Cover plate Square Ø80  
Cover plate Square Ø125

66031632

66031633

Cover plate Diagonal Ø80  
Cover plate Diagonal Ø125

66031634

66031635

Cover plate Aqua Ø80  
Cover plate Aqua Ø125

66031636

66031637

Cover plate Artist Ø80  
Cover plate Artist Ø125

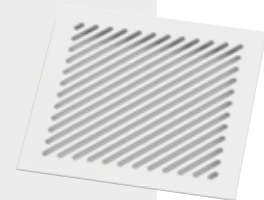
66031638

66031639

Cover plate Deco Ø80  
Cover plate Deco Ø125

66031642

66031643



## Design valves

SQair extraction valve [Deluxe]  
SQair extraction valve [Basic]

76050401

76050404



# SYSTEM C+®

**Cube®:** Demand-controlled, central extraction of polluted air

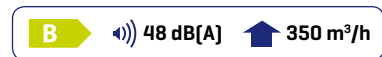


# SYSTEM C+<sup>®</sup>

## Technical data sheet Cube<sup>®</sup>

### PRODUCT CHARACTERISTICS

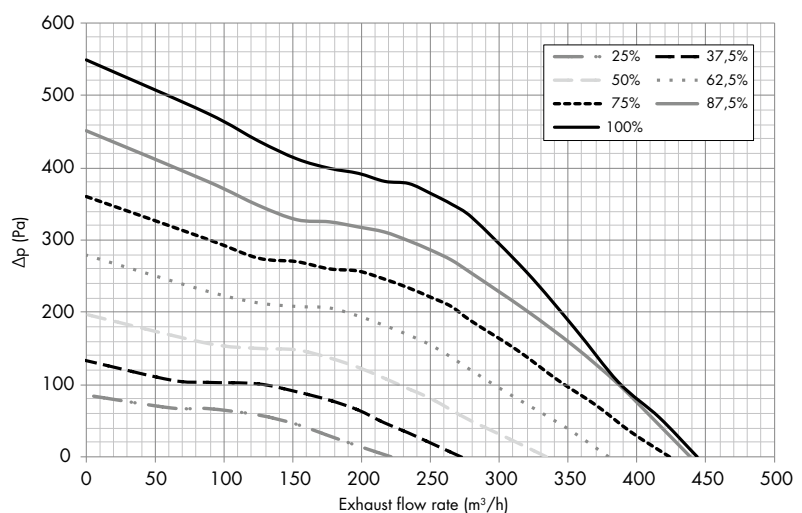
- EC DC motor: total flow rate, 350 m<sup>3</sup>/h at 190 Pa maximum pressure
  - Thermally protected
  - 0-10 V controlled
- Demand-controlled ventilation with settings based on:
  - Relative humidity [central humidity sensor in the unit]
  - Presence [wired presence sensors in toilet / bathroom + toilet]
    - NIKO<sup>®</sup> base with claw fixing
    - Cover plate not included
    - Central core compatible with BTicino
    - Min.: 2 x 0.34 mm<sup>2</sup> / Max.: 2 x 0.8 mm<sup>2</sup> [30 m max. length]
    - No external power supply required
  - CO<sub>2</sub> in the kitchen [sensor integrated in the control]
    - Air quality indication on the control [green - orange - red]
    - 230 V power supply
- Control via TouchDisplay
  - RF communication
  - 230 V power supply
- Capability for connecting 6 wet rooms thanks to 6 extraction points
- 6 extraction points as standard, equipped with 125 and 80 mm diameter adapter fittings
- 125 mm diameter exhaust point [adapter to 150 mm dia.]
- Recyclable plastic housing [polypropylene]
- Compact format: easy to incorporate in technical room, attic or false ceiling/wall
- Horizontal or vertical fitting using 4 screws
- Removable cover plate and motor plate make for simple maintenance of the fan unit
- Whisper-quiet motor



### TECHNICAL SPECIFICATIONS

- Dimensions: 320 x 320 x 180 mm [L x W x H]
- Weight: 3.350 Kg
- Supply voltage: 1 x 230 V / 50 Hz
- Maximum consumption: 86 W

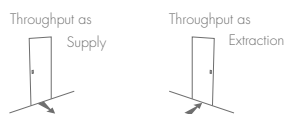
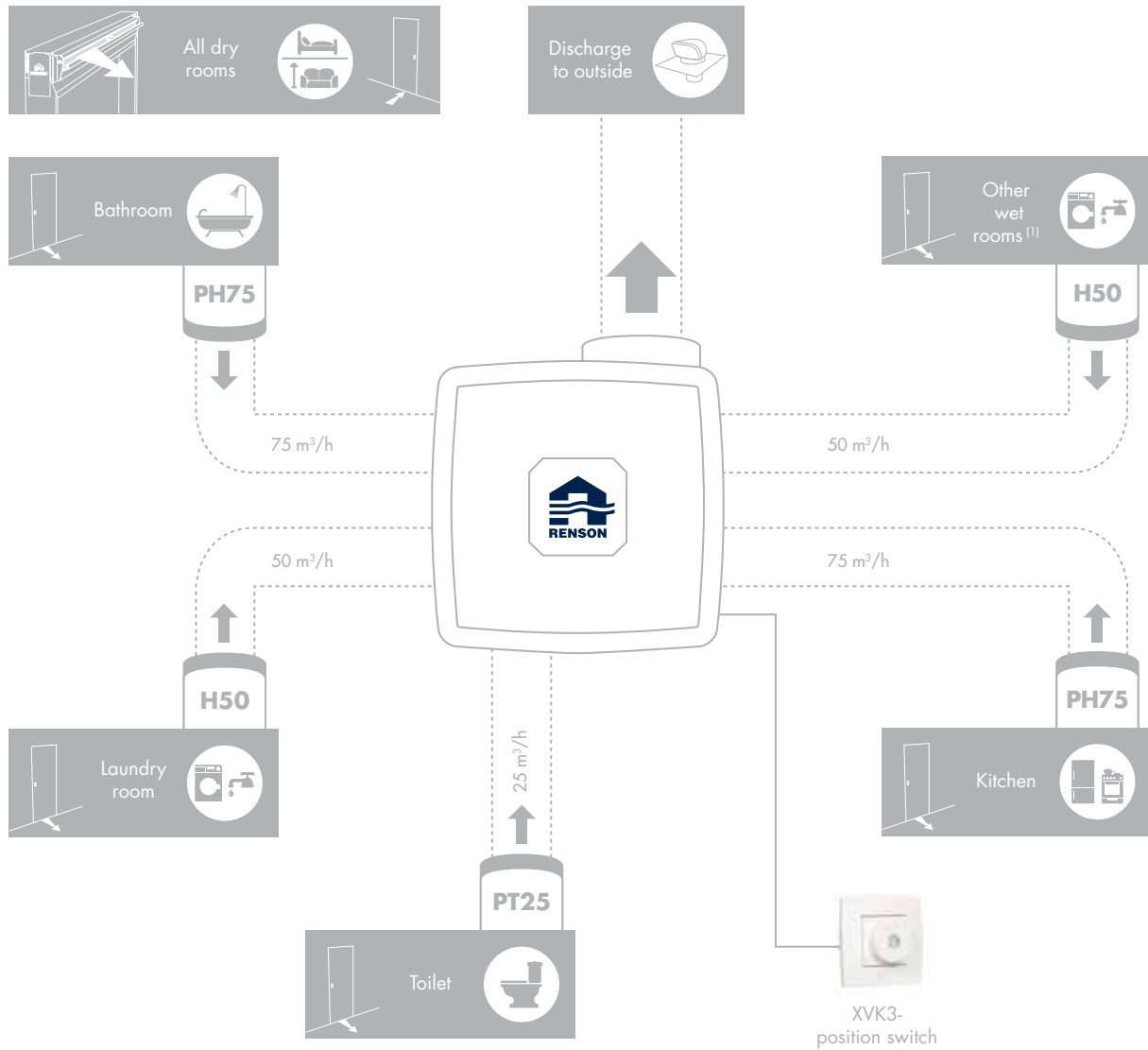
### FAN CURVES



# SYSTEM C+®

**Xtravent:** demand & zone controlled extraction of polluted air

0,9



PH75: humidity + presence H50: humidity measurement PT25: presence

The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision  
 (1) Laundry room, drying room or analogue room

Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,90
$f_{\text{reduc,vent,cool (3)}}$	= 0,90
$f_{\text{reduc,vent,overheat (3)}}$	= 0,90

Building application from 2015 onwards

## Basic package Xtravent Ecomodus Compact

### Kit

**66032000**

- 1 x motor unit EX325MC
- 2 x extraction PH75 humidity + presence detection
- 1 x extraction PT25 presence detection + timer
- 1 x 3-position switch



## Extraction grill

### PH75 Kitchen/Bathroom kit

**66014030**

- Extraction PH75 + mounting flange
- Humidity and presence detection
- Ø80 mm



## Extraction grill

### PT25 Toilet kit

**66014040**

- Extraction PT25 + mounting flange
- Humidity detection + timer
- Ø80 mm



## Extraction grill

### H50 Laundry room kit

**66014050**

- Extraction H50 + mounting flange
- Humidity detection
- Ø80 mm



## Control switch

### XVK3 position switch

**66014009**

- incl. rotary knob – central plate – cover plate

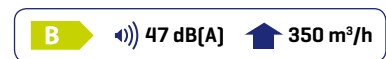


# SYSTEM C+®

## Technical data sheet Xtravent Ecomodus Compact

### PRODUCT SPECIFICATIONS

- EC vibration-free direct current motor: total airflow of 350m<sup>3</sup>/h at max pressure of 200Pa
- Possible to connect up to 6 rooms thanks to 6 extraction points on the unit
- Standardly all 6 extraction points equipped with adaptors Ø125 and Ø80
- Exhaust Ø125mm [adaptor to Ø150mm]
- Recyclable plastic housing [polypropylene]
- Compact size: easy to install in a technical room, attic or behind a false ceiling/wall
- Horizontal or vertical installation by means of 4 screws
- Easy maintenance of the fan thanks to removable cover
- Whisper quiet motor
- Controlled via 3 stage switch
- Extraction grill:
  - Rectangular white PVC grill [RAL 9010] with removable front panel for maintenance
  - Connection diameter 80mm
  - Power supply: 9V battery [not included] or power board 12 VAC [optional]
  - Dimensions extraction grilles PH75 , PT25 , H50 : 151 x 159 x 43mm [LxWxH]
  - Easy maintenance with removable cover



**PT25:** Extraction toilet with presence detector and timer 20 '

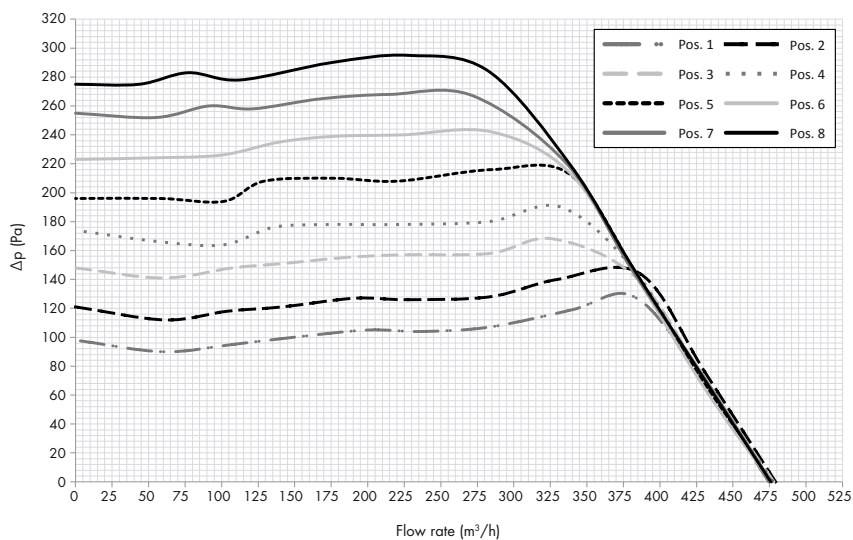
**H50:** Extraction laundry room fluid control with humidity sensor

**PH75:** Extraction bathroom or kitchen with presence detector and humidity sensor

### TECHNICAL SPECIFICATIONS

- Dimensions: 320 x 320 x 180mm [LxWxH]
- Weight : 3.455 Kg
- Voltage: 1 x 230V/50Hz
- Average power consumption: 27W
- Max power consumption: 54W

### FAN CURVES





# SYSTEM C+®

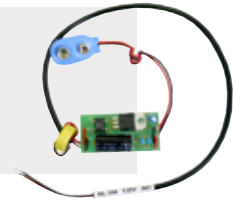
## Accessories Xtravent Ecomodus Compact

### Power supply card 12VAC-9VDC

12VAC - 9VDC

Can be combined with PH75 and PT25

**66014090**



### Transformer

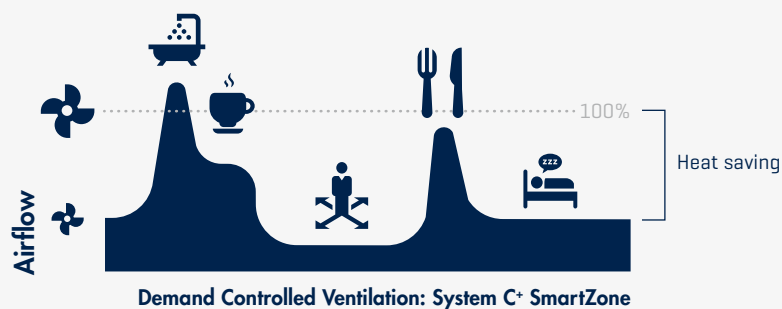
12VAC 12VA with fuse

**66014091**



# DEMAND CONTROLLED VENTILATION CENTRAL VS ZONE CONTROL

Each type C ventilation system in a home consists of at least a ventilation unit with an integrated fan. However, Renson® will keep innovating to raise this type of ventilation to a higher level to an intelligent, demand-controlled system, where the ventilation system adapts the discharge rate according to the needs and living pattern of the residents and the measured air quality.



## ZONE CONTROL: VENTILATE WHERE YOU LIVE

In this type of demand-control, the air flow is adjusted locally per room, according to the measured air quality ( $\text{CO}_2$ ,  $\text{H}_2\text{O}$  and/or odour [VOC]). The ventilation system will, if the air quality allows it, minimise ventilation and only extract more when necessary and then only in the specific rooms where pollution occurs. This type of ventilation gives you additional advantages over a ventilation system with **central control**:

1] Adjusting the ventilation intensity is completely automatic and only in the room where the pollution occurs.

**a. Additional acoustic comfort:**

The ventilation level is only adjusted in the room where pollution occurs. Unlike a centrally controlled system, there is no additional noise nuisance in one room when ventilation is activated in another.

**b. Additional limitation of heating leak:**

More than a centrally controlled ventilation system, a zone-controlled system will reduce heating leaks to a minimum. The total air flow from the home is therefore even lower than with a centrally controlled system.

**c. Additional limitation of electrical consumption:**

In analogy to the heating leak, electrical consumption of a zone-controlled system will also be lower, as the fan can run on a lower regime.

2] There are no sensors visible in the room. All sensors are integrated in the control valves of the ventilation system and no additional sensors need to be installed in the room.

Each control module is equipped with specific sensors for each type of room:



Symbol	Advice for the room to connect	Detection possibilities
	Laundry room <i>Shower room, bathroom (without toilet)</i>	H <sub>2</sub> O
	Bathroom (with toilet) <i>Wellness, garage, cellar</i>	H <sub>2</sub> O, VOC
	Toilet <i>Storage/technical area, workshop, dressing, hall/ corridor</i>	VOC
	Kitchen (open/closed)	CO <sub>2</sub> , H <sub>2</sub> O
	Bedroom <i>Living room, office, practice area, workspace, study, hobby room, waiting room/sitting area, baby room, children's room, TV/music room, relax room, dining room, playroom, attic</i>	CO <sub>2</sub> , H <sub>2</sub> O

Each control module is also equipped with temperature sensing.

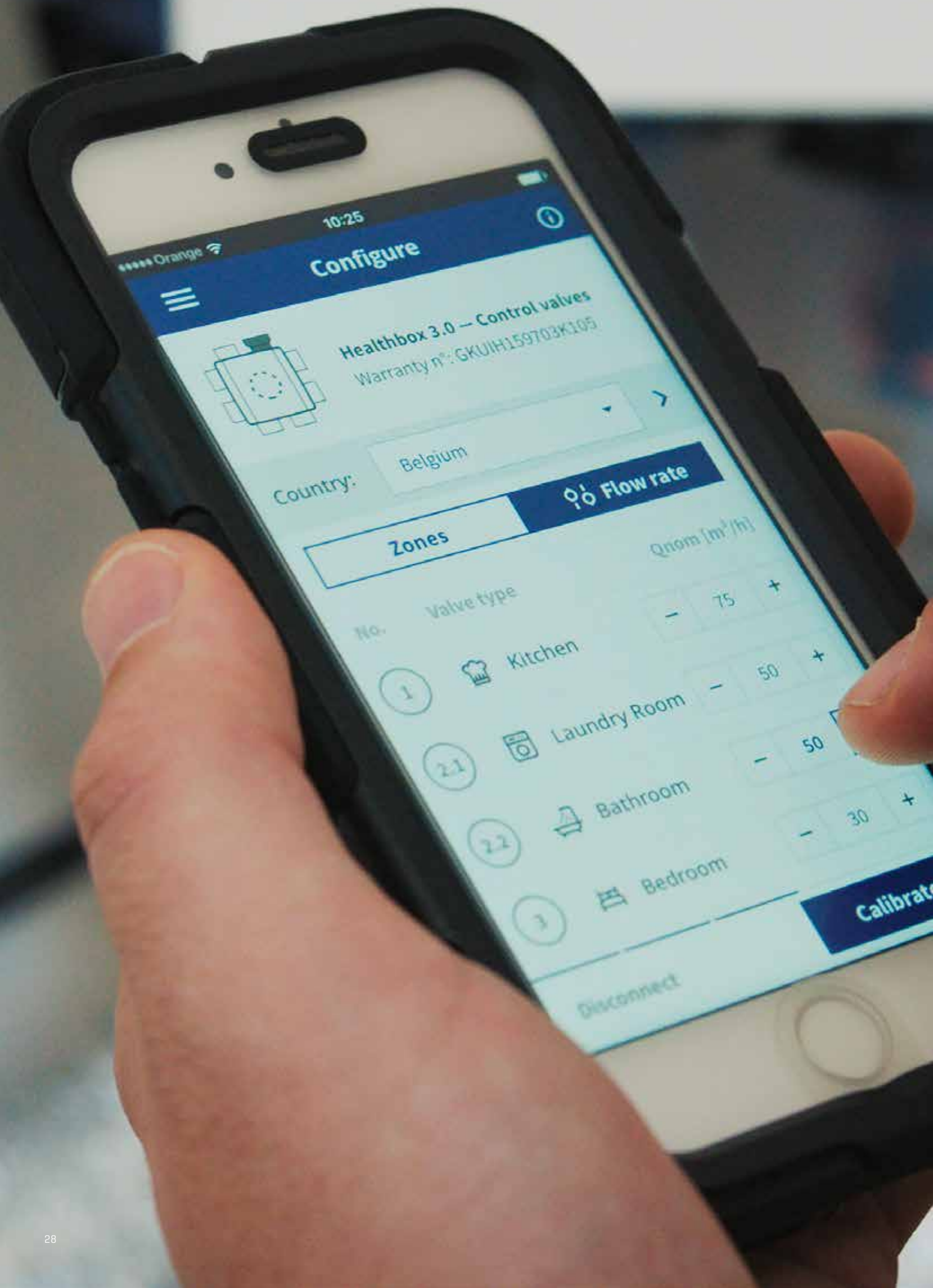
## SMARTCONNECT AND APP CONTROL

SmartConnect turns Healthbox 3.0 into a smart device that can communicate with the user/installer and other smart devices. This makes Healthbox 3.0 completely ready to be integrated into a smart home, resulting in greater overall comfort.

The accompanying app gives the user a clear insight of the air quality (H<sub>2</sub>O, VOC and/or CO<sub>2</sub>) and the ventilation level within the home. Due to various possible profiles, the user can personalise the ventilation level per room and can adjust ventilation even better to his needs.

The installer app on the other hand, ensures a clear step-by-step plan and thus, saves a lot of time during installation. The 'self learning'-factor helps installers forward on their way to high quality installations. Furthermore, all required information for the EPB declaration is digitally supplied via the app.





## Configure



Healthbox 3.0 -- Control valves  
Warranty n°: GKUIH159703K105

Country: Belgium

Zones

Flow rate

No.	Valve type	Qnom [m³/h]
1	Kitchen	75
21	Laundry Room	50
22	Bathroom	50
3	Bedroom	30

Calibrate

Disconnect

# SYSTEM C+®

Healthbox® 3.0: demand & zone controlled extraction of polluted air

The Renson® C+ systems use a combination of self-regulating Invisivent window ventilations and demand-controlled discharge ventilation [**controlled per zone**] to create a pleasant and healthy indoor climate.



- Fresh outdoor air supply
- Drainage of polluted indoor air
- Fresh outdoor air for nightcooling
- Outdoor sun protection



## Healthbox® 3.0

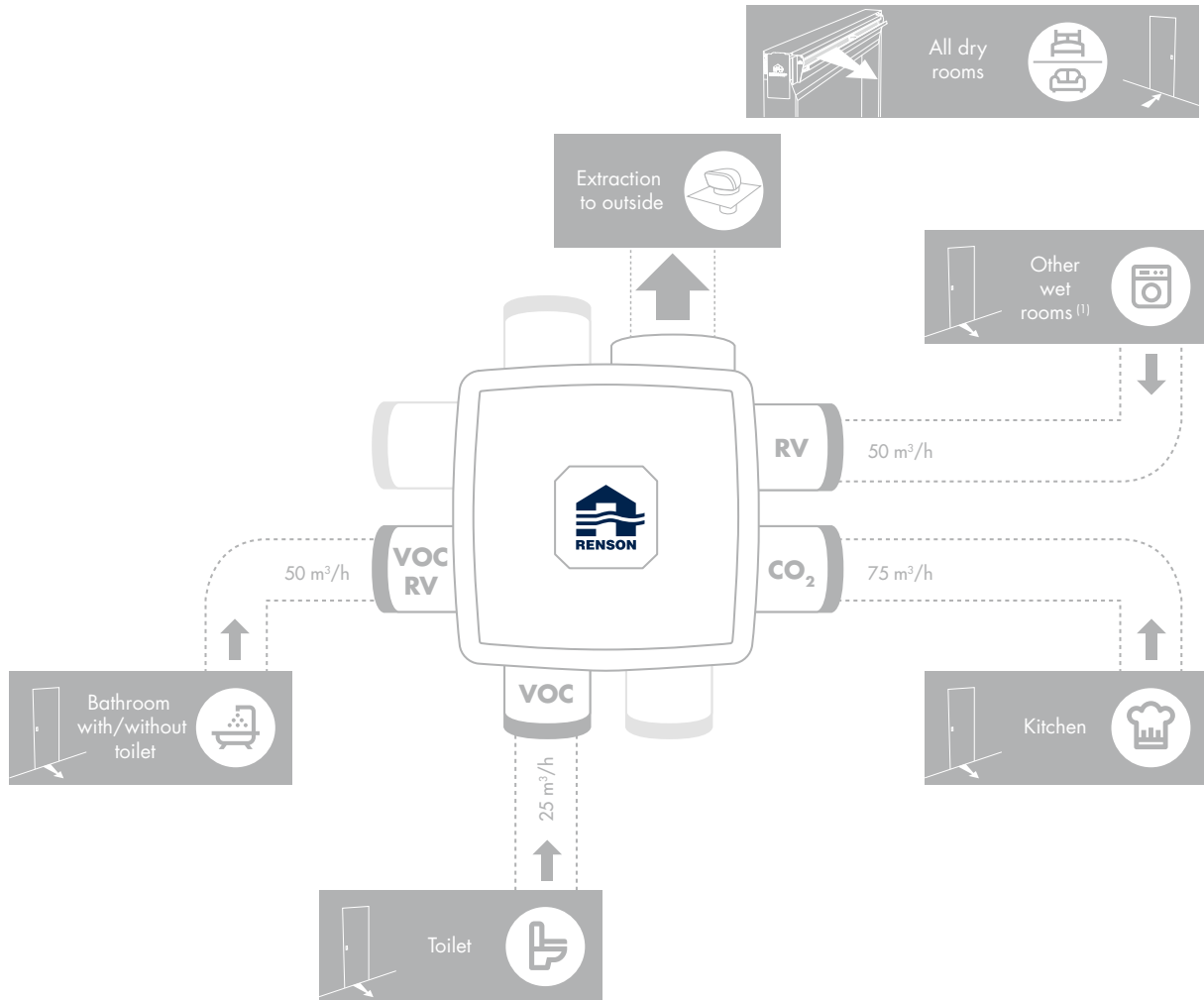
Demand-controlled **zone controlled** extraction of polluted air from the home.

# SYSTEM C+®

Healthbox® 3.0: demand & zone controlled extraction of polluted air

0,9

Smart - 0,90



Each valve controls a maximum of 1 local.  
 RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
 The position of the valves can be freely determined.  
 Breeze function present = demand controlled automatic deactivation in case of overheating  
 The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 (1) laundry room, drying room or analogue room

Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,90
$f_{\text{reduc,vent,cool (3)}}$	= 1,00
$f_{\text{reduc,vent,overheat (3)}}$	= 1,00

Building application from 2015 onwards

## Basic package Healthbox® 3.0

### Kit Healthbox 3.0

66060102

Kit contains:

- 1 x Healthbox 3.0 motor unit
- 1 x kitchen kit
- 1 x bathroom kit with toilet
- 1 x toilet kit
- 1 x Wi-Fi dongle
- 1 x Mains cable 230V incl. connector
- 7 x Adaptor Ø125-80
- 1 x Exhaust adaptor Ø150
- 4 x Louvre base Ø125
- 1 x Louvre base Ø80



## Kit

**Kitchen kit** (CO<sub>2</sub> + H<sub>2</sub>O)

66060128

**Bathroom kit with toilet** (VOC + H<sub>2</sub>O)

66060126

**Toilet kit** (VOC)

66060127

**Laundry room kit / bathroom without toilet** (H<sub>2</sub>O)

66060125

Each kit contains the respective control module plus:

- 1 x clamp Ø60-165 (for toilet kit Ø50-90)
- 1 x patch cable 0.5 m



## Kit valve collector

### T-piece

66060118

- 1 x T-piece
- 2 x adaptor 125-80

### Print

66060119

- 1 x print
- 2 x self tapping screw
- 1 x patch cable 0.5 m



## Cover plate

**Cover plate Puro Ø80**

66031630

**Cover plate Puro Ø125**

66031631

**Cover plate Square Ø80**

66031632

**Cover plate Square Ø125**

66031633

**Cover plate Diagonal Ø80**

66031634

**Cover plate Diagonal Ø125**

66031635

**Cover plate Aqua Ø80**

66031636

**Cover plate Aqua Ø125**

66031637

**Cover plate Artist Ø80**

66031638

**Cover plate Artist Ø125**

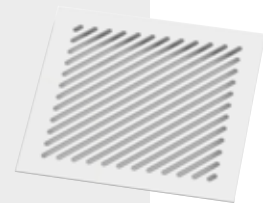
66031639

**Cover plate Deco Ø80**

66031642

**Cover plate Deco Ø125**

66031643



See also possible finishing on page 137

## Modular grill frame

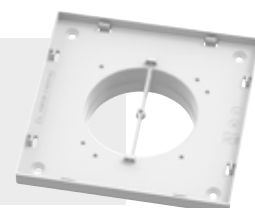
**Ø80**

66031675

**Ø125**

66031676

- 1 x louvre base
- 1 x plasterboard

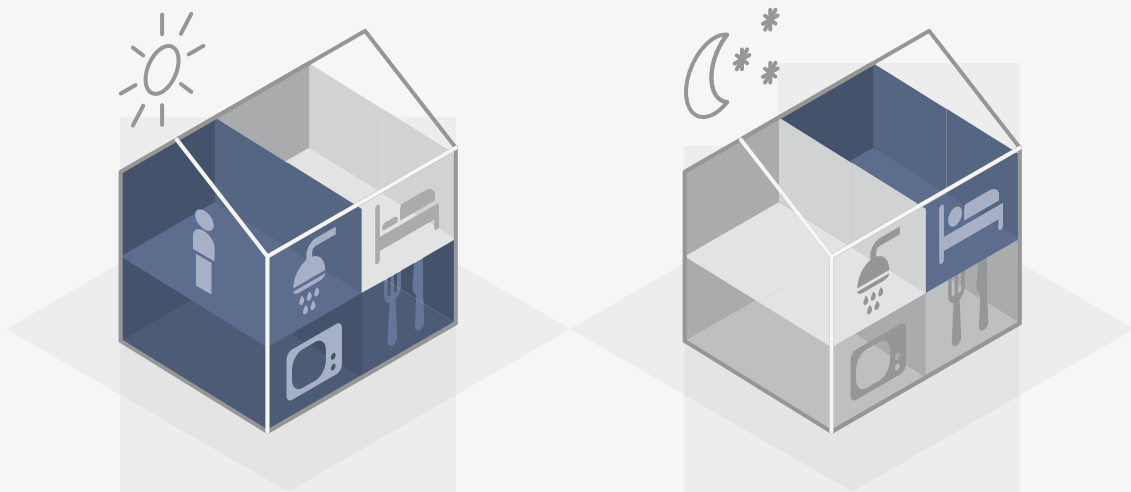


# SMART VENTILATION THANKS TO SMARTZONE

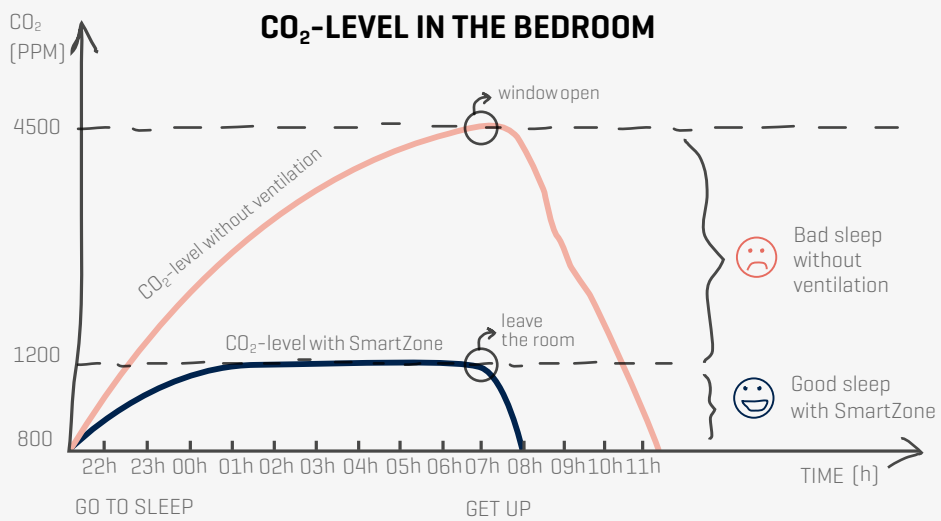
With the unique Smart Zone principle, polluted indoor air is removed not only in the humid areas, but also in the bedrooms. With different values, the ventilation pattern is adjusted even more to the practical needs of the residents.

Intelligent sensors, integrated into the ventilation unit's control valves, continuously measure the air quality in each room of the home and adjust ventilation air flow if necessary. For example, if the residents watch television in the evening, the ventilation system ensures an increased extraction in the living area. If they go to sleep, the control valve of the ventilation system detects

an increase of the CO<sub>2</sub> level in the bedroom and more polluted air is extracted there. Natural supply and mechanical extraction are therefore adapted to each other in order to achieve good air quality in every room and thus, ensure a good, healthy night's sleep.





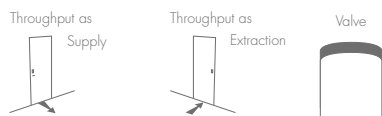
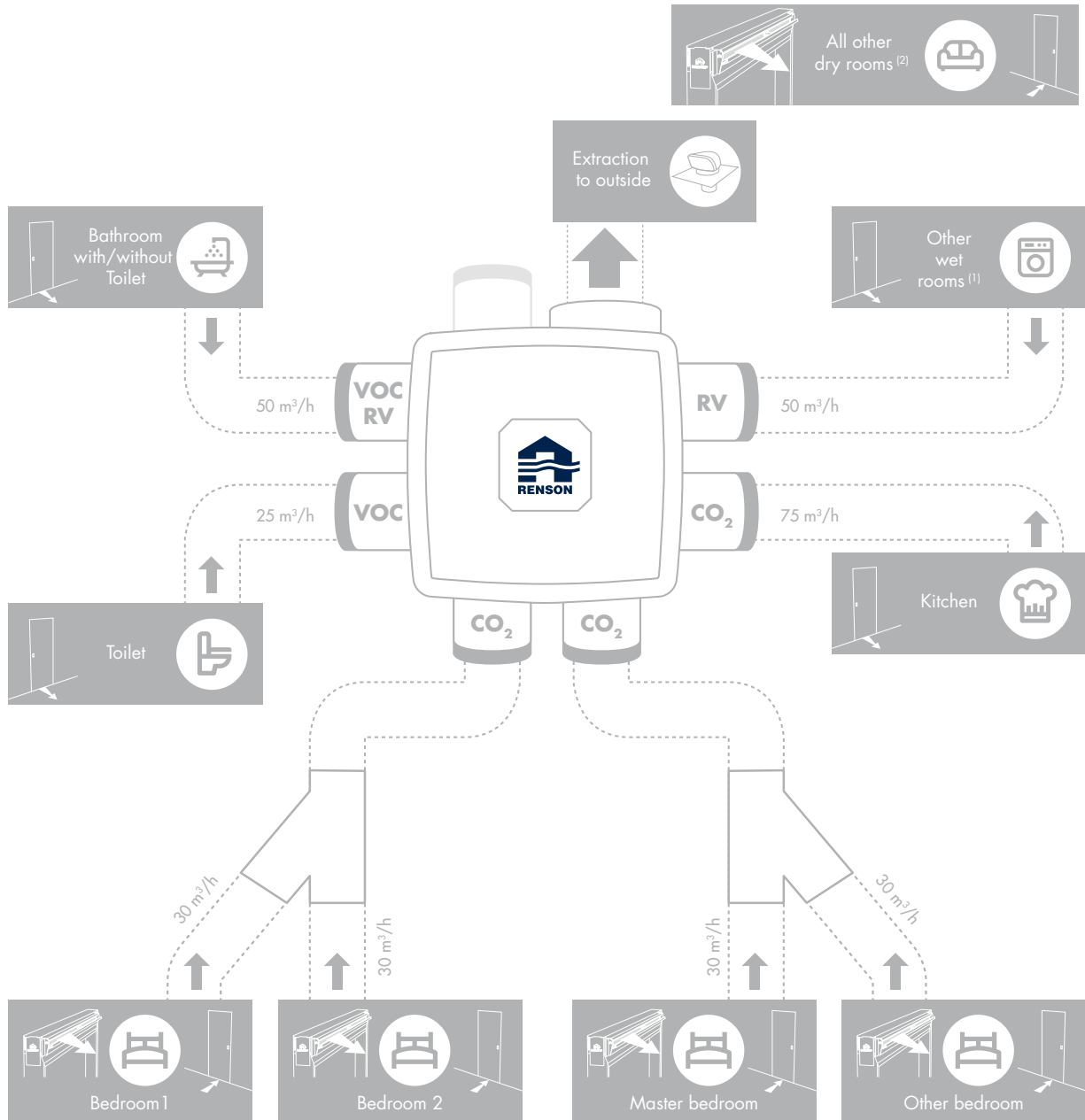


# SYSTEM C+®

Healthbox® 3.0: demand & zone controlled extraction of polluted air

0,61  
0,50

SMARTZONE - 0,61



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,61
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

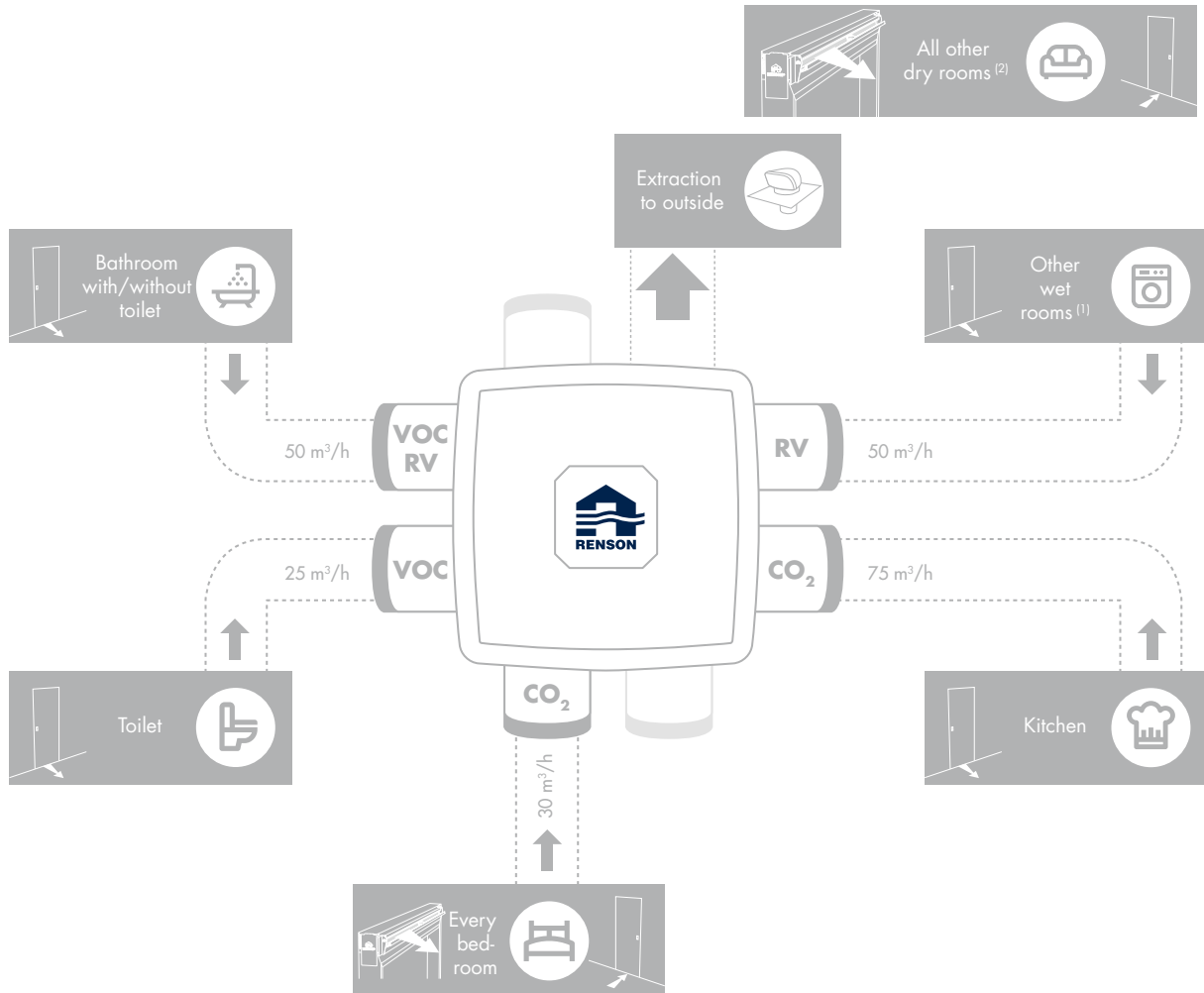
The valves for the bedrooms control up to 3 bedrooms. Each other valve controls a maximum of 1 local.  
 RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
 The position of the valves can be freely determined.  
 Breeze function present = demand controlled automatic deactivation in case of overheating.  
 The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 (1) Laundry room, drying room or analogue room  
 (2) Living room, study, playroom or analogue room

Building application from 2015 onwards

# SYSTEM C+®

Healthbox® 3.0: demand & zone controlled extraction of polluted air

## SMARTZONE - 0,50



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,50
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

Each valve controls a maximum of 1 local.  
 RV = Relative humidity detection VOC = Volatile organic components detection CO<sub>2</sub> = Carbon dioxide detection  
 The position of the valves can be freely determined.  
 Breeze function present = demand controlled automatic deactivation in case of overheating  
 The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 (I) Laundry room, drying room or analogue room  
 (II) Living room, study, playroom or analogue room

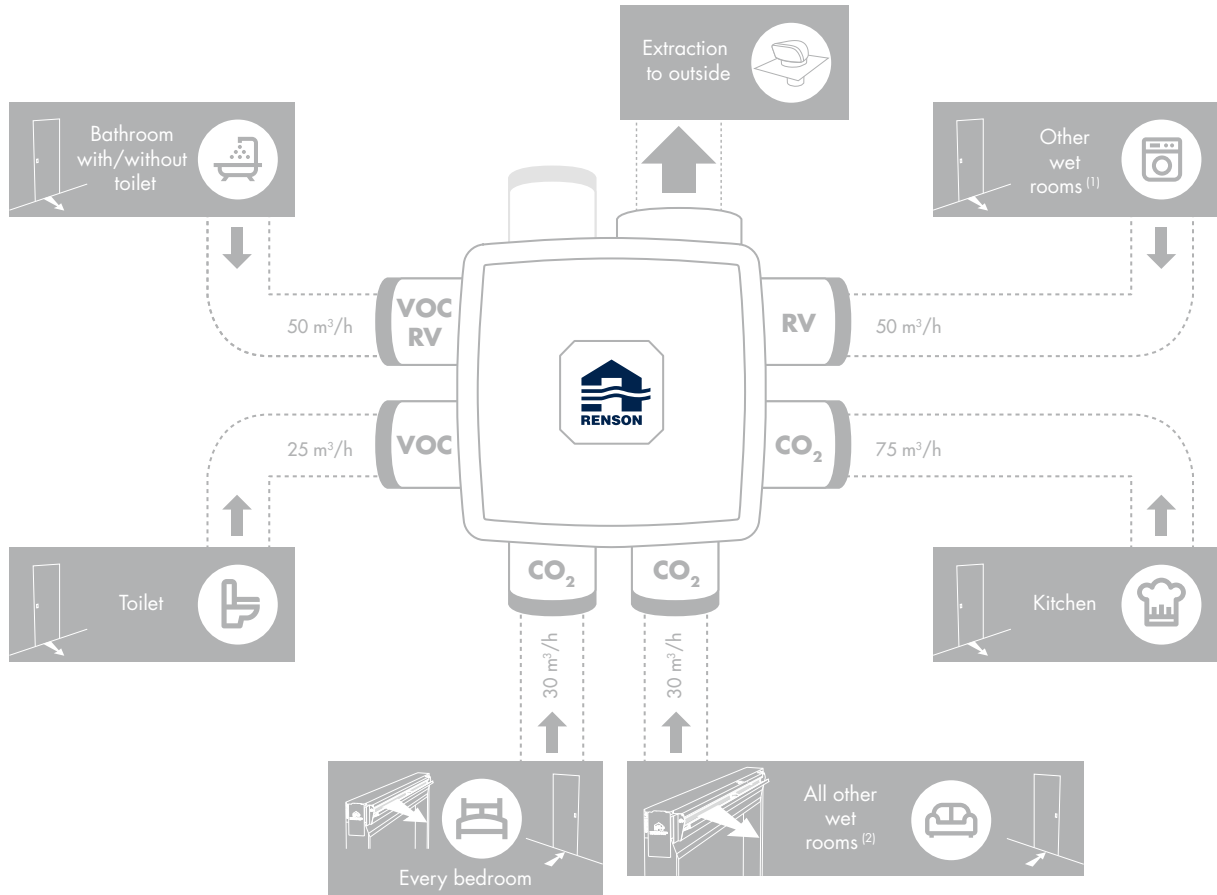
Building application from 2015 onwards

# SYSTEM C+®

Healthbox® 3.0: demand & zone controlled extraction of polluted air

0,43

SMARTZONE - 0,43



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,43
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

Each valve controls a maximum of 1 local.  
 RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
 The position of the valves can be freely determined.  
 Breeze function present = demand controlled automatic deactivation in case of overheating  
 The air flows displayed are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 (1) laundry room, drying room or analogue room  
 (2) Living room, study, playroom or analogue room

Building application from 2015 onwards

## Basic package Healthbox® 3.0 SmartZone

### Kit Healthbox 3.0 SmartZone

66060103

Kit contains:

- 1 x Healthbox 3.0 motor unit
- 1 x kitchen kit
- 1 x bathroom kit with toilet
- 1 x toilet kit
- 2 x bedroom kit
- 1 x Wi-Fi dongle
- 1 x Mains cable 230V incl. connector
- 7 x Adaptor Ø125-80
- 1 x Exhaust adaptor Ø150
- 4 x Louvre base Ø125
- 1 x Louvre base Ø80



## Kit

**Kitchen kit** [CO<sub>2</sub> + H<sub>2</sub>O]

66060128

**Bathroom kit with toilet** [VOC + H<sub>2</sub>O]

66060126

**Toilet kit** [VOC]

66060127

**Laundry room kit / bathroom without toilet** [H<sub>2</sub>O]

66060125

**Bedroom kit** [CO<sub>2</sub> + H<sub>2</sub>O]

66060129

Each kit contains the respective control module plus:

- 1 x clamp Ø60-165 [for toilet kit Ø50-90]
- 1 x patch cable 0.5 m



## Kit valve collector

### T-piece

66060118

- 1 x T-piece
- 2 x adaptor 125-80

### Print

66060119

- 1 x print with casing
- 2 x self-tapping screw
- 1 x patch cable 0,5 m



## Cover plate

**Cover plate Puro Ø80**

66031630

**Cover plate Puro Ø125**

66031631

**Cover plate Square Ø80**

66031632

**Cover plate Square Ø125**

66031633

**Cover plate Diagonal Ø80**

66031634

**Cover plate Diagonal Ø125**

66031635

**Cover plate Aqua Ø80**

66031636

**Cover plate Aqua Ø125**

66031637

**Cover plate Artist Ø80**

66031638

**Cover plate Artist Ø125**

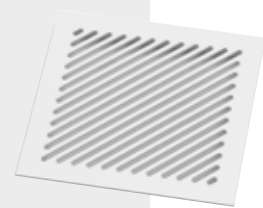
66031639

**Cover plate Deco Ø80**

66031642

**Cover plate Deco Ø125**

66031643



See also possible finishing on page 137

## Modular grill frame

**Ø80 adjustable white**

66031687

**Ø80 adjustable black**

66031624

**Ø125 adjustable white**

66031686

**Ø125 adjustable black**

66031625

**Ø80 non-adjustable white**

66031675

**Ø80 non-adjustable black**

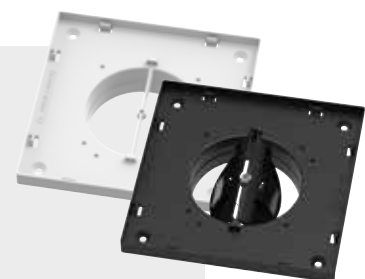
66031626

**Ø125 non-adjustable white**

66031676

**Ø125 non-adjustable black**

66031627



Adjustable louvre base available for configuration 0.61

# SYSTEM C+<sup>®</sup>

## Technical data sheet Healthbox<sup>®</sup> 3.0

### VENTILATION UNIT FOR DEMAND-CONTROLLED MECHANICAL EXTRACTION

Healthbox 3.0 is at the center of the energy-efficient ventilation concept C<sup>+</sup>. It controls the fresh air supply to dry dwellings through window ventilation and the mechanical extraction of stale air via Healthbox 3.0.

#### RANGE OF APPLICATION

- Incorporating demand-controlled ventilation in a dwelling/apartment/etc.
- Suitable for use in new buildings and renovation projects.
- A suitable system to achieve a worthwhile gain in E-level (Flemish energy performance requirement), thus bringing the dwelling up to the legally required E-level or better.
- SmartZone option: direct control of air quality can be achieved in all rooms in the dwelling by extracting stale air from dry rooms as well. This will achieve the maximum E-level gain in the system.
- Optimum operation of the C<sup>+</sup> ventilation system can only be guaranteed if the following components are in place and matched to one another:
  - Fresh air supply via self-regulating Renson window ventilators in dry spaces
  - Air throughput
  - Extraction of stale air via the Healthbox 3.0



Basic form

#### MAIN FEATURES

Healthbox 3.0 consists of a fan unit with control valves to be connected externally.

- **Demand-driven ventilation**
  - Guaranteed good air quality with heat savings of up to 60%\*
  - Built-in sensors measure indoor air quality 24 hours a day in the extracted air flow
  - Extraction flow rate controlled on the basis of measured indoor air quality
- **Central fan**
  - Low-noise and energy-efficient EC motor
- **Up to 11 rooms can be connected**
- **Ease of installation**
  - The installer app guides the installer through the start-up process:
    - Automatic calibration appreciably reduces installation time
    - Configurable control valves: extraction flow rate can be set individually for each room
  - Smart / compact air duct management in small spaces thanks to the valve collectors
  - Digital generation of measurement report
- **SmartConnect**
  - Healthbox 3.0 communicates with the user app, installer app and other devices/appliances in a smart home
- **Design extraction points**
  - Design extraction points (recessed or surface-mounted) can be fitted without control valves in the rooms



Healthbox 3.0 Set-up



\* in relation to the nominal flow rate, depending on configuration and occupancy

# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

### ITEM CODE

Item code	Designation	Main components
66060102	Healthbox 3.0 kit	<ul style="list-style-type: none"> <li>Healthbox 3.0 fan unit</li> <li>Control valves: kitchen - bathroom - toilet</li> </ul>
66060103	Healthbox 3.0 SmartZone kit	<ul style="list-style-type: none"> <li>Healthbox 3.0 fan unit</li> <li>Control valves: kitchen - bathroom - toilet - two bedrooms</li> </ul>

### SYSTEM SPECIFICATIONS

<b>Type of ventilation</b>	Mechanical demand-controlled extraction
<b>[Max.] ventilation flow rate</b>	475 m <sup>3</sup> /h [at 135 Pa] 430 m <sup>3</sup> /h [at 200 Pa] <i>Fan specifications: see technical drawings</i>
<b>Supply voltage</b>	230 VAC ±10% [50 Hz, 60 Hz] <i>Mains plug included (length: ± 2 m)</i>
<b>Fan unit rated power</b> - At max. flow rate of 150 m <sup>3</sup> /h: - At max. flow rate of 225 m <sup>3</sup> /h: - At max. flow rate of 325 m <sup>3</sup> /h: - At max. flow rate of 400 m <sup>3</sup> /h: - At max. flow rate of 475 m <sup>3</sup> /h:	28 watts 35 watts 53 watts 80 watts 85 watts <i>See graphs</i>
<b>Dimensions:</b> - Fan unit without control valves - Fan unit with control valves	390 x 443 x 200 mm [LxWxH] 567 x 567 x 200 mm [LxWxH] <i>See technical drawings</i>
<b>Weight:</b> - Fan unit without control valves - Control valve + adaptor	2600 g 240 g + 65 g
<b>Connection dia. for intake duct</b>	Choice via adaptor: 80 and/or 125 mm dia.
<b>Connection dia. for extraction duct</b>	Choice via adaptor: 125 or 150 mm dia. [160 mm dia. via optional ring]
<b>Fan</b>	Extremely quiet & energy-efficient EC motor with 180 mm dia. impeller. Active variable pressure control: the lowest possible pressure level is set in each case consistent with the required extraction flow rates.
<b>Maximum fan operating pressure</b>	350 Pa - Recommended operating pressure at design flow rate: ≤ 200 Pa - Target value for a very good operating pressure at design flow rate (cf. TV No. 258): ≤ 100 Pa
<b>Calibration readout</b>	Via user app, installer app & Renson My-Lio-professional web portal
<b>Automatic calibration of ventilation flow rates</b> <i>[patented]</i>	Takes place in 2 successive stages: - Stage 1: pressure drop readings taken automatically in all air ducts - Stage 2: valve positions for air distribution calculated automatically
<b>Automatic calibration time</b>	- Calibration of 2 to 5 control valves: up to ± 3 minutes - Calibration of 6 to 8 control valves: up to ± 5 minutes - Calibration of 9 to 11 control valves: up to ± 6 minutes
<b>Maximum number of connection points for extraction:</b> - Basic form - Using valve collectors	7 11 <i>[subject to a few limiting conditions]</i>
<b>Valve collector</b>	1 or 2 valve collectors to be connected to the fan unit, with 1 to 3 control valves to be connected to each valve collector. The valve collector can also be connected remotely from the fan unit. Electrical connection [UTP cable Cat 5e, wire gauge 24AWG, 30 metres max.].

# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

<b>Connections</b>	<ul style="list-style-type: none"> <li>- 1x Ethernet connection</li> <li>- 2x USB connection <i>[USB dongle for Wi-Fi connection included]</i></li> <li>- Inputs: 3x DIGITAL, 1x ANALOGUE (0-10 V)</li> </ul>
<b>Sound power level [LWA]</b> [point of reference: Ecodesign]	<ul style="list-style-type: none"> <li>Qmax 150m³/h: 32 dB(A)</li> <li>Qmax 225m³/h: 34 dB(A)</li> <li>Qmax 325m³/h: 39 dB(A)</li> <li>Qmax 400m³/h: 43 dB(A)</li> <li>Qmax 475m³/h: 47dB(A)</li> </ul>
<b>Breeze function</b>	Temporary nominal ventilation [= demand control deactivated] at times when there is a given cooling need [=> optimum shading factors]

### DEMAND-CONTROLLED VENTILATION CONTROL

The control valves provide individual demand control for each connected room. The control is applied consistent with the chosen country setting.

Air quality detection [CO <sub>2</sub> , humidity and/or VOC]	Via electronic sensors in control valves. The sensors measure indoor air quality 24 hours a day in the exhaust air flow for each room.
Automatic control of ventilation extraction flow rate for each room	The stepper motor positions the internal valve damper based on measured sensor values. The extraction flow rate is controlled in this way consistent with air quality.
Ventilation extraction flow rate control algorithm [BE]	<ul style="list-style-type: none"> <li>- CO<sub>2</sub> detection: proportional</li> <li>- VOC detection: dynamic</li> <li>- Humidity detection: dynamic + proportional</li> </ul>



# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

### CONTROL VALVES

There are a number of predefined control valves. The desired nominal flow rate for each control valve can be set via the installer app. The make-up of the control valves is virtually identical, the only differentiation being:

- Plug-in printed circuit board with sensors
- Sticker on the stepper motor that shows the room to be connected



Predefined control valves				
Sticker on stepper motor	Room to be ventilated (BE)	CO <sub>2</sub> detection	Humidity detection	VOC detection
	Bathroom with toilet <i>Wellness, garage, basement, etc.</i>	-	✓	✓
	Laundry room <i>Shower room, bathroom without toilet, etc.</i>	-	✓	-
	Toilet <i>Storeroom, technical rooms, workshop, walk-in wardrobe, hall/corridor, etc.</i>	-	-	✓
	Kitchen (open/closed)	✓	✓	-
	Bedroom <i>Living room, office, study, hobby room, waiting room, leisure area, dining room, etc.</i>	✓	✓	-

# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

### OTHER FEATURES

Automatic fault indication	- Via user app - Via installer app and Renson My-Lio-professional web portal (installer): fault indication reported during start-up phase
Automatic software updates	If Healthbox 3.0 is connected to the internet
User & installer app	Can be downloaded free of charge from Play Store [Android] and App Store [Apple] - User app: Healthbox 3.0 - Installer app: Healthbox 3.0 Set-up
Integration into smart home & home automation	- Smart home: via API - Home automation: switch module (3 connections)
Access to Renson My-Lio-professional web portal	- User: if Healthbox 3.0 is connected to the internet, via account - Installer: via account
Fire protection (= release pressure in system with valves shut)	✓
EU declaration of conformity	✓
EPB	Demand driven ventilation in accordance with national legislation: controlled conformity registered at <a href="http://www.bcrq.nl">www.bcrq.nl</a>

### CONTROL

- User app 'Healthbox 3.0':
  - Readout of air quality in dwelling down to room level
  - Facility for personalisation and [temporary] manually changing ventilation extraction flow rate down to room level
- Zero potential switch (3 positions) (XVK3) for manually changing ventilation extraction flow rate



### HEALTHBOX 3.0 INSTALLATION

#### Installation

Room	Indoor installation, preferably in insulated room. Temperature limits from -10° to +50°C.
Mounting options	- Can be mounted in any attitude: upright, flat (above/below), angled - Four mounting options: wall mounted, ceiling mounted, floor mounted, cord mounted (suspended, cover on top)
Exhaust direction	By using valve collectors, the exhaust direction can always be fitted in any desired direction => reduced pressure drop
Exhaust in central extraction duct of an apartment building	✓ If an (auxiliary) roof fan is used: constant pressure control

The fan unit requires a minimum of 2 control valves to be connected to it.

#### Start-up

Start-up via installer app	The app guides the installer through the start-up, enabling a reliable high-quality system to be installed rapidly: <ul style="list-style-type: none"> <li>- Display of control valve configuration</li> <li>- Automatic calibration start-up, with facility for adjusting nominal flow rate + indication of remaining time</li> <li>- Overview of completed installation + digital generation of measurement report</li> </ul>
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# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

### Renson My-Lio-professional web portal

The Renson My-Lio-professional web portal guides the installer throughout project management and monitoring, from start-up to completion. Some features:

- Project creation
- Project address details, installer on duty, installation parameters, etc.
- Sending measurement report digitally

This will bring about digitisation and administrative simplification of paperwork.

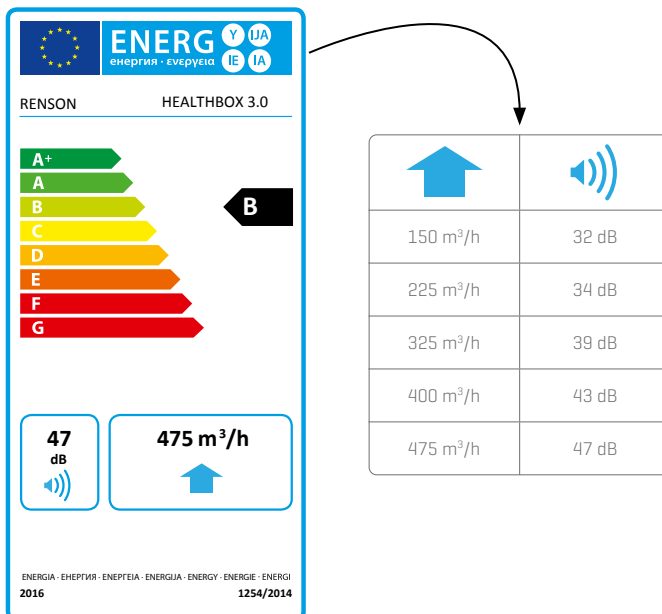
### RENSON OPTIONS

Extraction vents	Design extraction points (recessed or surface-mounted)
Easyflex air ducts	Air transport ducts, airtightness class D
Acoudec	Air hose with high acoustic insulation properties
Roof exhaust / wall louvre	Suitable feed-through fittings with low pressure drop

For more information, please consult our company website [www.renson.eu](http://www.renson.eu) (products → mechanical ventilation).



### ECOLABEL

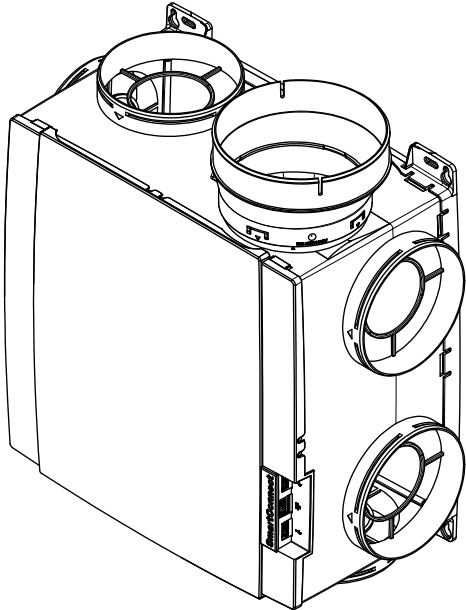
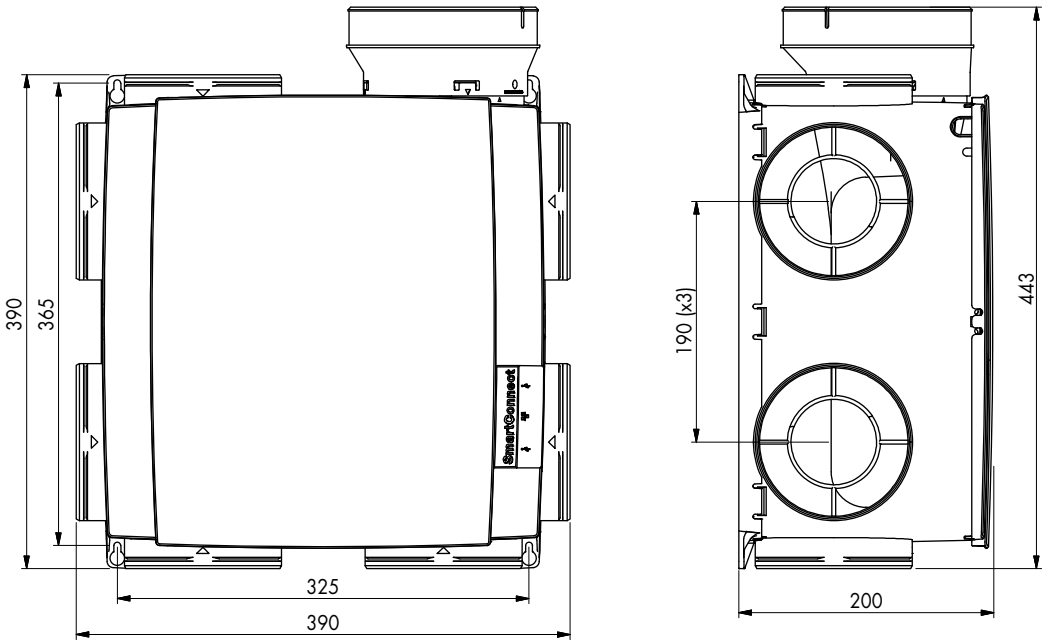


# SYSTEM C+<sup>®</sup>

## Technical data sheet Healthbox<sup>®</sup> 3.0

### TECHNICAL DRAWINGS

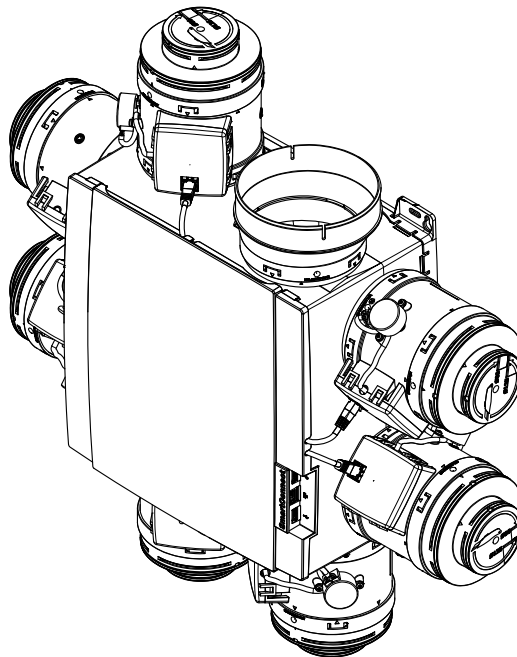
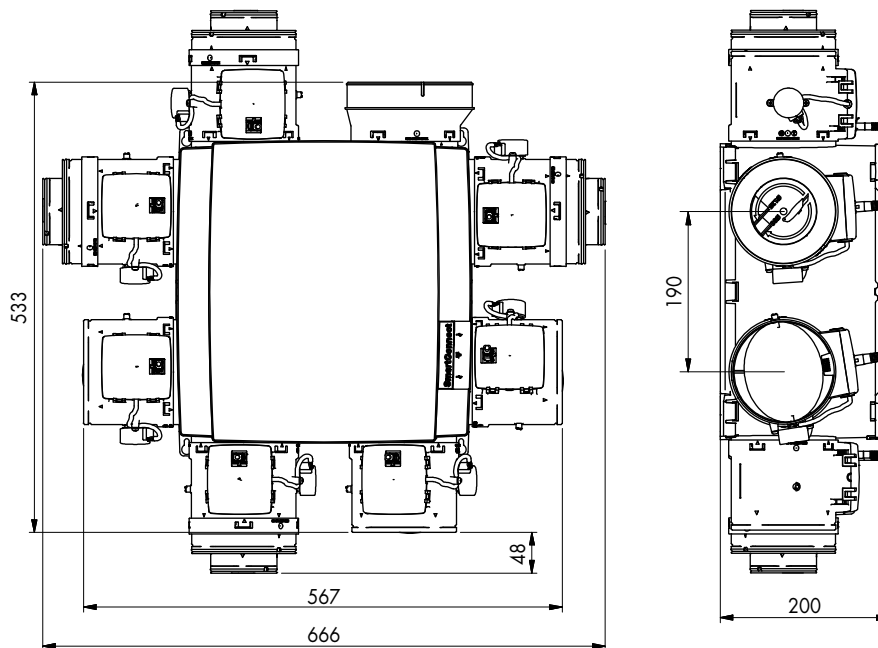
- Fan unit without control valves



# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

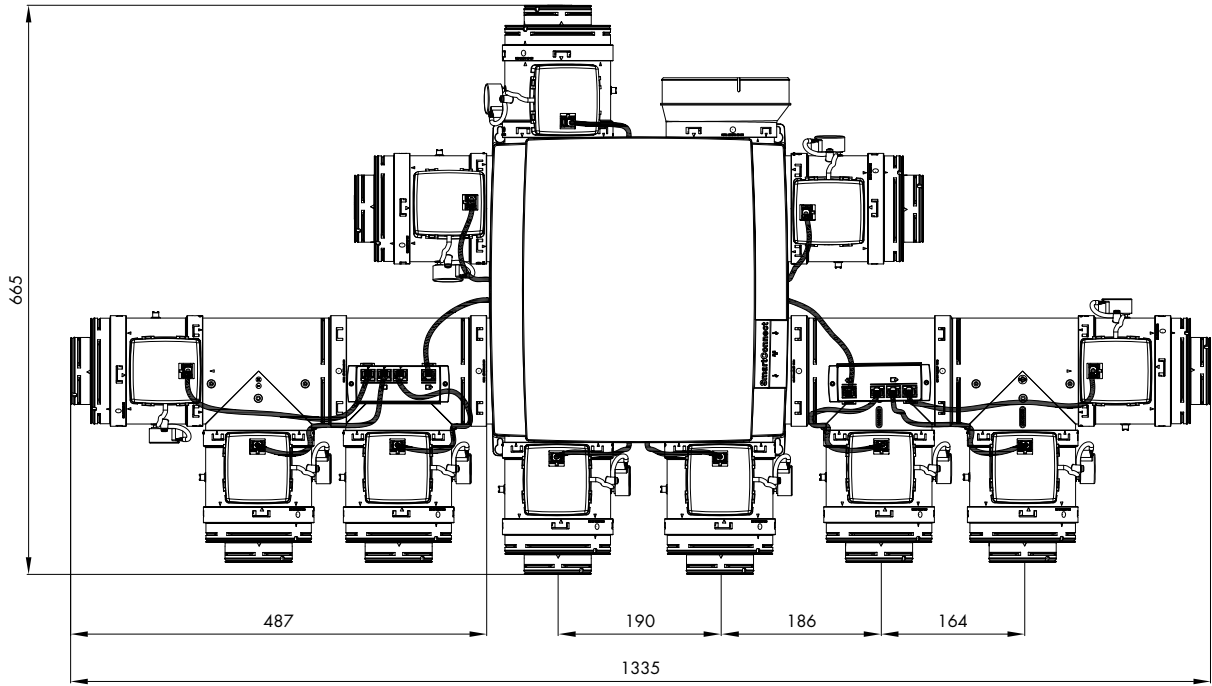
- Fan unit with control valves



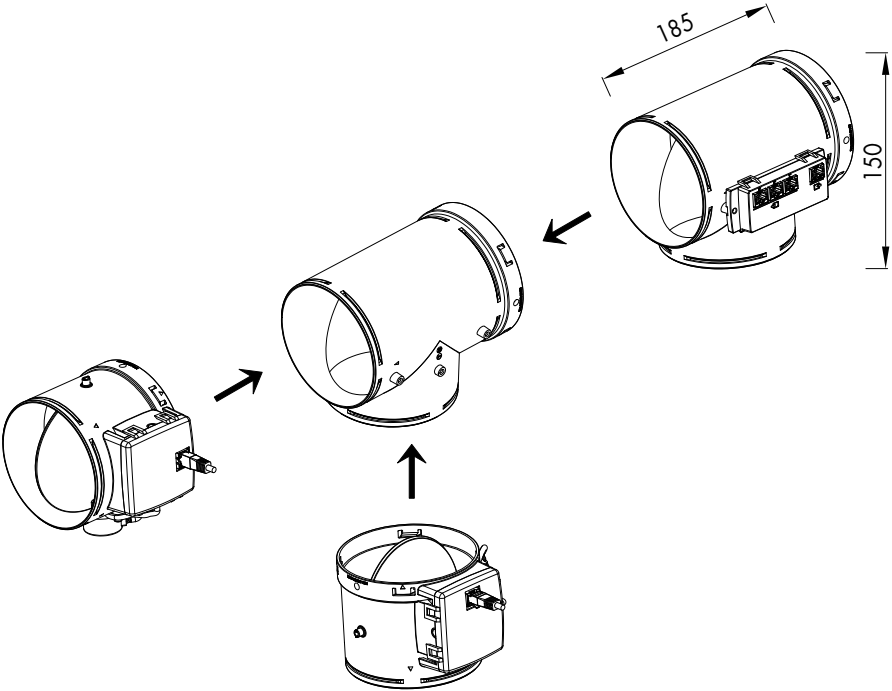
# SYSTEM C+®

## Technical data sheet Healthbox® 3.0

- Healthbox 3.0 with 11 control valves



- Valve collector

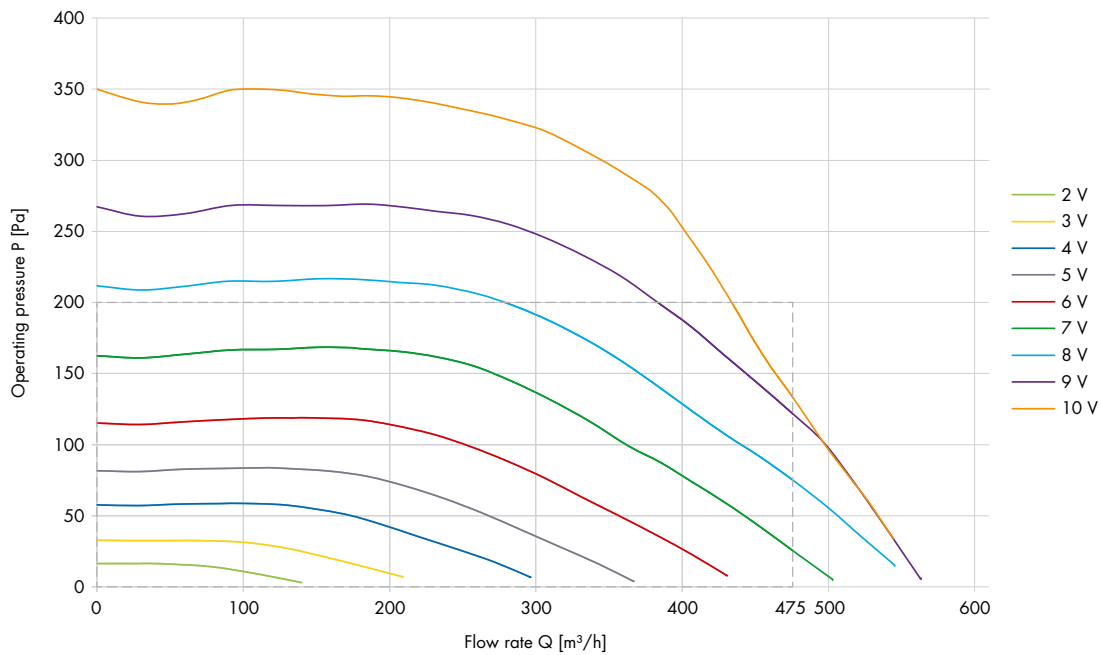


# SYSTEM C+®

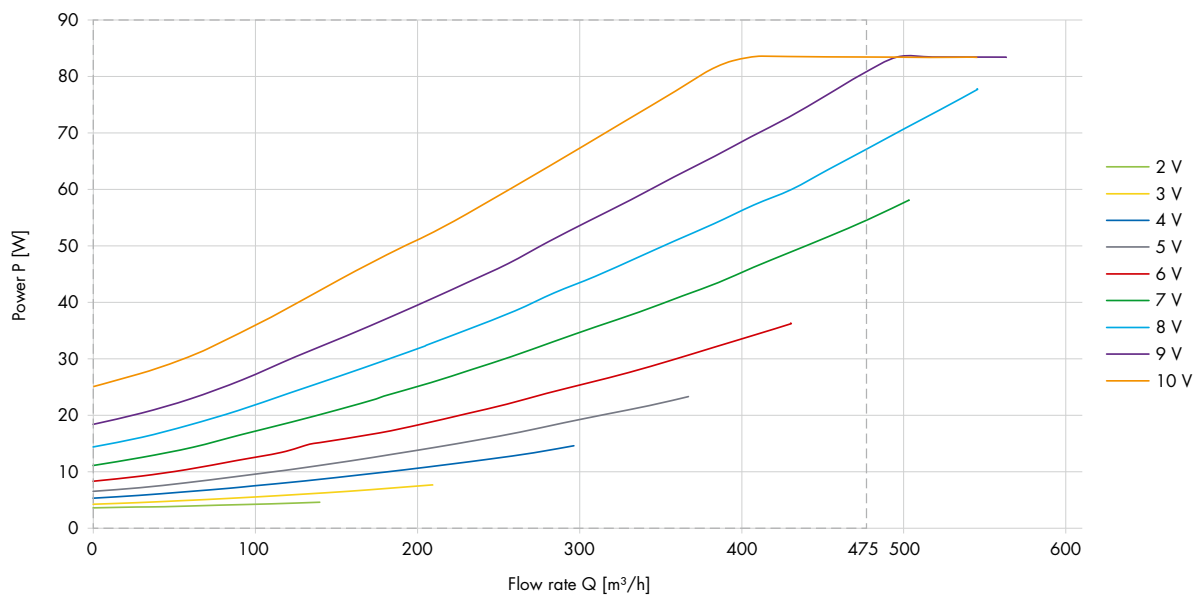
## Technical data sheet Healthbox® 3.0

### GRAPHS

#### Fan unit characteristics



#### Fan power curves







# SYSTEM D+®

**Endura® Delta:** demand-controlled, central ventilation with heat recovery

The Renson® D+ system is based on a combination of demand-controlled ventilation [2 fans for air supply and air extraction] and heat recovery to create a pleasant indoor climate.



- Fresh outdoor air supply
- Drainage of polluted indoor air
- Fresh outdoor air for nightcooling
- Outdoor sun protection



**Endura® Delta  
330 T4**



**Endura® Delta  
380 / 450 T4**



**Endura® Delta  
330 T2/B2**



**Endura® Delta  
380 / 450 T2/B2**

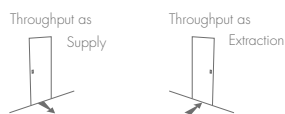
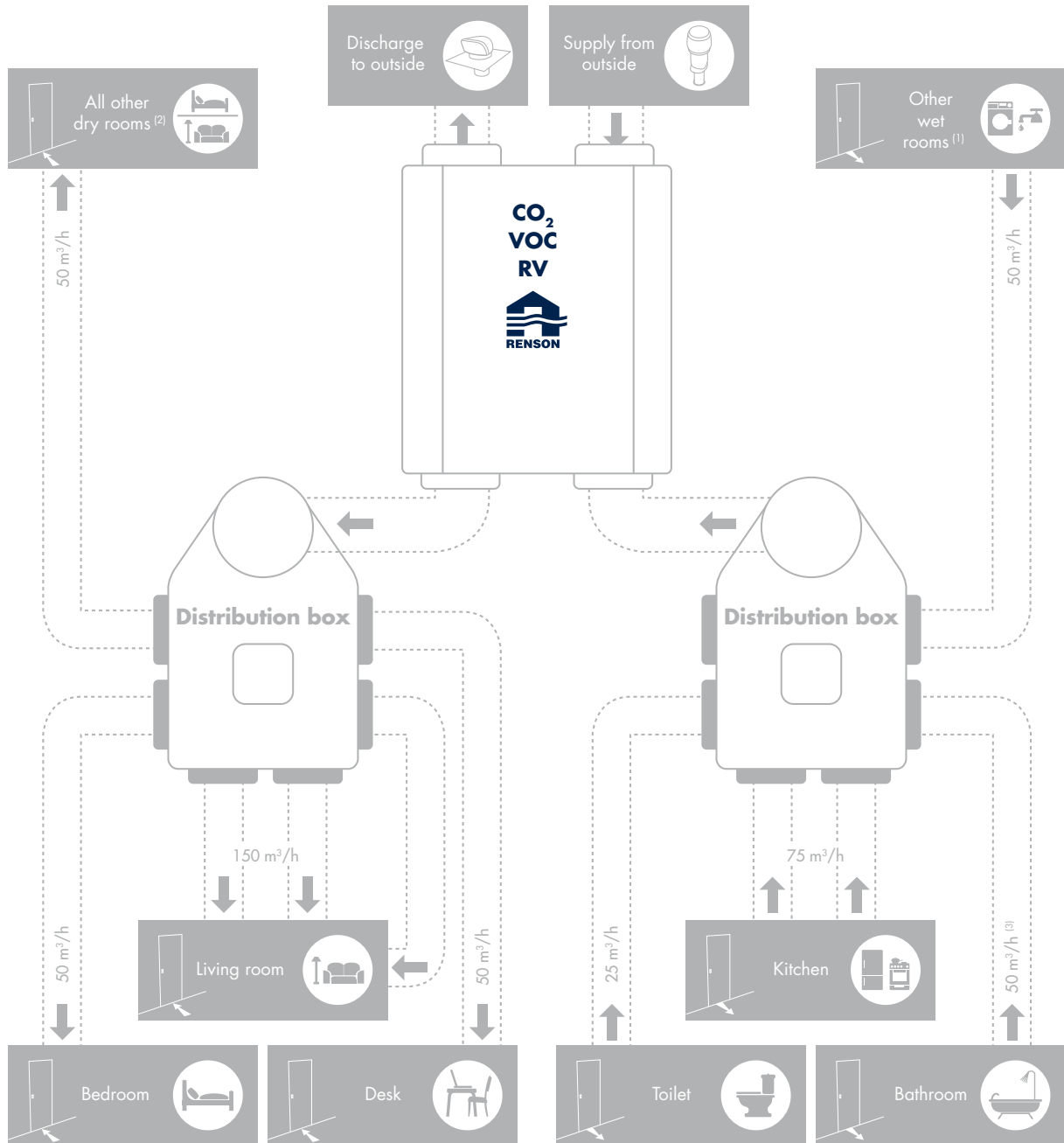
Demand-controlled, central ventilation with heat recovery.

# SYSTEM D+®

Endura® Delta: demand-controlled, central ventilation with heat recovery

0,93

SMART - 0,93



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,93
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.

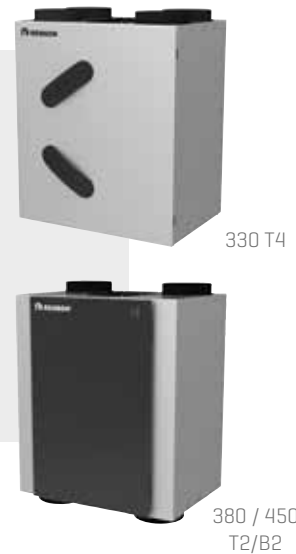
<sup>(1)</sup> laundry room, drying room or analogue room  
<sup>(2)</sup> living room, study, playroom or analogue room  
Starting at 57 m<sup>3</sup>/h split it into 2 channels for additional acoustic comfort.

Building application from 2015 onwards

## Endura® Delta

ED 330 T4	76050800
ED 330 T4 PH	76050801
ED 330 T2/B2	76050802
ED 330 T2/B2 PH	76050803
ED 380 T4	76050804
ED 380 T4 PH	76050805
ED 380 T2/B2	76050806
ED 380 T2/B2 PH	76050807
ED 450 T4	76050808
ED 450 T4 PH	76050809
ED 450 T2/B2	76050810
ED 450 T2/B2 PH	76050811

Note: Standard left-version, can be easily converted to right-version  
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater.



## Filters

Coarse [G4] filter cassette - coarse filter	76015650
ePM1 [F7] filter cassette - fine / pollen filter	76015651
Coarse [G4] filter cassette + activated carbon filter	76015652



## Mounting base

Mounting base Endura Delta	76050558
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## Design valves

SQair supply valve [Deluxe]	76050400
SQair extraction valve [Deluxe]	76050401
SQair supply valve [Basic]	76050403
SQair extraction valve [Basic]	76050404
Filter SQair pulsion	76050406



## Distribution box

Easyflex® distribution box angled 160 6 fastening brackets included	60013135
Easyflex® distribution box straight 160 6 fastening brackets included	60013140
Easyflex® distribution box 8 connections 8 fastening brackets included	60013136
Easyflex® straight double adaptor ø125	60013141

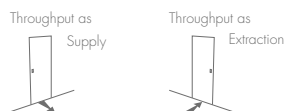
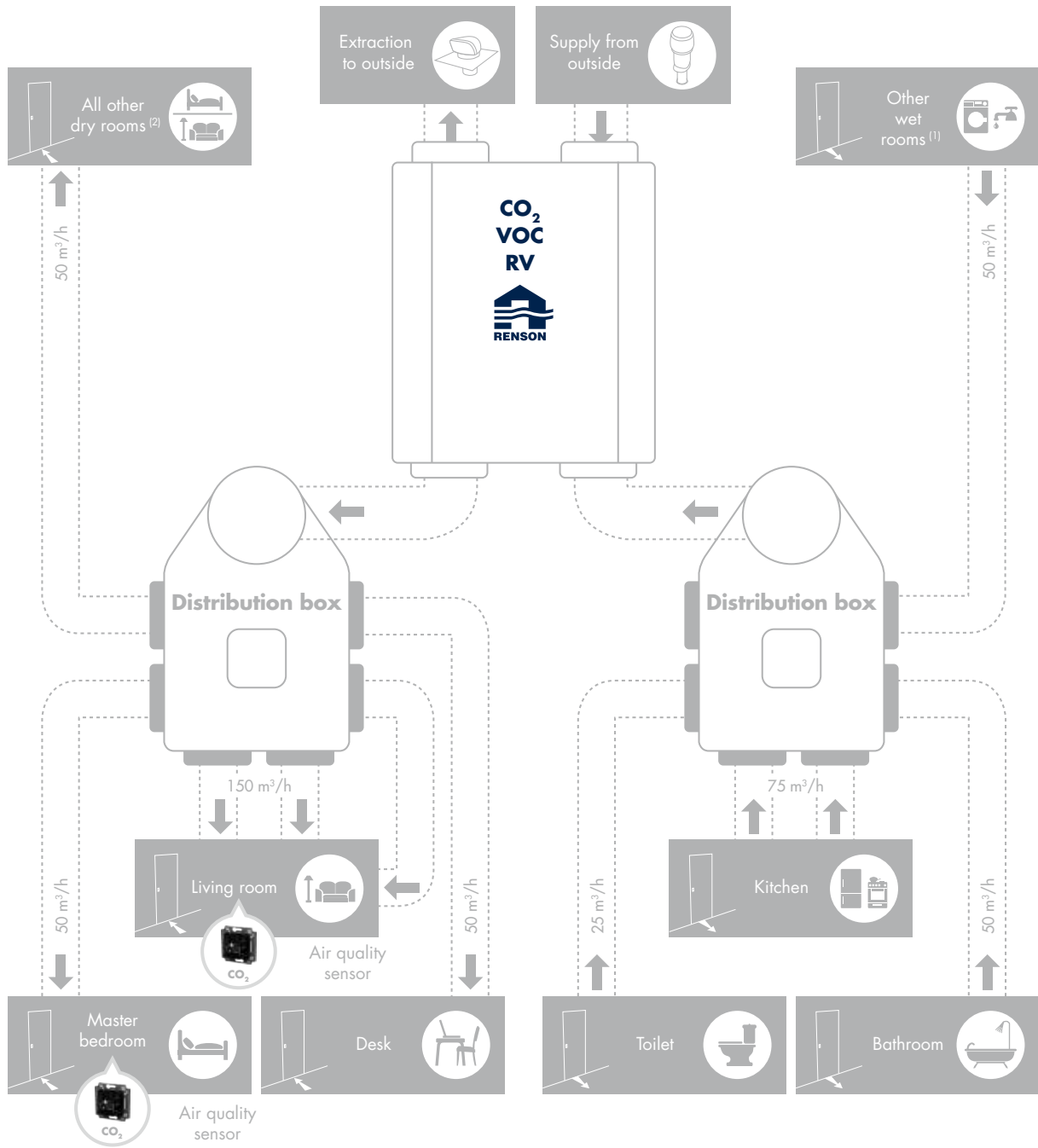


# SYSTEM D+®

Endura® Delta: demand-controlled, central ventilation with heat recovery

0,87

## SENSE - 0,87



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,87
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.

<sup>(1)</sup> Laundry room, drying room or analogue room

<sup>(2)</sup> Study, playroom or analogue room

Starting at 57 m<sup>3</sup>/h split it into 2 channels for additional acoustic comfort.

Applicable if the living room and master bedroom are equipped with an air quality sensor.

Building application from 2015 onwards

## Endura® Delta

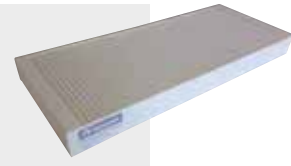
ED 330 T4	76050800
ED 330 T4 PH	76050801
ED 330 T2/B2	76050802
ED 330 T2/B2 PH	76050803
ED 380 T4	76050804
ED 380 T4 PH	76050805
ED 380 T2/B2	76050806
ED 380 T2/B2 PH	76050807
ED 450 T4	76050808
ED 450 T4 PH	76050809
ED 450 T2/B2	76050810
ED 450 T2/B2 PH	76050811

Note: Standard left-version, can be easily converted to right-version  
 T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater



## Filters

Coarse [G4] filter cassette - coarse filter	76015650
ePM1 [F7] filter cassette - fine / pollen filter	76015651
Coarse [G4] filter cassette + activated carbon filter	76015652



## Mounting base

Mounting base Endura Delta	76050558
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## Design valves

SQair supply valve [Deluxe]	76050400
SQair extraction valve [Deluxe]	76050401
SQair supply valve [Basic]	76050403
SQair extraction valve [Basic]	76050404
Filter SQair pulsion	76050406



## Distribution box

Easyflex® distribution box angled 160 6 fastening brackets included	60013135
Easyflex® distribution box straight 160 6 fastening brackets included	60013140
Easyflex® distribution box 8 connections 8 fastening brackets included	60013136
Easyflex® straight double adaptor ø125	60013141



## Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection [data]	76050332
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76050333

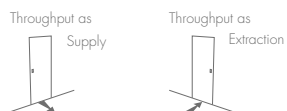
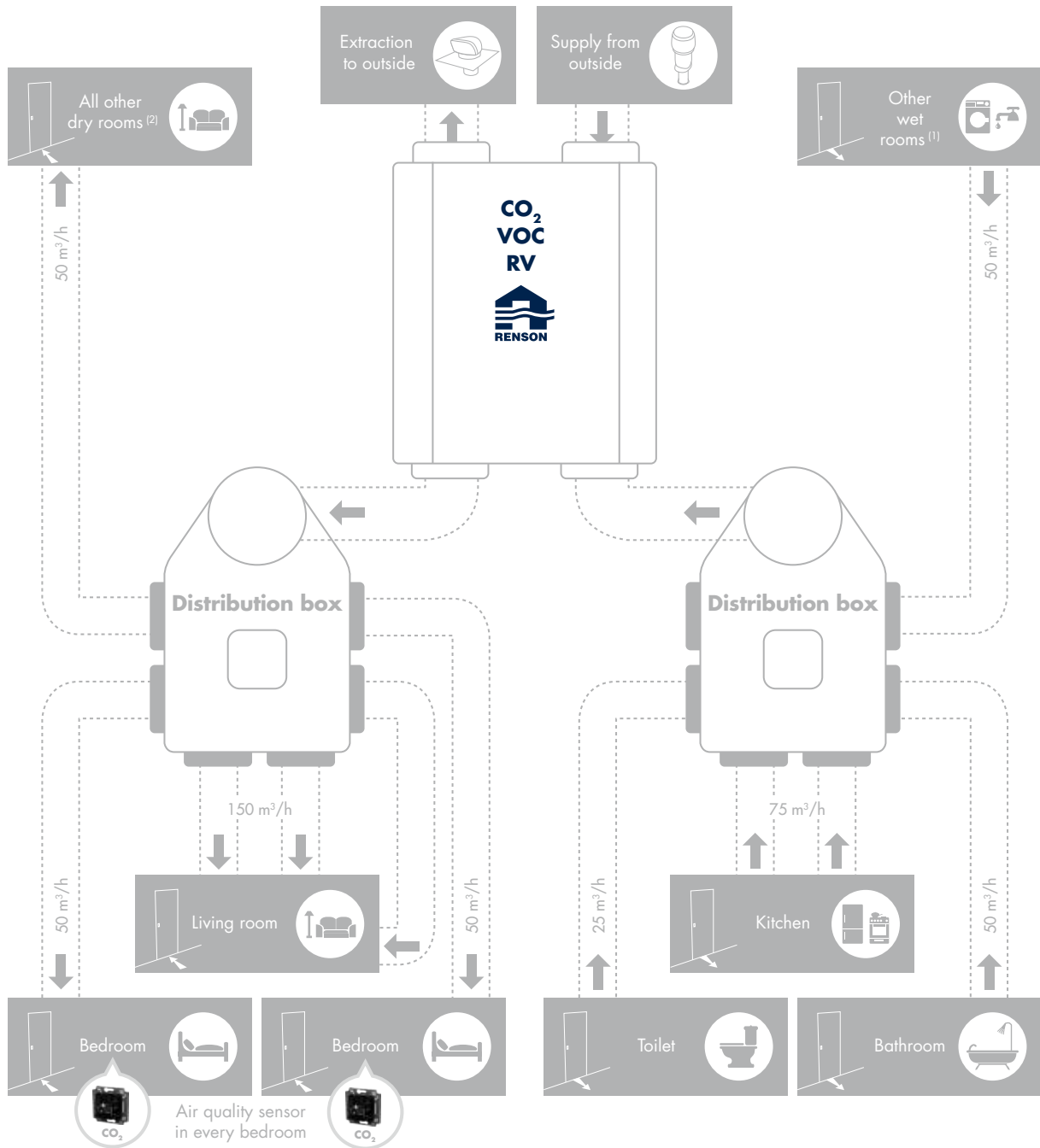


# SYSTEM D+®

Endura® Delta: demand-controlled, central ventilation with heat recovery

0,70

SENSE - 0,70



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,70
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

RV = Relative humidity detection    VOC = Volatile organic components detection    CO<sub>2</sub> = Carbon dioxide detection  
The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
<sup>(1)</sup> Laundry room, drying room or analogue room  
<sup>(2)</sup> Study, playroom or analogue room  
 Starting at 57 m³/h split it into 2 channels for additional acoustic comfort.  
 Applicable if all bedrooms are individually equipped with an air quality sensor.

Building application from 2015 onwards

## Endura® Delta

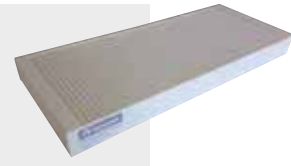
ED 330 T4	76050800
ED 330 T4 PH	76050801
ED 330 T2/B2	76050802
ED 330 T2/B2 PH	76050803
ED 380 T4	76050804
ED 380 T4 PH	76050805
ED 380 T2/B2	76050806
ED 380 T2/B2 PH	76050807
ED 450 T4	76050808
ED 450 T4 PH	76050809
ED 450 T2/B2	76050810
ED 450 T2/B2 PH	76050811

Note: Standard left-version, can be easily converted to right-version  
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater



## Filters

Coarse [G4] filter cassette - coarse filter	76015650
ePM1 [F7] filter cassette - fine / pollen filter	76015651
Coarse [G4] filter cassette + activated carbon filter	76015652



## Mounting base

Mounting base Endura Delta	76050558
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## Design valves

SQair supply valve [Deluxe]	76050400
SQair extraction valve [Deluxe]	76050401
SQair supply valve [Basic]	76050403
SQair extraction valve [Basic]	76050404
Filter SQair pulsion	76050406



## Distribution box

Easyflex® distribution box angled 160 6 fastening brackets included	60013135
Easyflex® distribution box straight 160 6 fastening brackets included	60013140
Easyflex® distribution box 8 connections 8 fastening brackets included	60013136
Easyflex® straight double adaptor ø125	60013141



## Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection [data]	76050332
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76060333

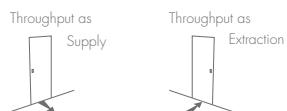
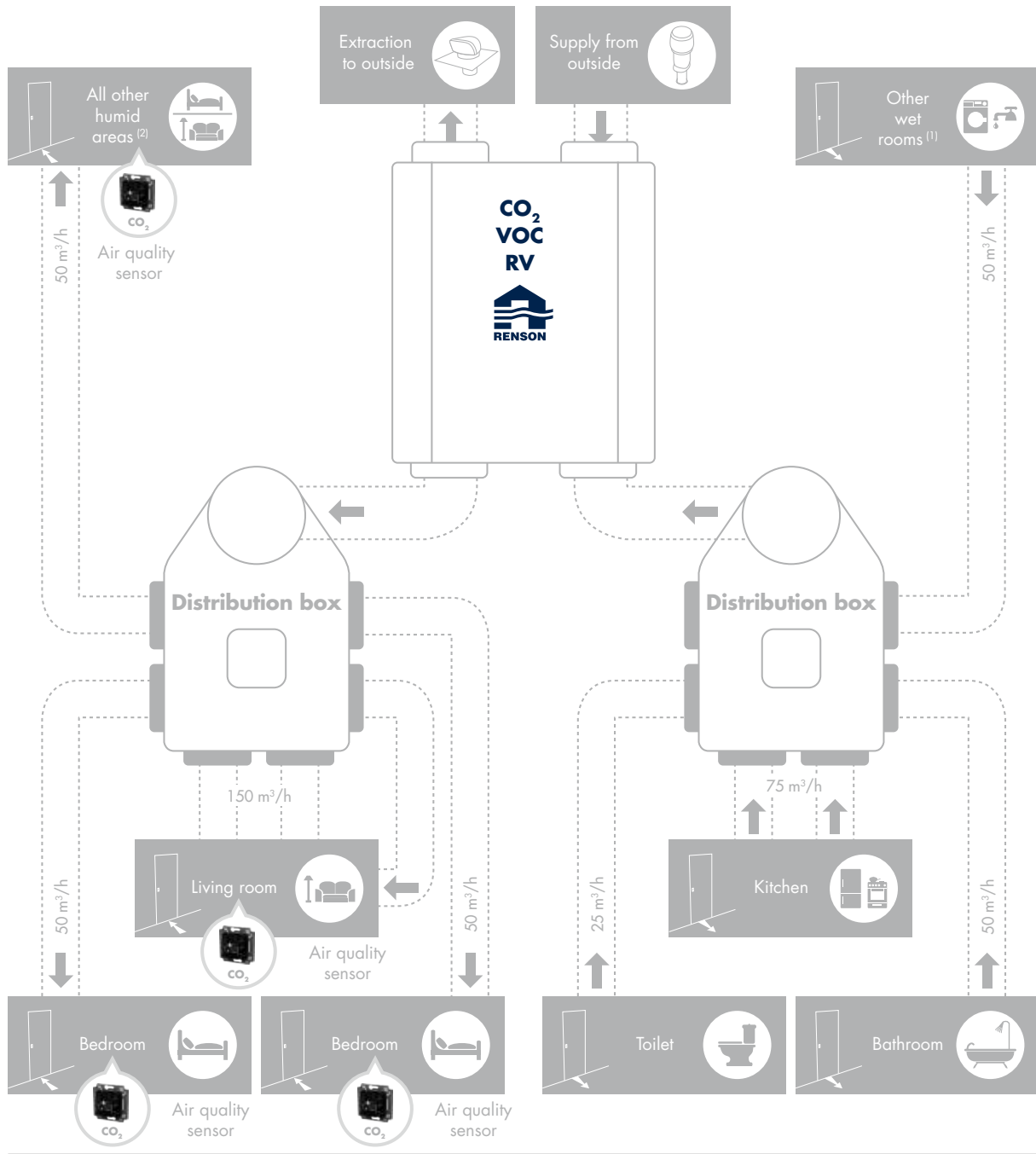


# SYSTEM D+®

Endura® Delta: demand-controlled, central ventilation with heat recovery

0,61

## SENSE - 0,61



Shading factors	
$f_{\text{reduc,vent,heat}}$	= 0,61
$f_{\text{reduc,vent,cool}}$	= 1,00
$f_{\text{reduc,vent,overheat}}$	= 1,00

RV = Relative humidity detection VOC = Volatile organic components detection CO<sub>2</sub> = Carbon dioxide detection  
 The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.  
 !!! Laundry room, drying room or analogue room  
 (2) Study, playroom or analogue room  
 Starting at 57 m³/h split into 2 channels for additional acoustic comfort.  
 Valid if all dry areas are equipped with an air quality sensor.

Building application from 2015 onwards



## Endura® Delta

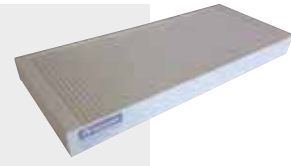
ED 330 T4	76050800
ED 330 T4 PH	76050801
ED 330 T2/B2	76050802
ED 330 T2/B2 PH	76050803
ED 380 T4	76050804
ED 380 T4 PH	76050805
ED 380 T2/B2	76050806
ED 380 T2/B2 PH	76050807
ED 450 T4	76050808
ED 450 T4 PH	76050809
ED 450 T2/B2	76050810
ED 450 T2/B2 PH	76050811

Note: Standard left-version, can be easily converted to right-version  
 T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater



## Filters

Coarse [G4] filter cassette - coarse filter	76015650
ePM1 [F7] filter cassette - fine / pollen filter	76015651
Coarse [G4] filter cassette + activated carbon filter	76015652



## Mounting base

Mounting base Endura Delta	76050558
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## Design valves

SQair supply valve [Deluxe]	76050400
SQair extraction valve [Deluxe]	76050401
SQair supply valve [Basic]	76050403
SQair extraction valve [Basic]	76050404
Filter SQair pulsion	76050406



## Distribution box

Easyflex® distribution box angled 160 6 fastening brackets included	60013135
Easyflex® distribution box straight 160 6 fastening brackets included	60013140
Easyflex® distribution box 8 connections 8 fastening brackets included	60013136
Easyflex® straight double adaptor ø125	60013141



## Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection [data]	76050332
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76060333



# SYSTEM D+®

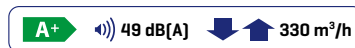
## Technical data sheet Endura® Delta 330

### AREA OF APPLICATION

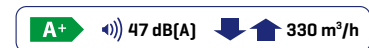
- Can be used in medium sized houses [2-3 bedrooms] up to 330 m<sup>3</sup>/h at 150 Pa
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for reduced heat losses



Endura Delta 330 T4



Endura Delta 330 T2/B2



### PRODUCT CHARACTERISTICS

#### EPB product data

- Max. capacity: 330 m<sup>3</sup>/h at 150 Pa
- Integrated plastic counter flow heat exchanger
- Maximum power consumption: 2 x 85 W

#### Ventilation system

- Ventilators
  - 2 EC motors
  - Supply voltage: 1 x 230V / 50Hz
  - Ventilators with forward-curved blades
  - Constant flow control: airflow remains constant
- Dimensions: H 862 x W 745 x D 520 mm
- Weight: 41 kg
- Available with 4 upper connections [T4] or 2 upper and 2 lower connections [T2/B2]
- Standard left-hand model, possible to convert to right-hand model
- Automatic full bypass
  - Modular control
  - Closing of the heat exchanger during warm weather
- 150/180 mm diameter connections in expanded polypropylene
  - Direct join to the unit:
    - EPP ducts: outer diameter 180 mm, inner diameter 150 mm
    - EPP ducts: with connecting sleeve: outer diameter 210 mm, inner diameter 180 mm
    - Other ducts: 180 mm diameter can be connected directly onto the ventilation system

- Integrated condensation drain Ø32 mm
- Extremely airtight appliance
- 2 x coarse [G4] cartridge filters [PM1 [F7] optional for supply]
  - Maintenance-friendly
  - Large filter surface area
- Ethernet connection [RJ45 connector]
  - Possibility to control unit via tablet / smartphone via local network
- External input/output contacts
  - Open input contact [digital 0-24 V]
    - Supply and extract disabling option – e.g. emergency OFF to switch off supply flow rate
    - Supply switch-off
    - Drainage switch-off
    - Activation of fireplace function via external contact
  - Open output contact [digital 0-24 V]
    - Error message
    - Filter message
  - 0-10V analogue input
  - 0-10V analogue output

# SYSTEM D+®

## Technical data sheet Endura® Delta 330

### FUNCTIONS

- Operation
  - According to automatic mode [program]
  - Manual control
  - Timers
  - Via integrated air quality sensors [RH, CO<sub>2</sub> & VOC]
  - Via optional, external air quality sensors
- Demand-driven ventilation thanks to integrated air quality sensors
  - Relative humidity
  - VOC [volatile organic compounds]
  - CO<sub>2</sub>
  - Ventilation levels adapted in accordance with measured air quality
- Automatic frost protection
  - Temporary imbalance and flow restriction to prevent freezing of the heat exchanger
- Extra frost protection option through installation of pre-heating element
  - Electrical pre-heating element
  - Modular power
  - Max. power: 1000 W
- Breeze function
  - Breeze function for optimum cooling in summer [summer bypass with adjustable ventilation level]
  - Automatic and manual bypass activation
  - 4-seasons automatically controlled indoor temperature
- Fireplace function
  - Activated via external pulse switch
  - Temporary imbalance on supply side [overpressure] to aid ignition process
- Holiday mode
  - Input of start and end dates during prolonged absence
  - System ventilates at maximum energy efficiency
- Filter message
  - Via smartphone
  - On external control unit [optional]
  - Timer-controlled

### CONTROL

#### Standard

- Control via Endura® Delta App [iOS, Android] on smartphone and tablet

#### Option

- Master air quality sensor [76050332]
  - Display of air quality and ventilation intensity
  - Integrated air quality sensor
  - Display of active program
  - Timer programming possible
  - Power via motor unit [connect directly to the motor unit]
- Slave air quality sensor [76050333]
  - Always in combination with Master
  - Wireless communication with Master
  - Power voltage 230V / 50Hz
  - Integrated air quality sensor
  - Same information as on the Master available
- 4-position switch [on request]
  - Limited functionality



Endura® Delta app



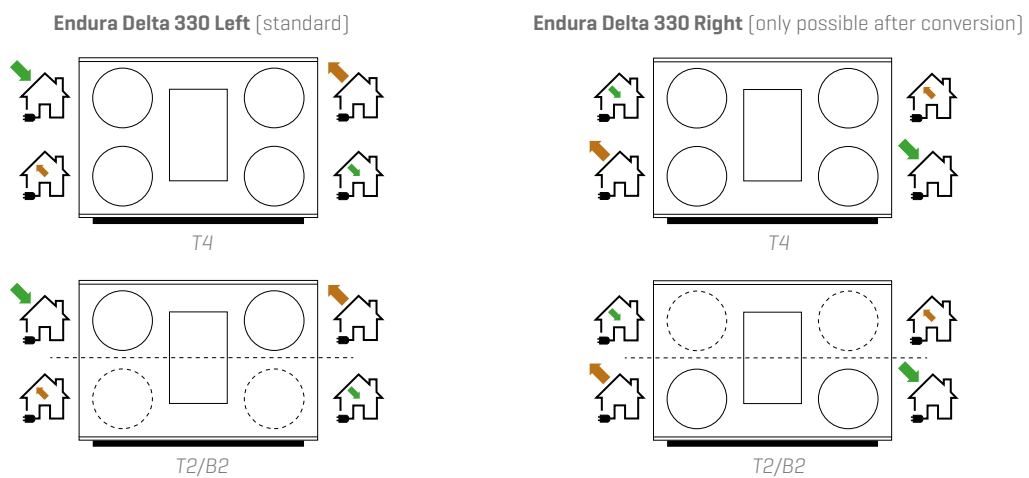
TouchDisplay

# SYSTEM D+®

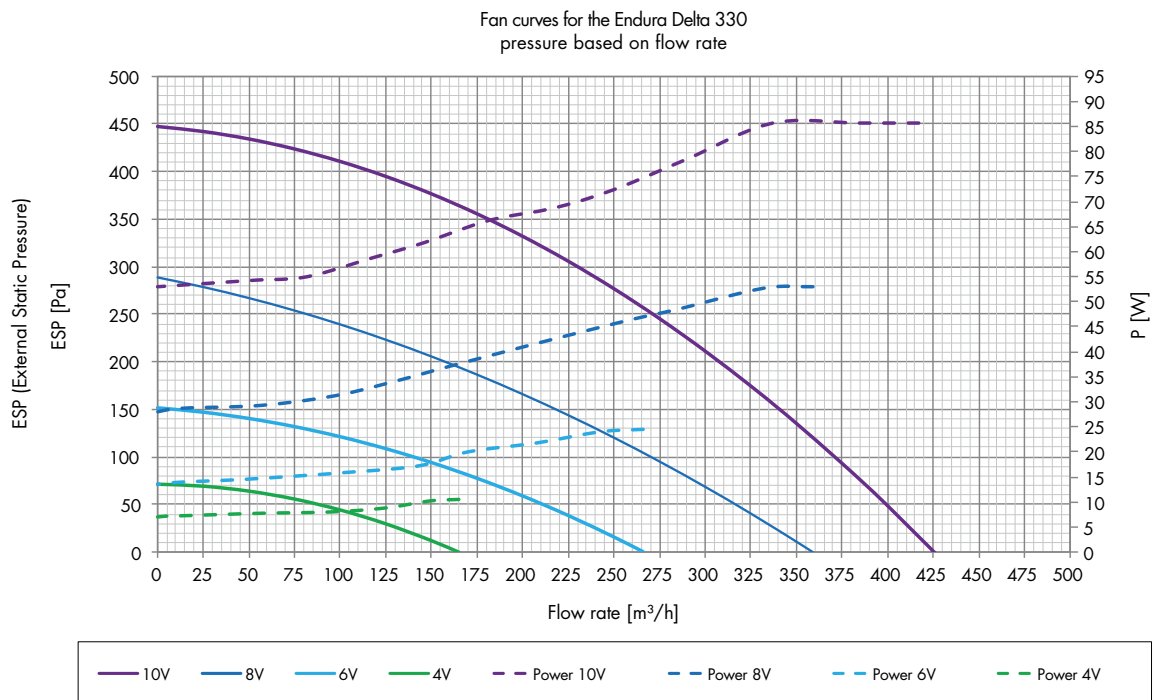
## Technical data sheet Endura® Delta 330

### MODELS

DESIGNATION	ARTICLE NUMBER
Endura Delta 330 T4	76050800
Endura Delta 330 T4 PH	76050801
Endura Delta 330 T2/B2	76050802
Endura Delta 330 T2/B2 PH	76050803



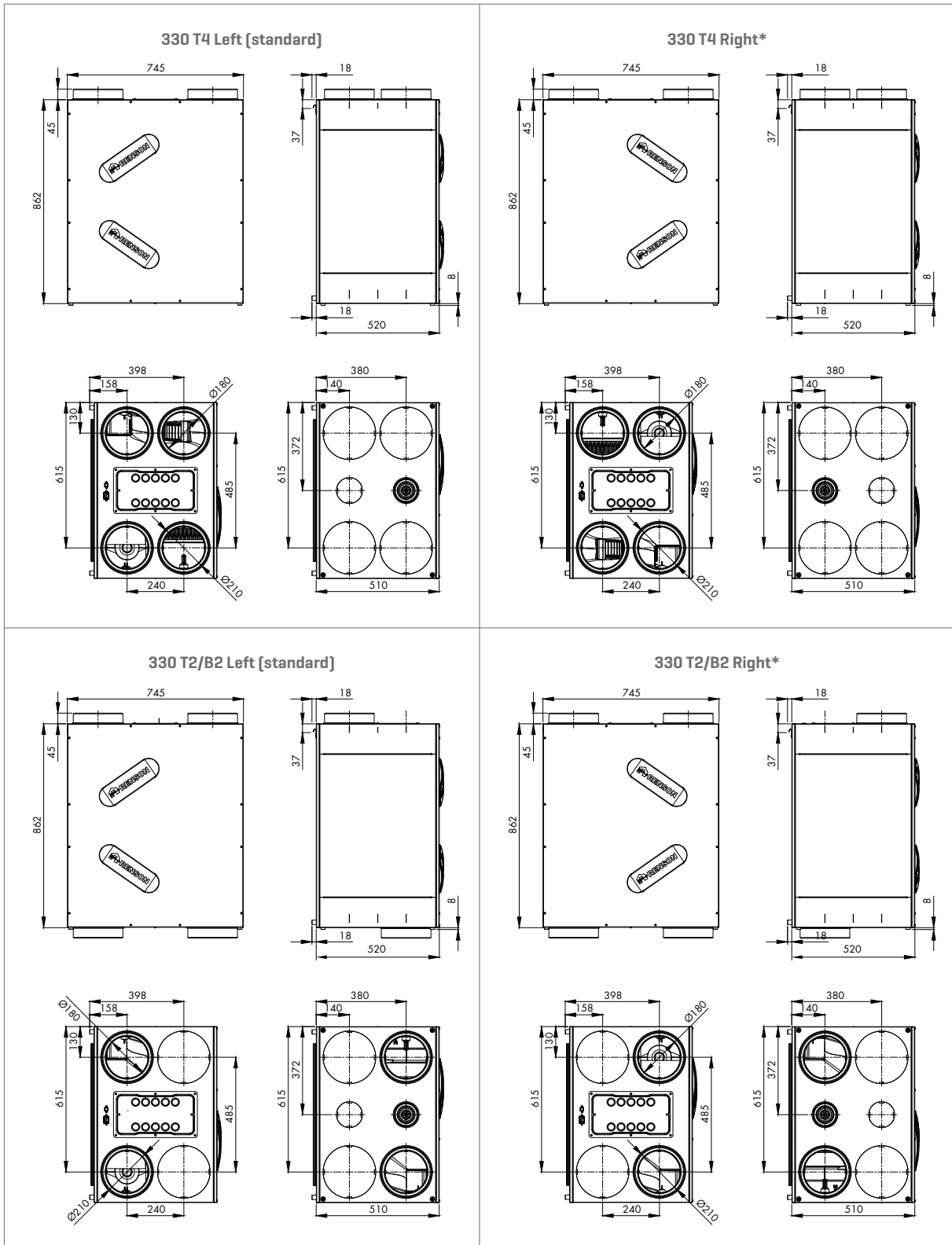
### PRESSURE CURVES



# SYSTEM D+®

## Technical data sheet Endura® Delta 330

### TECHNICAL DRAWINGS



\* Only possible after conversion.

# SYSTEM D+®

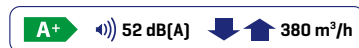
## Technical data sheet Endura® Delta 380

### AREA OF APPLICATION

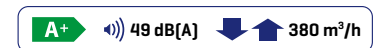
- Can be used in spacious houses [3-4 bedrooms] up to 380 m<sup>3</sup>/h at 150 Pa
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for reduced heat losses



Endura Delta 380 T4



Endura Delta 380 T2/B2



### PRODUCT CHARACTERISTICS

#### EPB product data

- Max. capacity: 380 m<sup>3</sup>/h at 150 Pa
- Integrated plastic counter flow heat exchanger
- Maximum power consumption: 2 x 83 W

#### Ventilation system

- Ventilators
  - 2 EC motors
  - Supply voltage: 1 x 230V / 50Hz
  - Ventilators with backward-curved blades
  - Constant flow control: airflow remains constant
- Dimensions: H 862 x W 745 x D 520 mm
- Weight: 46 kg
- Available with 4 upper connections [T4] or 2 upper and 2 lower connections [T2/B2]
- Standard left-hand model, possible to convert to right-hand model
- Automatic full bypass
  - Modular control
  - Closing of the heat exchanger during warm weather
- 150/180 mm diameter connections in expanded polypropylene
  - Direct join to the unit:
    - EPP ducts: outer diameter 180 mm, inner diameter 150 mm
    - EPP ducts: with connecting sleeve: outer diameter 210 mm, inner diameter 180 mm
    - Other ducts: 180 mm diameter can be connected directly onto the ventilation system

- Integrated condensation drain Ø32 mm
- Extremely airtight appliance
- 2 x coarse [G4] cartridge filters [PM1 [F7] optional for supply]
  - Maintenance-friendly
  - Large filter surface area
- Integrated TouchDisplay in front panel
  - Touchscreen
  - Possibility to configure and control ventilation unit
  - Error feedback
  - Filter message
  - Visualization of current ventilation conditions
- Ethernet connection [RJ45 connector]
  - Possibility to control unit via tablet / smartphone via local network
- External input/output contacts
  - Open input contact [digital 0-24 V]
    - Supply and extract disabling option - e.g. emergency OFF to switch off supply flow rate
    - Supply switch-off
    - Drainage switch-off
    - Activation of fireplace function via external contact
  - Open output contact [digital 0-24 V]
    - Error message
    - Filter message
  - 0-10V analogue input
  - 0-10V analogue output

# SYSTEM D+®

## Technical data sheet Endura® Delta 380

### FUNCTIONS

- Operation
  - According to automatic mode [program]
  - Manual control
  - Timers
  - Via integrated air quality sensors [RH, CO<sub>2</sub> & VOC]
  - Via optional, external air quality sensors
- Demand-driven ventilation thanks to integrated air quality sensors
  - Relative humidity
  - VOC [volatile organic compounds]
  - CO<sub>2</sub>
  - Ventilation levels adapted in accordance with measured air quality
- Automatic frost protection
  - Temporary imbalance and flow restriction to prevent freezing of the heat exchanger
- Extra frost protection option through installation of pre-heating element
  - Electrical pre-heating element
  - Modular power
  - Max. power: 1000 W
- Breeze function
  - Breeze function for optimum cooling in summer [summer bypass with adjustable ventilation level]
  - Automatic and manual bypass activation
  - 4-seasons automatically controlled indoor temperature
- Fireplace function
  - Activated via external pulse switch
  - Temporary imbalance on supply side [overpressure] to aid ignition process
- Holiday mode
  - Input of start and end dates during prolonged absence
  - System ventilates at maximum energy efficiency
- Filter message
  - Via smartphone
  - On integrated TouchDisplay
  - On external control unit [optional]
  - Timer-controlled

### CONTROL

#### Standard

- With Endura Delta app
  - iOS, Android
  - Smartphone and tablet
- TouchDisplay on unit
  - Power and communication with motor unit via RS232
  - Possibility to program the motor unit with the TouchDisplay

#### Option

- Master air quality sensor [76050332]
  - Display of air quality and ventilation intensity
  - Integrated air quality sensor
  - Display of active program
  - Timer programming possible
  - Power via motor unit [connect directly to the motor unit]
- Slave air quality sensor [76050333]
  - Always in combination with Master
  - Wireless communication with Master
  - Power voltage 230V / 50Hz
  - Integrated air quality sensor
  - Same information as on the Master available
- 4-position switch [on request]
  - Limited functionality



TouchDisplay

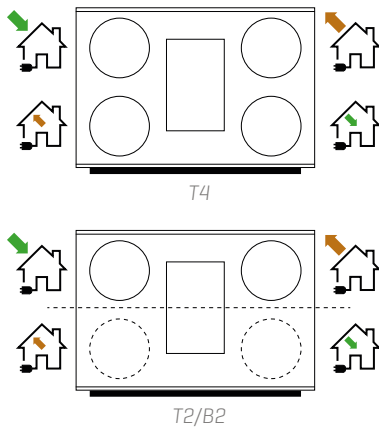
# SYSTEM D+®

## Technical data sheet Endura® Delta 380

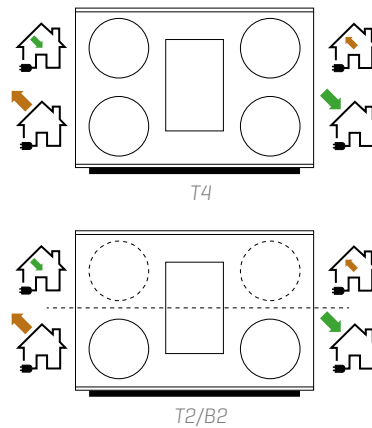
### MODELS

DESIGNATION	ARTICLE NUMBER
Endura Delta 380 T4	76050804
Endura Delta 380 T4 PH	76050805
Endura Delta 380 T2/B2	76050806
Endura Delta 380 T2/B2 PH	76050807

Endura Delta 380 Left [standard]

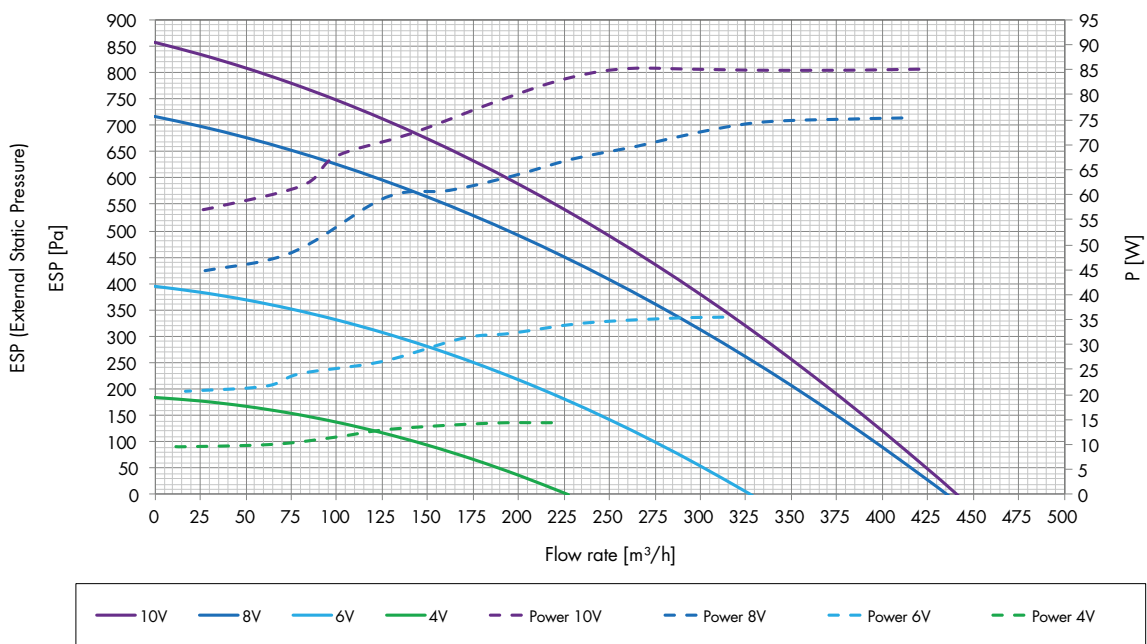


Endura Delta 380 Right [only possible after conversion]



### PRESSURE CURVES

Fan curves for the Endura Delta 380  
pressure based on flow rate

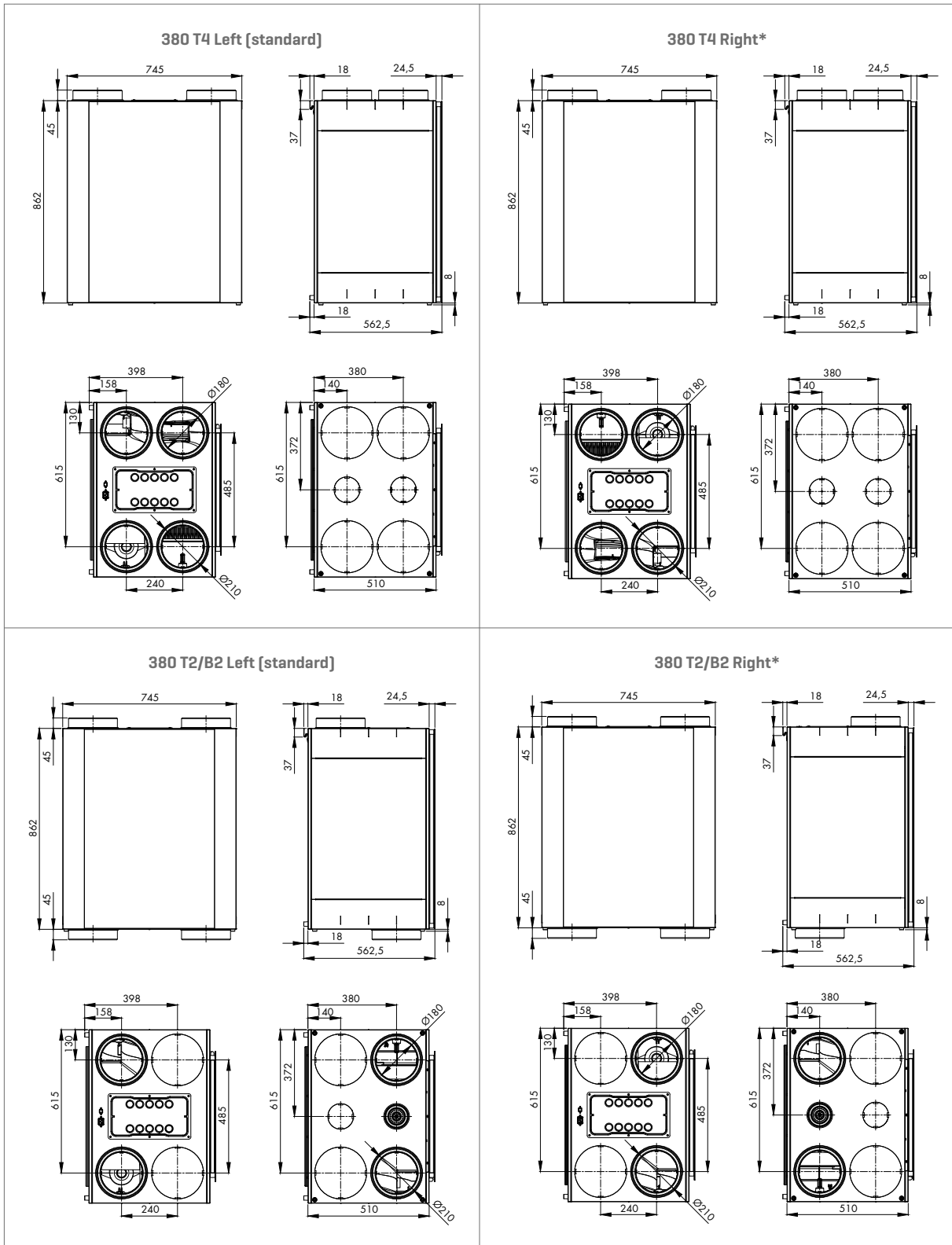




# SYSTEM D+®

## Technical data sheet Endura® Delta 380

### TECHNICAL DRAWINGS



\* Only possible after conversion.

# SYSTEM D+®

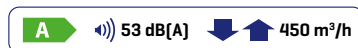
## Technical data sheet Endura® Delta 450

### AREA OF APPLICATION

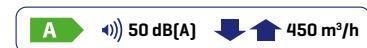
- Can be used in large houses [4-5 bedrooms] up to 450 m³/h at 150 Pa
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for reduced heat losses



Endura Delta 450 T4



Endura Delta 450 T2/B2



### PRODUCT CHARACTERISTICS

#### EPB product data

- Max. capacity: 450 m³/h at 150 Pa
- Integrated plastic counter flow heat exchanger
- Maximum power consumption: 2 x 115 W

#### Ventilation system

- Ventilators
  - 2 EC motors
  - Supply voltage: 1 x 230V / 50Hz
  - Ventilators with backward-curved blades
  - Constant flow control: airflow remains constant
- Dimensions: H 862 x W 745 x D 520 mm
- Weight: 46 kg
- Available with 4 upper connections [T4] or 2 upper and 2 lower connections [T2/B2]
- Standard left-hand model, possible to convert to right-hand model
- Automatic full bypass
  - Modular control
  - Closing of the heat exchanger during warm weather
- 150/180 mm diameter connections in expanded polypropylene
  - Direct join to the unit:
    - EPP ducts: outer diameter 180 mm, inner diameter 150 mm
    - EPP ducts: with connecting sleeve: outer diameter 210 mm, inner diameter 180 mm
    - Other ducts: 180 mm diameter can be connected directly onto the ventilation system

- Integrated condensation drain Ø32 mm
- Extremely airtight appliance
- 2 x coarse [G4] cartridge filters [PM1 [F7] optional for supply]
  - Maintenance-friendly
  - Large filter surface area
- Integrated TouchDisplay in front panel
  - Touchscreen
  - Possibility to configure and control ventilation unit
  - Error feedback
  - Filter message
  - Visualization of current ventilation conditions
- Ethernet connection [RJ45 connector]
  - Possibility to control unit via tablet / smartphone via local network
- External input/output contacts
  - Open input contact [digital 0-24 V]
    - Supply and extract disabling option – e.g. emergency OFF to switch off supply flow rate
    - Supply switch-off
    - Drainage switch-off
    - Activation of fireplace function via external contact
  - Open output contact [digital 0-24 V]
    - Error message
    - Filter message
  - 0-10V analogue input
  - 0-10V analogue output

# SYSTEM D+®

## Technical data sheet Endura® Delta 450

### FUNCTIONS

- Operation
  - According to automatic mode [program]
  - Manual control
  - Timers
  - Via integrated air quality sensors [RH, CO<sub>2</sub> & VOC]
  - Via optional, external air quality sensors
- Demand-driven ventilation thanks to integrated air quality sensors
  - Relative humidity
  - VOC [volatile organic compounds]
  - CO<sub>2</sub>
  - Ventilation levels adapted in accordance with measured air quality
- Automatic frost protection
  - Temporary imbalance and flow restriction to prevent freezing of the heat exchanger
- Extra frost protection option through installation of pre-heating element
  - Electrical pre-heating element
  - Modular power
  - Max. power: 1000 W
- Breeze function
  - Breeze function for optimum cooling in summer [summer bypass with adjustable ventilation level]
  - Automatic and manual bypass activation
  - 4-seasons automatically controlled indoor temperature
- Fireplace function
  - Activated via external pulse switch
  - Temporary imbalance on supply side [overpressure] to aid ignition process
- Holiday mode
  - Input of start and end dates during prolonged absence
  - System ventilates at maximum energy efficiency
- Filter message
  - Via smartphone
  - On integrated TouchDisplay
  - On external control unit [optional]
  - Timer-controlled

### CONTROL

#### Standard

- With Endura Delta app
  - iOS, Android
  - Smartphone and tablet
- TouchDisplay on unit
  - Power and communication with motor unit via RS232
  - Possibility to program the motor unit with the TouchDisplay

#### Option

- Master air quality sensor [76050332]
  - Display of air quality and ventilation intensity
  - Integrated air quality sensor
  - Display of active program
  - Timer programming possible
  - Power via motor unit [connect directly to the motor unit]
- Slave air quality sensor [76050333]
  - Always in combination with Master
  - Wireless communication with Master
  - Power voltage 230V / 50Hz
  - Integrated air quality sensor
  - Same information as on the Master available
- 4-position switch [on request]
  - Limited functionality



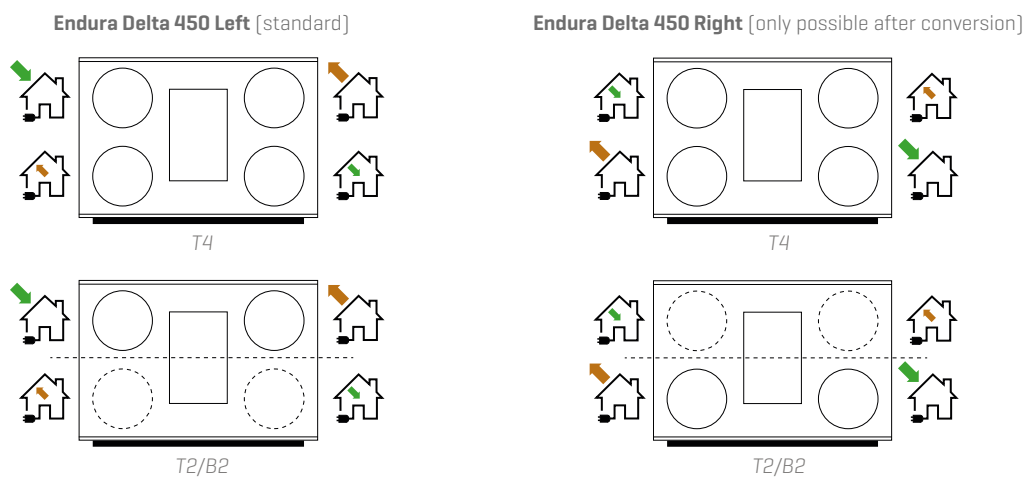
TouchDisplay

# SYSTEM D+®

## Technical data sheet Endura® Delta 450

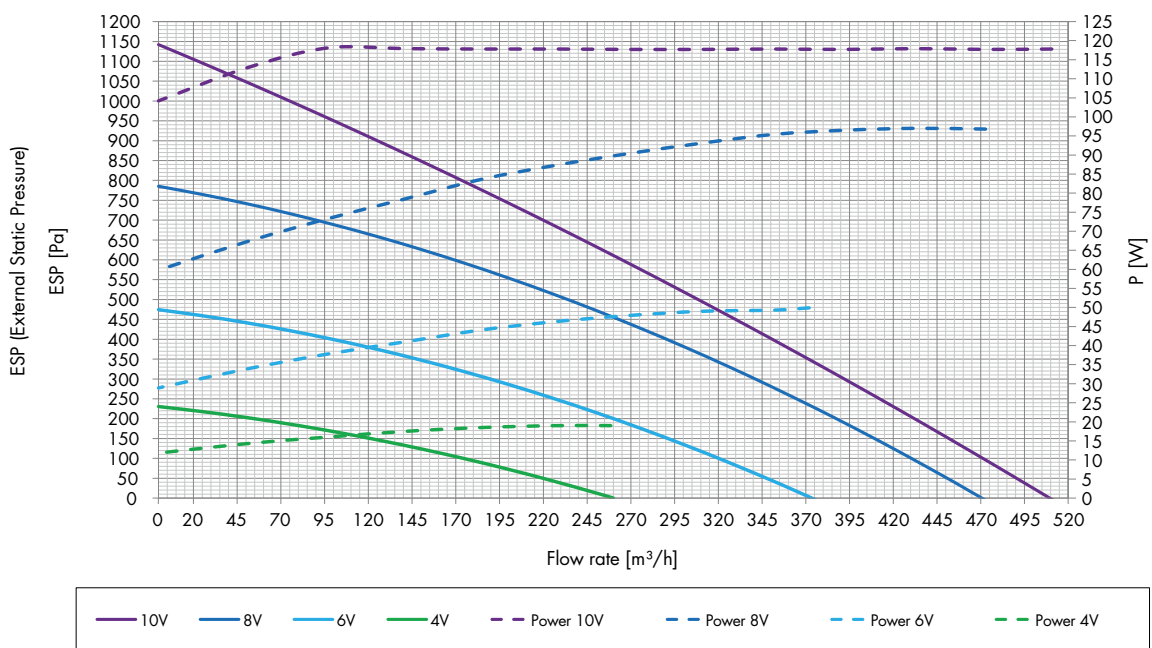
### MODELS

DESIGNATION	ARTICLE NUMBER
Endura Delta 450 T4	76050808
Endura Delta 450 T4 PH	76050809
Endura Delta 450 T2/B2	76050810
Endura Delta 450 T2/B2 PH	76050811



### PRESSURE CURVES

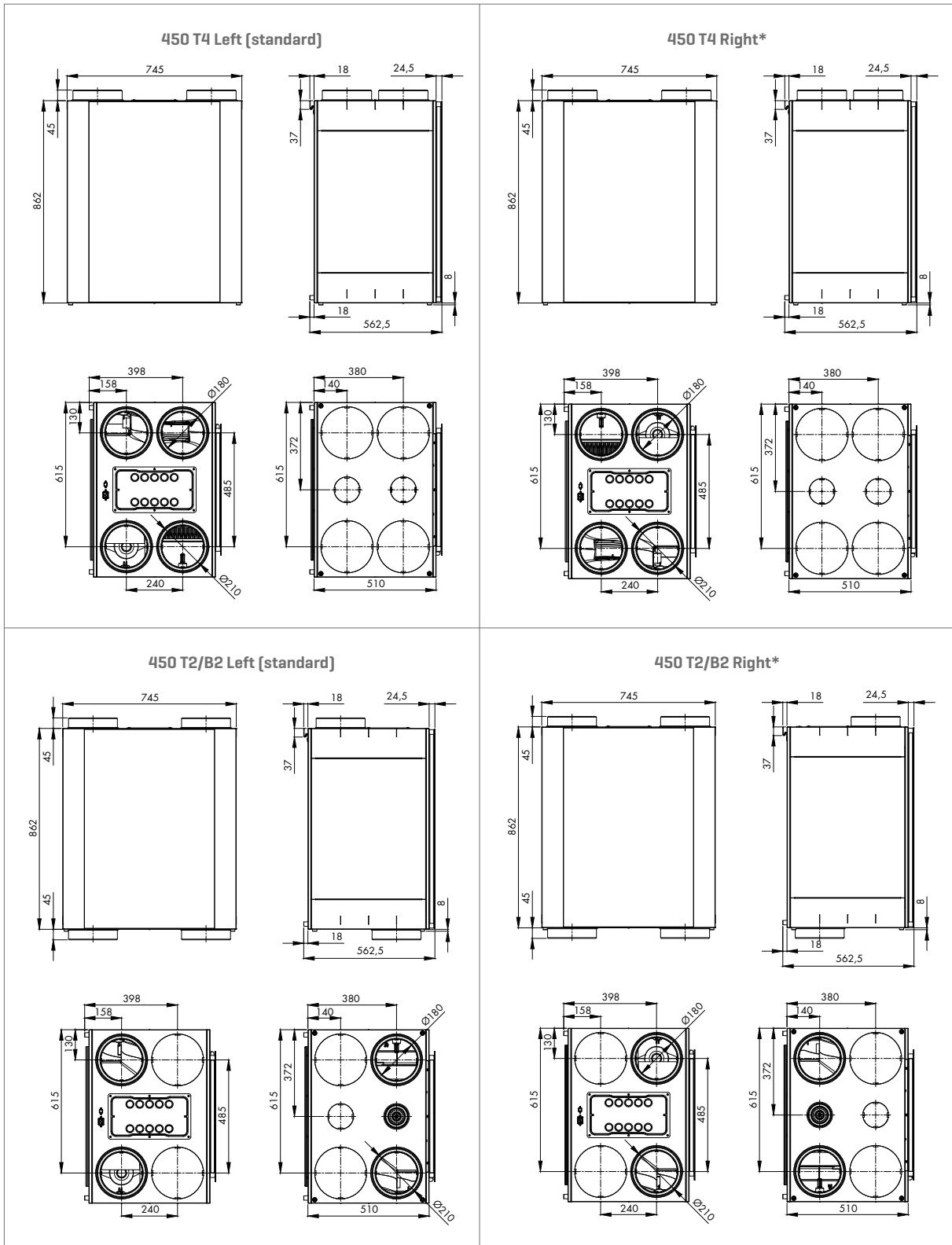
Fan curves for the Endura Delta 450  
pressure based on flow rate



# SYSTEM D+®

## Technical data sheet Endura® Delta 450

### TECHNICAL DRAWINGS



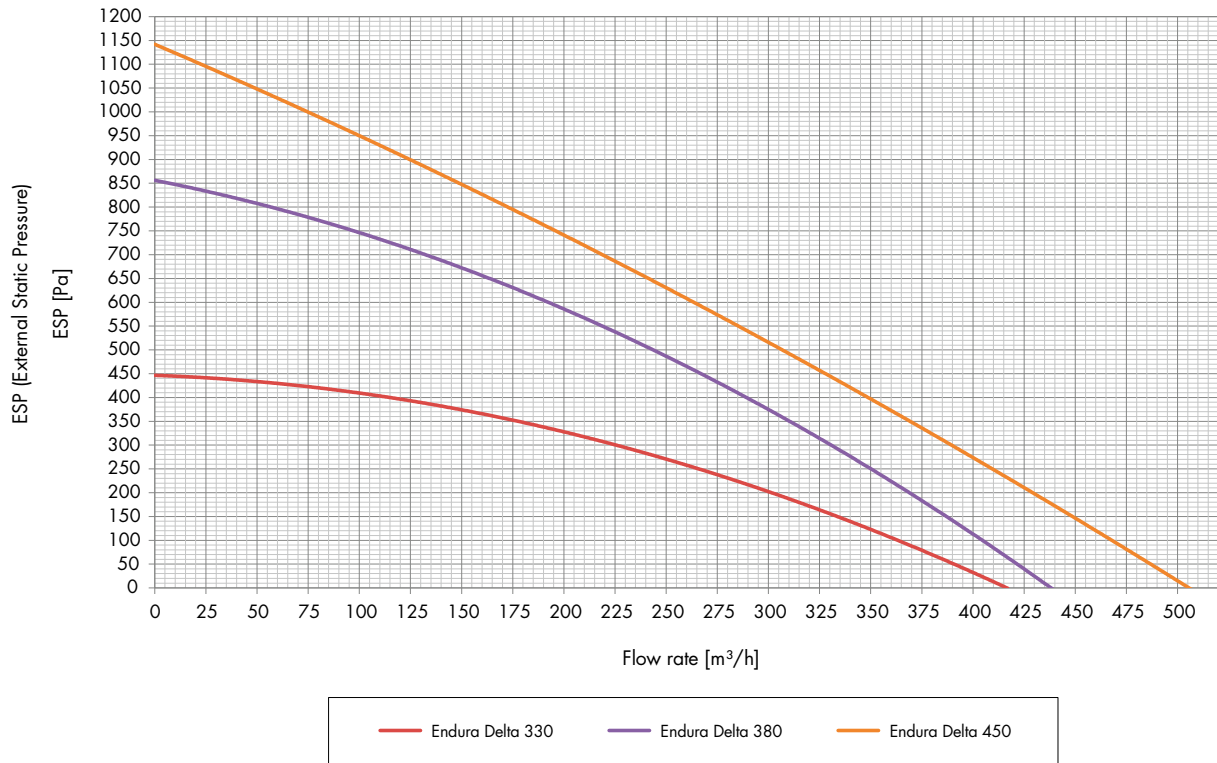
\* Only possible after conversion.

# SYSTEM D+®

## Overview technical data sheet Endura® Delta

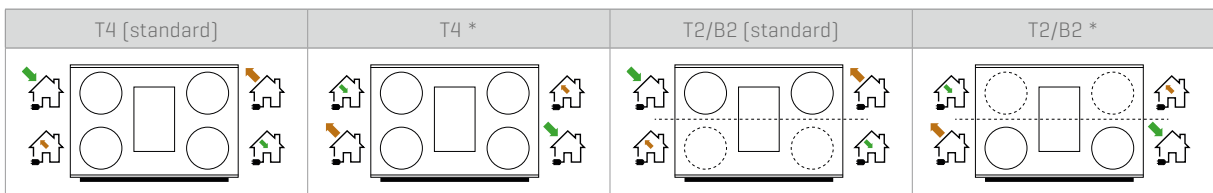
### OVERVIEW ENDURA DELTA 330-380-450

Fan curves for the Endura Delta  
pressure based on flow rate



### MODELS

Description	Item no.	Description	Item no.	Description	Item no.
ED 330 T4	76050800	ED 380 T4	76050804	ED 450 T4	76050808
ED 330 T4 PH	76050801	ED 380 T4 PH	76050805	ED 450 T4 PH	76050809
ED 330 T2/B2	76050802	ED 380 T2/B2	76050806	ED 450 T2/B2	76050810
ED 330 T2/B2 PH	76050803	ED 380 T2/B2 PH	76050807	ED 450 T2/B2 PH	76050811



\* Only possible after conversion.

# SYSTEM D+®

## Overview technical data sheet Endura® Delta

### TECHNICAL SPECIFICATIONS

	Endura Delta 330	Endura Delta 380	Endura Delta 450
Flow rate	330 m³/h at 150 Pa	380 m³/h at 150 Pa	450 m³/h at 150 Pa
Fans	EC fan with forward curved blades, constantly driven by volume	EC fan with backward curved blades, constantly driven by volume	EC fan with backward curved blades, constantly driven by volume
Max. power	2 x 85 W	2 x 83 W	2 x 115 W
Max. power preheater	1000 W	1000 W	1000 W
Heat exchanger	PS	PS	PS
Thermal yield measured according to EN308	89% at 100 m³/h 87% at 150 m³/h 84% at 250 m³/h 82% at 325 m³/h 81% at 350 m³/h	88% at 100 m³/h 85% at 200 m³/h 83% at 300 m³/h 81% at 400 m³/h	87% at 100 m³/h 83% at 250 m³/h 81% at 350 m³/h 79% at 470 m³/h
Connections	Ø 180 mm 4 upper connections [T4] 2 upper and 2 lower connections [T2/B2]	Ø 180 mm 4 upper connections [T4] 2 upper and 2 lower connections [T2/B2]	Ø 180 mm 4 upper connections [T4] 2 upper and 2 lower connections [T2/B2]
Bypass	Modulating	Modulating	Modulating
Filters	2 x coarse [G4] PM1 [F7] optional	2 x coarse [G4] PM1 [F7] optional	2 x coarse [G4] PM1 [F7] optional
Controls	Smartphone / Tablet Optional: 4-position switch	Integrated TouchDisplay Smartphone / Tablet Optional: 4-position switch	Integrated TouchDisplay Smartphone / Tablet Optional: 4-position switch
Frost protection	Automatic through temporary imbalance Optional preheater [proportional and no imbalance]	Automatic through temporary imbalance Optional preheater [proportional and no imbalance]	Automatic through temporary imbalance Optional preheater [proportional and no imbalance]
Casing	Coated steel plate	Coated steel plate	Coated steel plate
Weight	41 kg	46 kg	46 kg
Materials inner part	Expanded Polypropylene	Expanded Polypropylene	Expanded Polypropylene
Condensate discharge	Integrated Ø 32 mm	Integrated Ø 32 mm	Integrated Ø 32 mm
Contacts	0-10 V IN/OUTPUTS	0-10 V IN/OUTPUTS	0-10 V IN/OUTPUTS
Sensors	Integrated temperature sensors Integrated humidity sensor Integrated VOC sensor Integrated CO <sub>2</sub> sensor	Integrated temperature sensors Integrated humidity sensor Integrated VOC sensor Integrated CO <sub>2</sub> sensor	Integrated temperature sensors Integrated humidity sensor Integrated VOC sensor Integrated CO <sub>2</sub> sensor







# HEALTHCONNECTOR®

In schools, hospitals, office buildings, etc. the indoor climate is of crucial importance. The Healthconnector can be combined with any constantly pressure-controlled ventilation system (extraction or pulse), to create a demand-controlled ventilation system, based on CO<sub>2</sub> and relative humidity control.

## Healthconnector Ø125 Master

Max 125m<sup>3</sup>/h  
CO<sub>2</sub> & H<sub>2</sub>O sensors

66025092



## Healthconnector Ø125 Slave

Max 125m<sup>3</sup>/h

66025093



## Healthconnector Ø200 Master

Max 400 m<sup>3</sup>/h  
CO<sub>2</sub> & H<sub>2</sub>O sensors

66025082



## Healthconnector Ø200 Slave

Max 400 m<sup>3</sup>/h

66025083



## Healthconnector Ø250 Master

Max 600 m<sup>3</sup>/h  
CO<sub>2</sub> & H<sub>2</sub>O sensors

66025087



## Healthconnector Ø250 Slave

Max 600 m<sup>3</sup>/h

66025088





# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

The Renson Healthconnector is used to ensure the air quality is good in schools, offices, and industrial buildings.



### SCOPE OF APPLICATION

- It is a suitable solution for integrating demand-driven ventilation in buildings. Demand-driven ventilation provides energy-efficient ventilation while maintaining good air quality and comfort.
- To be used in buildings with a central ventilation system, both in new construction and renovation projects.
  - Extraction [system type C]:
    - Supply of fresh air using window ventilation.
    - Air extraction using central constant pressure ventilator[s].
  - In combination with heat-recovery system [system type D]:
    - Supply and extraction of air using central constant pressure ventilator[s]
- Individual control of ventilation per room.
- Plug and Play principle: Healthconnector can be directly integrated into the air duct network.
- The Healthconnector with CO<sub>2</sub> detector is included in the best air conditioning class IDA-C6 of the European ventilation standard for non-residential buildings [NBN EN 13779:2007].

### VERSIONS

There are 19 different types of the Healthconnector as determined by:

- The sensors [RH, CO<sub>2</sub>, IAQ]
- The diameter [Ø125, Ø200, Ø250]
- Manner in which it is connected to a building management system [0-10V, Modbus]
- With or without sound damper [Ø125]

	Ø	Sensor			Connection to building management system	Article number
		RH*	IAQ*	CO <sub>2</sub>		
Master	125	–	–	•	0-10 V [with sound damper]	66026000
	125	•	•	–	0-10 V [with sound damper]	66026001
	125	–	–	•	Modbus® [with sound damper]	66026002
	125	•	•	–	Modbus® [with sound damper]	66026003
	125	•	–	•	0-10 V [with sound damper]	66026098
	125	•	–	•	0-10 V [without sound damper]	66026099
	125	–	–	•	0-10 V [without sound damper]	66026100
	125	•	•	–	0-10 V [without sound damper]	66026101
	200	–	–	•	0-10 V	66026004
	200	•	•	–	0-10 V	66026005
	200	–	–	•	Modbus®	66026006
	200	•	•	–	Modbus®	66026007
	250	–	–	•	0-10 V	66026008
	250	•	•	–	0-10 V	66026009
Slave	125	–	–	–	–	66026012
	200	–	–	–	–	66026013
	250	–	–	–	–	66026014
	250	–	–	•	Modbus®	66026010
	250	•	•	–	Modbus®	66026011

\* RH: Relative Humidity  
IAQ: Indoor Air Quality [odours, Volatile Organic Compounds – VOCs]

• present  
– not present

# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

### PRIMARY FEATURES

#### Master Healthconnector®

- The sensors continuously measure the indoor air quality IN the extraction airflow.
- The stepper motor automatically positions the internal valve blade based on the measured air quality [CO<sub>2</sub>, relative humidity and/or Indoor Air Quality]. This regulates the extraction airflow depending on the indoor air quality.
- The Healthconnector CO<sub>2</sub> limit value is adjustable. The specified limit value ensures that the CO<sub>2</sub> level will not be exceeded in the connected room[s].
- Option to [temporarily] manual adjust the ventilation extraction airflow using the [optional] control or via the building management system.
- As standard, the Master Healthconnector is equipped to control a Slave Healthconnector and/or a motorised inlet louvre [if applicable].

#### Slave Healthconnector®

- The Slave Healthconnector is a slave valve without integrated sensors that is controlled by the Master Healthconnector.
- The positioning of the valve blade is determined by the Master Healthconnector.
- The Slave Healthconnector can be powered separately or be supplied by the Master. The Plug and Play concept allows up to 6 slave valves to be supplied with power by 1 Master valve.

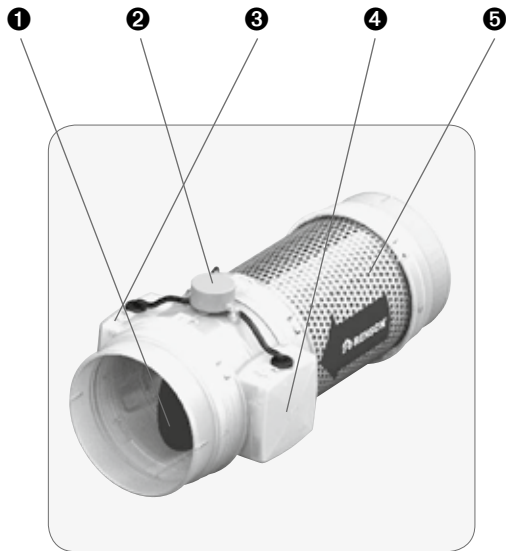
#### Master Healthconnector® and Slave Healthconnector® set up

If a large ventilation extraction airflow [600+ m<sup>3</sup>/h] is required at the same location, the parallel Master-Slave combination can be used. The total extraction airflow is the sum of the individual Healthconnector airflows. Different types of Healthconnectors can be used together.

# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

### HEALTHCONNECTOR® PARTS



Master  
Ø125



Master  
Ø200/250

	Master	Slave
❶ Valve blade	•	•
❷ Stepper motor	•	•
❸ Printed circuit board	• [with RH and/or IAQ sensor]	• [without sensor]
❹ CO <sub>2</sub> sensor	• [if applicable]	-
❺ Sound damper	• [only Ø125]	• [only Ø125]
Healthconnector Ø125	<ul style="list-style-type: none"> <li>The valve blade halves are made of polypropylene</li> <li>The valve blade is made of ABS</li> <li>The integrated sound damper is made of:                             <ul style="list-style-type: none"> <li>- A perforated plate of size 395 mm x 200 mm x 1 mm and provides 40% airflow</li> <li>- Sound damping foam of size 260 mm x 358 mm F0.5/N0.5, thickness 12 mm</li> </ul> </li> </ul>	
Healthconnector Ø200/250	<ul style="list-style-type: none"> <li>The valve blade halves are made of ABS</li> <li>The cover is made of polypropylene</li> <li>The valve blade and connecting flange are galvanised</li> </ul>	
Healthconnector Ø125 integrated sound damper	5.7 dB [i.e. the actual difference between the sound pressure level measured at the same place from the source with and without the damper under the same conditions]	

# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

### TECHNICAL SPECIFICATIONS

Type	Healthconnector 125		Healthconnector 200		Healthconnector 250	
	Master	Slave	Master	Slave	Master	Slave
Connection diameter	Ø125		Ø200		Ø250	
Airflow [max.]	125 m³/h [i.e. the maximum airspeed of 2.8 m/s]		400 m³/h [i.e. the maximum airspeed of 3.5 m/s]		600 m³/h [i.e. the maximum airspeed of 3.5 m/s]	
Sound damping	•	•	-	-	-	-
Integrated sensor[s]	•	-	•	-	•	-

Controls	
Valve position control <i>(via the optional control or Modbus®)</i>	<p><b>Nominal position:</b> 16 steps from completely open to minimum position</p> <p><b>Minimum position:</b> From 10% to 100% of the nominal airflow</p>
Control valve blade in normal operation	From the minimum position to nominal valve position in 7 steps
<b>Master Healthconnector® control</b>	
CO <sub>2</sub> control	<p><b>Air extraction control:</b> Linear control according to the specified CO<sub>2</sub> limit value.</p> <p><b>Opening the valve blade:</b> Proportionately in 7 steps based on the measured and specified CO<sub>2</sub> limit value from minimum position to the nominal valve position.</p>
Master Healthconnector CO <sub>2</sub> limit value settings <i>(via the optional control or Modbus®)</i>	<ul style="list-style-type: none"> <li>- 600 ppm</li> <li>- 800 ppm</li> <li>- 900 ppm</li> <li>- 1000 ppm</li> <li>- 1100 ppm</li> <li>- 1200 ppm <i>(default)</i></li> <li>- 1400 ppm</li> <li>- 1600 ppm</li> </ul>
RH control	<p><b>Air extraction control:</b> Responds to a sudden increase or high absolute relative humidity value. The set values are fixed.</p> <p><b>Opening the valve blade:</b> Opening from the minimum position to nominal valve position when moisture detected.</p>
IAQ control	<p><b>Air extraction control:</b> Responds to a sudden increase in or high absolute odour/VOCs value. The values are permanently set.</p> <p><b>Opening the valve blade:</b> Opening from the minimum position to nominal valve position when odour detected.</p>
<b>Slave Healthconnector control</b>	The Master Healthconnector uses a [wired] control signal to adjust the position of the Slave Healthconnector valve blade.

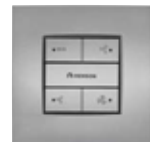
# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

Power source connection voltage	
All types of Healthconnectors	<ul style="list-style-type: none"> <li>- 12 V/24 V DC</li> <li>- 12 V AC</li> </ul>
Power supply can be looped for each Healthconnector	1 Master Healthconnector can power a maximum of 6 slaves
Required amperage	1. Power for 1 Healthconnector: $I \geq 0.63 \text{ A}$ 2. If power looped: <ul style="list-style-type: none"> <li>• Power for 1 Master and 1 to 4 Slaves: <math>I \geq 1.26 \text{ A}</math></li> <li>• Power for 1 Master and 5 to 6 Slaves:               <ul style="list-style-type: none"> <li>- <math>I \geq 1.89 \text{ A}</math>, or,</li> <li>- <math>I \geq 1.26 \text{ A}</math> if the power supply can provide a peak voltage 1.89 A or higher</li> </ul> </li> </ul>

### OPTIONAL CONTROL

- RENSON 4-position switch with LED indicator:
  - During normal operation: the ventilation extraction airflow can be manually adjusted (only possible with the Master Healthconnector)
  - Adjustment: [temporarily] a minimum of a single 4-position switch is required to control the Healthconnector [both Master and Slave Healthconnector] unless the adjustment occurs via a Modbus building management system [only with the Master]
  - Display malfunctions
- Connection:
  - Use a 10-wire cable to connect to the Healthconnector (Min.  $10 \times 0.34 \text{ mm}^2$ , Max.  $10 \times 0.8 \text{ mm}^2$ )
  - A maximum of 2 controls can be connected [in parallel] to 1 Healthconnector
  - A maximum of 1 Healthconnector can be connected per control



### INSTALLATION

- When used according to system type C, the proper operation of the Healthconnector can only be guaranteed if the following two components are present and harmonised with each other:
  - Supply: Self-regulating ventilation louvres [P3 and P4].
  - Extraction: Constant pressure-controlled centralised ventilator.  
Set the ventilator pressure so that the pressure across the Healthconnector does not exceed 200 Pa.
- Multiple Healthconnectors can be connected using a central ventilator: Healthconnectors are installed in parallel.
- Installation:
  - Indoor environment [preferably within the insulated area].
  - In the air duct of the connected location[s].
  - The Healthconnector can be installed horizontally or vertically.
- Control [manual]: maximum opening limit
  - A control [optional] or Modbus building management system is required to start up the control.
  - Measure the airflow [using an anemometer] at the extraction louvre in the location. The Healthconnector nominal airflow must be adjusted using the control or Modbus® [i.e. determining the nominal position of the valve blade]. If necessary, additional fine-tuning can be made to the adjustable extraction louvre.

# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

### COMPREHENSIVE APPLICATIONS

- Connection with inlet louvre with motorised inner valve  
The Healthconnector can be connected to Renson motorised inlet louvres [0-10 V signal]. This allows the motorised inner valve in the inlet louvre to be controlled based on the indoor air quality.
- Connection with building management system:  
The Master Healthconnector can be connected to an [external] building management system via a Modbus® or via a 0-10 V voltage signal. For example, this allows the ventilation airflow to be controlled by the logic in the building management system.

#### Modbus®

- Control and display the valve position [7 steps and valve blade completely closed]
- Control and display of HD and ECO ventilation modes
- control: setting the maximum and minimum valve position
- Display measured CO<sub>2</sub> value [in PPM] [if CO<sub>2</sub> sensor present]
- Set CO<sub>2</sub> threshold [if CO<sub>2</sub> sensor present]
- Feedback from the Healthconnector in operation:
  - sensors
  - display malfunctions
  - valve blade position
  - control active yes/no for CO<sub>2</sub>, RH and/or IAQ

#### 0-10 V voltage signal

- Valve position manual control [7 steps and valve blade completely closed]
- HDC ventilation mode control

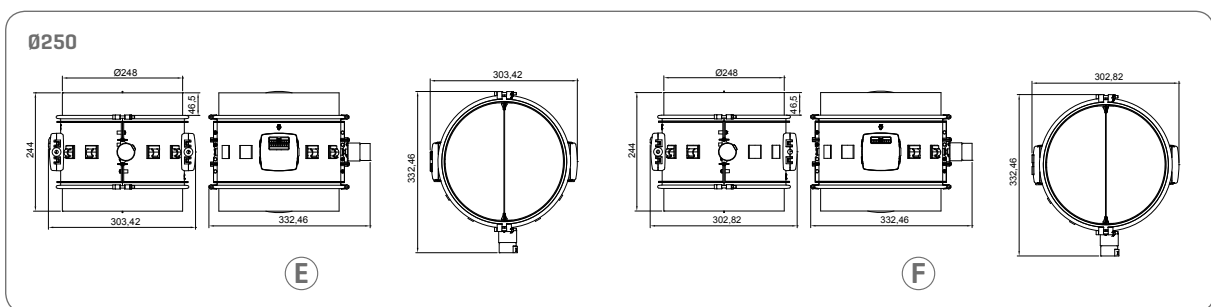
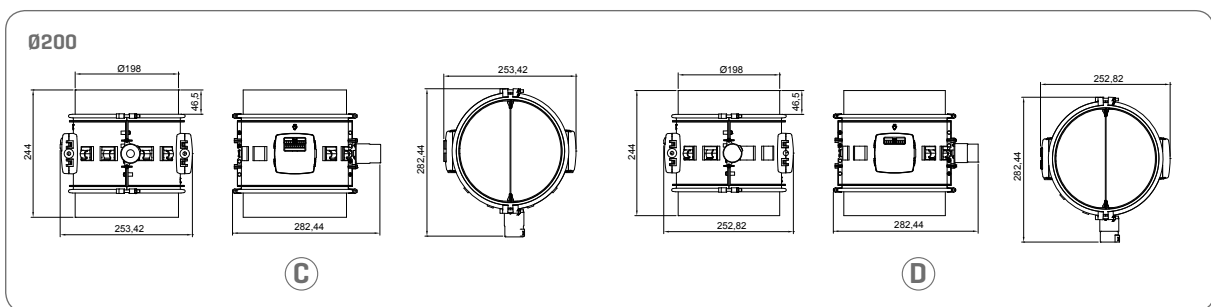
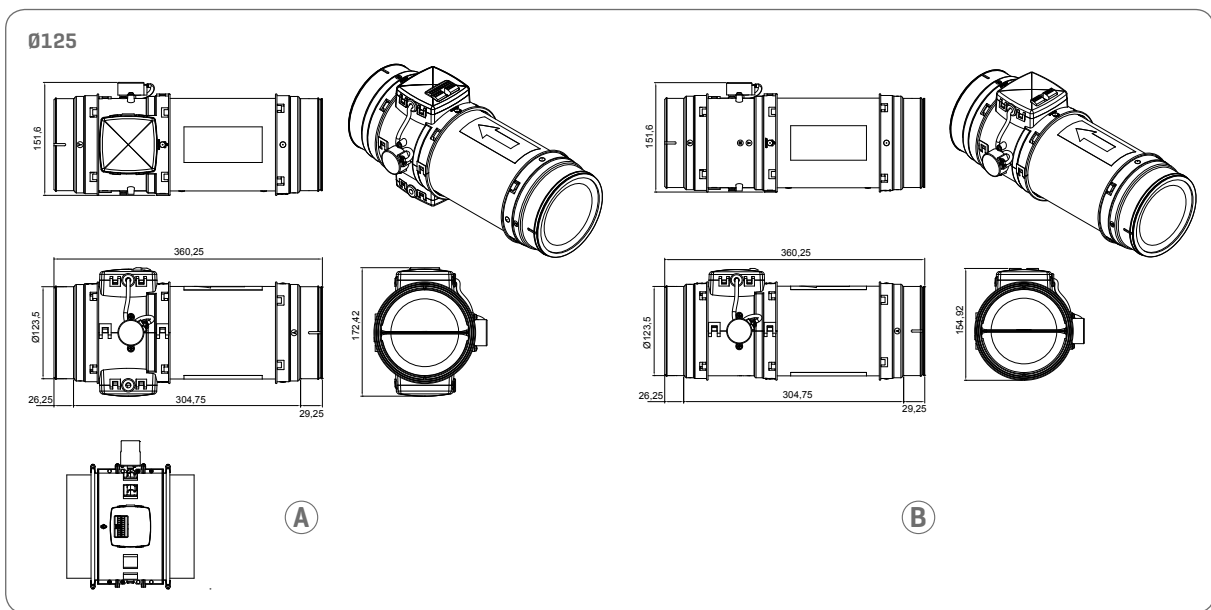


# HEALTHCONNECTOR®

## Technical data sheet Healthconnector®

### TECHNICAL DRAWINGS

Healthconnector	Ø125	Ø200	Ø250
Master	(A)	(C)	(E)
Slave	(B)	(D)	(F)





# CONTROLS

Each Renson® system can be controlled with specific controls. This enables the user to operate every device optimally and, if possible, also receives the necessary feedback.

## XVK3 switch

### Control

**66014009**

3-position switch with rotary switch  
Built-in switch  
Cover plate type NIKO 'Intense', colour 'Sterling'  
Connection cable: min. 4 x 0,8 mm<sup>2</sup> / max. 4 x 1,5 mm<sup>2</sup>  
Compatible with Cbase® / Xtravent® EcoModus Compact / Healthbox® 3.0



## XVK4 switch

### Control

**66016446**

4-position switch with push button  
Built-in switch  
NIKO with claw mount  
Cover plate type NIKO 'Intense', colour 'Sterling'  
Connection cable: min. 10 x 0,34 mm<sup>2</sup> / max. 10 x 0,8 mm<sup>2</sup>  
Compatible with Healthbox® II / Healthbox® II Compact / Healthbox® II SmartZone / Healthconnector



## TouchDisplay with CO<sub>2</sub> sensor

### TouchDisplay HB with CO<sub>2</sub> sensor

**66031830**

### TouchDisplay Cube® with CO<sub>2</sub> sensor

**66032202**

TouchDisplay with integrated CO<sub>2</sub> sensor  
Wireless communication  
Cover plate not included  
230V



## Sensorless TouchDisplay

### Sensorless TouchDisplay HB

**66031828**

### Sensorless TouchDisplay Cube®

**66032203**

### TouchDisplay Endura®

**76050322**

Sensorless TouchDisplay  
Wireless communication  
Cover plate not included  
230V





# SENSORS

Some ventilation systems can optionally be equipped with additional sensors. As a result, the air quality or residents' presence is measured locally in order to adjust ventilation air flow accordingly.

## Master air quality sensor

### Master air quality sensor

76050332

TouchDisplay with integrated CO<sub>2</sub> sensor  
RS232 connection (not connected to Endura® Delta)  
Compatible with Endura® Delta  
Cover plate not included



## Slave air quality sensor

### Slave air quality sensor

76060333

TouchDisplay with integrated CO<sub>2</sub> sensor  
Wireless communication  
230V  
Compatible with Endura® Delta  
Cover plate not included

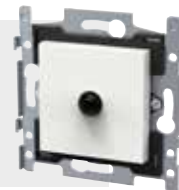


## Motion sensor

### XVKS motion sensor

66031720

1 x XVKS motion sensor white  
Compatible with Cube®  
Cover plate not included





# EASYFLEX®

De Easyflex luchtkanalen kunnen gecombineerd worden met elk type ventilatiesysteem en in zo goed als elke woning of gebouw. Dankzij hun grote dimensionering kunnen ze een groot debiet aan bij een lage luchtsnelheid. Dit zorgt ervoor dat de geluidsproductie over het totale systeem sterk daalt. De gladde binnenwand is uitgerust met antistatische en antibacteriële additieven om ophoping van stof en het uitbreken van bacteriehaarden te voorkomen.

## Easyflex® flexible duct

**G0013110**

Flat oval 140 x 64 mm  
Roll 15 m



## Easyflex® flat oval duct

**G0013126**

Flat oval 135 x 55 mm  
3 m



## Easyflex® flexible connection piece

**G0013139**

Flat oval 140 x 64 mm



## Easyflex® round duct ø125

**G0013130**

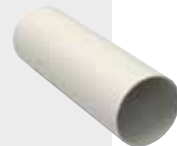
3 m



## Easyflex® round duct ø80

**G0013131**

3 m



## Easyflex® extension piece ø125

**G0013132**

0,25 m



## Easyflex® extension piece ø80

**G0013133**

0,25 m



## Easyflex® crosspiece pivot

**G0013145**



# EASYFLEX®

Easyflex® double valve connection  $\varnothing 125$

**G0013118**



Easyflex® valve connection  $\varnothing 125$

**G0013117**



Easyflex® valve connection  $\varnothing 80$

**G0013116**



Easyflex® adaptor flat to round 140 x 60 >  $\varnothing 125$

**G0013124**



Easyflex® straight double adaptor 2 x 140 x 60 >  $\varnothing 125$

**G0013141**



Easyflex® adaptor flat to round 140 x 60 >  $\varnothing 80$

**G0013123**



Easyflex® Y-piece

**G0013120**



Easyflex® vertical bend 90°

**G0013114**





Easyflex® horizontal bend 90° **60013113**



Easyflex® angled concrete duct kit, Ø80 **60013146**



Easyflex® angled concrete duct kit, Ø125 **60013147**



Easyflex® connector with integrated rubber gaskets, flat **60013111**



Easyflex® connector with integrated rubber gaskets, Ø125 **60013122**



Easyflex® connector with integrated rubber gaskets, Ø80 **60013121**



Easyflex® quick fastener **60013112**



Easyflex® metal fastening bracket **60013137**



Easyflex® distribution box angled 160 **60013135**

6 connections, 6 metal fastening brackets

Easyflex® distribution box straight 160 **60013140**

6 connections, 6 metal fastening brackets

Easyflex® distribution box 8 connections **60013136**

8 connections, 8 metal fastening brackets



Easyflex® inspection hatch **76050405**






























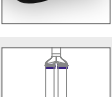
Easyflex® insulation tube **66031400**

2 m



# EASYFLEX®

## Technical data sheet overview Easyflex® ducts

	<b>G0013110</b> Flexible duct	p. 91		<b>G0013141</b> Straight double adaptor 2 x 140 x 60 mm > Ø 125 mm	p. 105
	<b>G0013126</b> Flat oval duct	p. 92		<b>G0013131</b> Round duct Ø 80 mm	p. 106
	<b>G0013139</b> Flexible connection piece	p. 93		<b>G0013121</b> Connector with integrated rubber gaskets, round Ø 80 mm	p. 107
	<b>G0013111</b> Connector with integrated rubber gaskets, flat	p. 94		<b>G0013116</b> Valve connection Ø 80 mm	p. 108
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# EASYFLEX®

## Technical data sheet flexible duct - G0013110

### DESCRIPTION

Easyflex® is a flexible polyethylene duct with an outer diameter of 140 x 64 mm and an equivalent inner diameter of 90 mm. The smooth inner wall of this double walled duct has an anti-static and antibacterial additive treatment to help prevent dust build-up and bacterial outbreaks.

The limited height of the Easyflex® air duct makes it easy to recess in screed, concrete or stud walls or false ceilings.

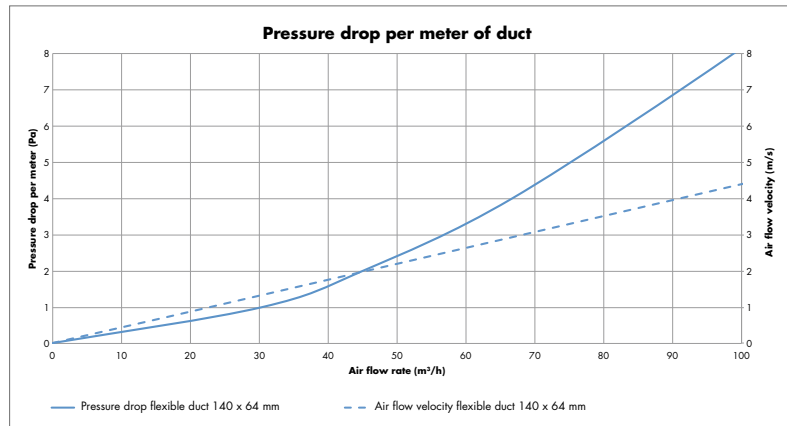
The air duct's broad cross section allows high air flow rates at low velocities, which leads to a quiet ventilation system operation.



Flexible duct - G0013110

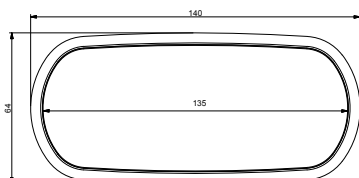
### PRODUCT CHARACTERISTICS

- Double walled
  - Ribbed outer sheath
  - Smooth inner sheath
- Made of polyethylene
  - Outer sheath: HDPE RAL 9002
  - Inner sheath: LDPE
- Antibacterial and anti-static
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean
- Bending radius on horizontal surface  
≥ 400 mm
- Recommended installation temperature: ≥ 0°C



### PACKAGING

Art. No.: G0013110  
 Dimensions: 140 x 64 mm  
 Roll length: 15 m  
 Roll diameter: 1150 mm  
 UV-protected: Wrapped in foil  
 End caps: Every duct is carefully sealed with end caps



Type of duct	Flexible duct					
Air flow velocity [m/s]	0,50	1,00	1,50	2,00	2,50	3,00
Air flow rate [m³/h]	11,37	22,75	34,12	45,50	56,87	68,25
Duct length [m]	Pressure drop [Pa]					
1	0,18	0,6	1,23	2,04	3,02	4,17
2	0,36	1,20	2,46	4,08	6,05	8,33
3	0,53	1,81	3,69	6,12	9,07	12,50
4	0,71	2,41	4,92	8,16	12,09	16,67
5	0,89	3,01	6,15	10,20	15,11	20,83
6	1,07	3,61	7,38	12,24	18,14	25,00
7	1,24	4,22	8,61	14,29	21,16	29,17
8	1,42	4,82	9,84	16,33	24,18	33,34
9	1,60	5,42	11,07	18,37	27,21	37,50
10	1,78	6,02	12,30	20,41	30,23	41,67
11	1,96	6,63	13,53	22,45	33,25	45,84
12	2,13	7,23	14,76	24,49	36,27	50,00
13	2,31	7,83	15,99	26,53	39,30	54,17
14	2,49	8,43	17,22	28,57	42,32	58,34
15	2,67	9,03	18,45	30,61	45,34	62,50
16	2,84	9,64	19,68	32,65	48,37	66,67
17	3,02	10,24	20,91	34,69	51,39	70,84
18	3,20	10,84	22,14	36,73	54,41	75,01
19	3,38	11,44	23,37	38,77	57,43	79,17
20	3,56	12,05	24,60	40,82	60,46	83,34

# EASYFLEX®

## Technical data sheet flat oval duct - G0013126

### DESCRIPTION

The flat oval duct is made of PVC and has an outer diameter of 135 x 55 mm, and an equivalent inner diameter of 90 mm.

The limited height of the Easyflex® air duct makes it easy to recess in screed, concrete or stud walls or false ceilings.

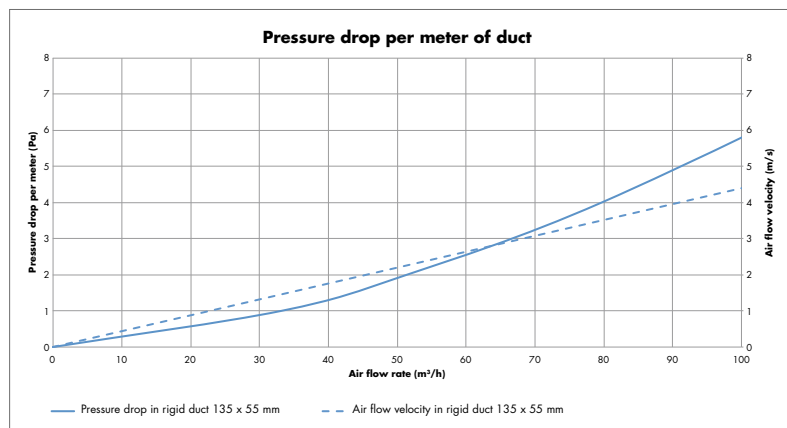
The air duct's broad cross section allows high air flow rates at low velocities, which leads to quiet ventilation system operation.



Flat oval duct - G0013126

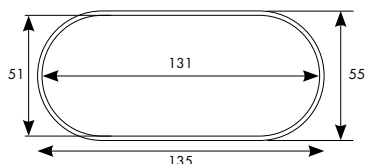
### PRODUCT CHARACTERISTICS

- Made of PVC RAL 9002
- Anti-static
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013126  
 Dimensions: 135 x 55 mm  
 Length: 3 m  
 UV-protected: Wrapped in foil  
 End caps: Every duct is carefully sealed with end caps



Type of duct	Flat oval duct 135 x 55 mm					
Air flow velocity [m/s]	0,50	1,00	1,50	2,00	2,50	3,00
Air flow rate [m³/h]	11,37	22,75	34,12	45,50	56,87	68,25
Duct length [m]	Pressure drop [Pa]					
1	0,18	0,55	1,05	1,65	2,35	3,13
2	0,37	1,10	2,10	3,30	4,70	6,26
3	0,55	1,66	3,14	4,95	7,04	9,39
4	0,74	2,21	4,19	6,60	9,39	12,53
5	0,92	2,76	5,24	8,25	11,74	15,66
6	1,11	3,31	6,29	9,90	14,09	18,79
7	1,29	3,87	7,33	11,55	16,43	21,92
8	1,48	4,42	8,38	13,20	18,78	25,05
9	1,66	4,97	9,43	14,85	21,13	28,18
10	1,85	5,52	10,48	16,50	23,48	31,31
11	2,03	6,08	11,53	18,16	25,83	34,44
12	2,22	6,63	12,57	19,81	28,17	37,58
13	2,40	7,18	13,62	21,46	30,52	40,71
14	2,59	7,73	14,67	23,11	32,87	43,84
15	2,77	8,28	15,72	24,76	35,22	46,97
16	2,96	8,84	16,76	26,41	37,57	50,10
17	3,14	9,39	17,81	28,06	39,91	53,23
18	3,33	9,94	18,86	29,71	42,26	56,36
19	3,51	10,49	19,91	31,36	44,61	59,49
20	3,70	11,05	20,96	33,01	46,96	62,63

# EASYFLEX®

## Technical data sheet flexible connection piece - G0013139

### DESCRIPTION

The Easyflex® connection piece can be used to connect flat oval ducts [G0013126] and flexible ducts [G0013110].

The connection piece consists of a 350 mm flexible air duct with a connection sleeve with rubber along both sides. It can also be used for horizontal and vertical curves of 90° at the most, but as well for other difficult obstacle points [for instance S-curves].

The flexible connection piece has an outer diameter of 140 x 64 mm and an equivalent inner diameter of 90 mm.

The air duct's broad cross section allows high air flow rates at low velocities, which leads to a quiet ventilation system operation.

The limited height of the Easyflex® connection piece makes it easy to recess in stud walls or false ceilings. It can also be poured in screed or concrete as long as strengthening or reinforcement is provided.

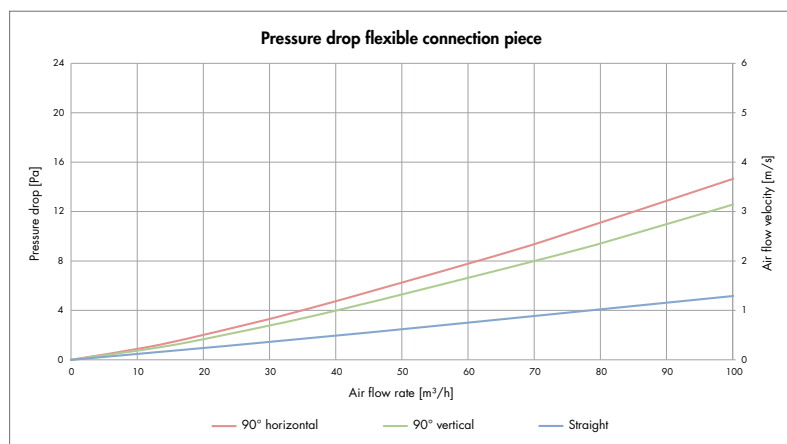
The smooth finished inner wall has an anti-static additive treatment to help prevent dust build-up and bacterial outbreaks.



Flexible connection piece - G0013139

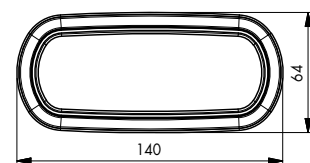
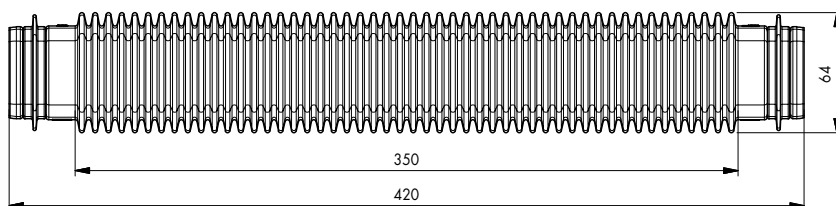
### PRODUCT CHARACTERISTICS

- Single walled
  - Ribbed out sheath
- Made of polyethylene
  - HDPE RAL 9002
- Anti-static
- Best airtightness class D  
[as long as tape is used]  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall



### PACKAGING

Art. No.: G0013139  
Dimensions: 140 x 64 x 420 mm  
Packaging: 12 pieces per box



# EASYFLEX®

## Technical data sheet connector with integrated rubber gaskets, flat - G0013111

### DESCRIPTION

The unique coupling system ensures an almost perfect airtightness. The connector is equipped with two integrated double rubber seals.

Thanks to these seals, the Easyflex® air duct system qualifies for airtightness class D, meaning the system is three times less liable to leak than class C.

The flat connector can be used to couple:

- The Easyflex® flexible duct [G0013110]
- The Easyflex® flat oval duct [G0013126]
- Coupling of all Easyflex® accessories

The coupling can be reinforced with:

- Quick fastener [G0013112]
- Metal fastening bracket [G0013137]



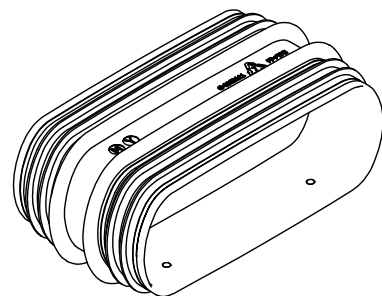
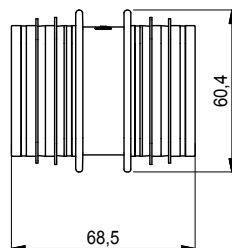
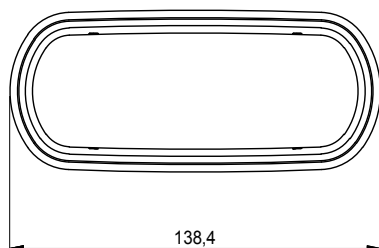
Connector with integrated rubber gaskets, flat - G0013111

### PRODUCT CHARACTERISTICS

- Made of polypropylene
- Rubber sealing: TPE [ThermoPlastic Elastomer]
- Best airtightness class D [[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: G0013111  
Dimensions: 138,5 x 68,5 x 60,4 mm  
Packaging: 50 pieces per box



# EASYFLEX®

## Technical data sheet quick fastener - G0013112

### DESCRIPTION

These quick fasteners are used for all fixings of the Easyflex® range; always to be used in pairs. The fastening can be done using screws or concrete pins.

The fastening with clips makes overhand mounting much easier. The first quick fasteners can first be screwed to the ceiling, then the flexible can be easily clipped without tools.

The components that can be fastened with these quick couplings are the following:

- The Easyflex® flexible duct [G0013110]
- The Easyflex® flat oval duct [G0013126]
- Coupling of all Easyflex® accessories



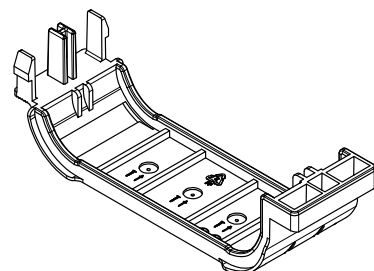
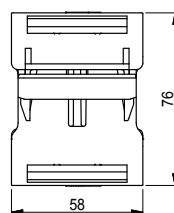
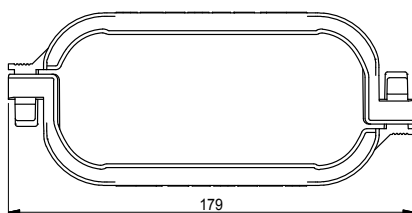
Quick fastener - G0013112

### PRODUCT CHARACTERISTICS

- Made of polypropylene
- Pre-formed mounting
- Fastening with clips that can be reopened

### PACKAGING

Art. No.: G0013112  
Dimensions: 179 x 58 x 48 mm  
Packaging: 100 pieces per box



# EASYFLEX®

## Technical data sheet metal fastening bracket - G0013137

### DESCRIPTION

This fastening bracket can be used for all fixings of the Easyflex® range. Screws or pins can be used for clasping.

The components that can be fastened with this bracket are the following:

- The Easyflex® flexible duct [G0013110]
- The Easyflex® flat oval duct [G0013126]
- Fastening of all Easyflex® accessories
- Coupling with all distribution boxes



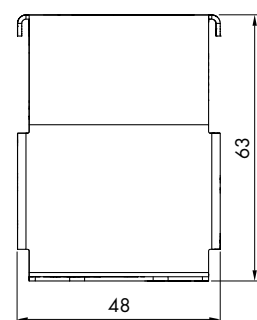
Metal fastening bracket - G0013137

### PRODUCT CHARACTERISTICS

- Made of chromed steel
- 63 x 48 x 188 mm

### PACKAGING

Art. No.: G0013137  
Dimensions: 175 x 205 x 159 mm  
Packaging: 100 pieces per box





# EASYFLEX®

## Technical data sheet horizontal bend 90° - G0013113

### DESCRIPTION

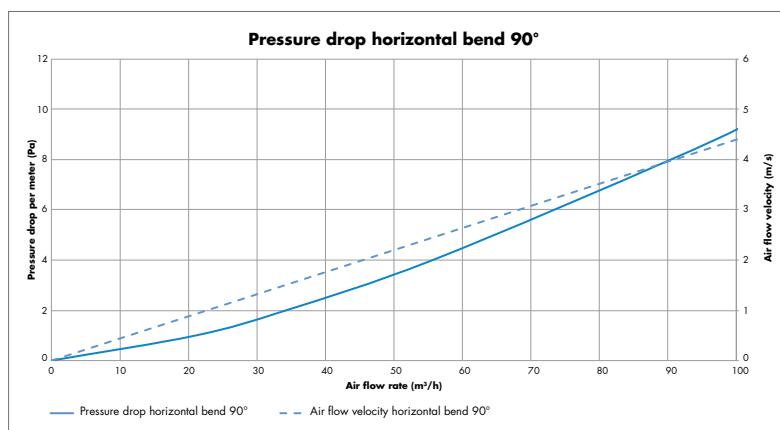
It is best to avoid using flexible ducts for sharp bends. It is better to use fixed bend accessories, such as a 90° horizontal bend. The bend has integrated mounting bases to fix it to the supporting structure.



Horizontal bend 90° - G0013113

### PRODUCT CHARACTERISTICS

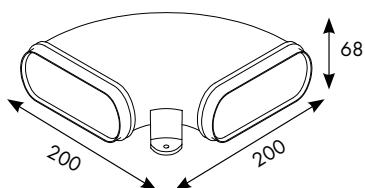
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013113  
 Dimensions: 200 x 200 x 68 mm  
 Packaging: 20 pieces per box

Type of accessory	Horizontal bend 90°		
	Air flow rate [m³/h]	25	50
Air flow velocity [m/s]	1,10	2,20	3,30
Pressure drop [Pa]	1,27	3,43	6,12



# EASYFLEX®

## Technical data sheet vertical bend 90° - G0013114

### DESCRIPTION

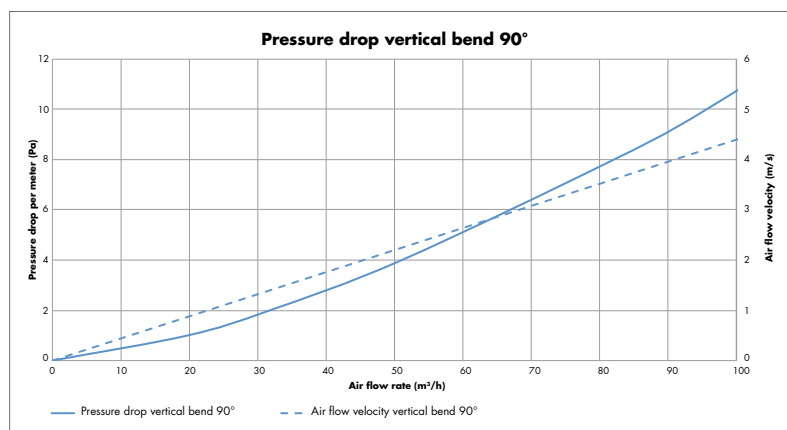
It is best to avoid using flexible duct for sharp bends. It is better to use fixed bend accessories, such as a 90° vertical bend.



Vertical bend 90° - G0013114

### PRODUCT CHARACTERISTICS

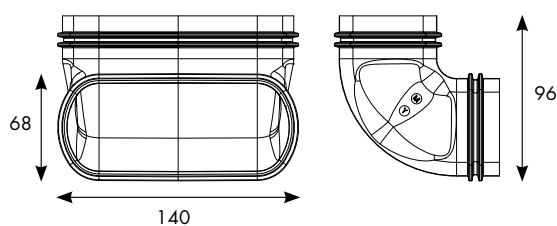
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013114  
 Dimensions: 96 x 96 x 140 mm  
 Packaging: 20 pieces per box

Type of accessory	Vertical bend 90°		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	1,10	2,20	3,30
Pressure drop [Pa]	1,41	3,88	7,01



# EASYFLEX®

## Technical data sheet y-piece - G0013120

### DESCRIPTION

It is possible to connect one flat, oval channel to two flat, oval channels. In this way, two spaces can be reached with a single main channel.

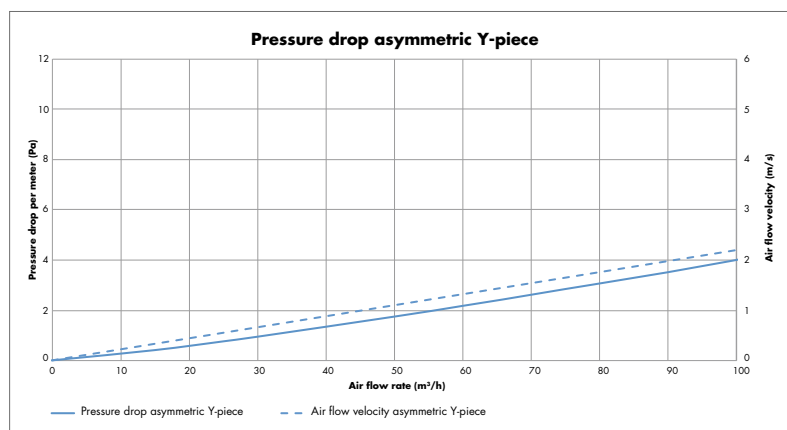
For example, extraction from two rooms can be done on one valve. To do this, controllable grate bases must be installed to adjust the flow rates.



Y-piece - 2x140x60 mm > 140x60 mm  
G0013120

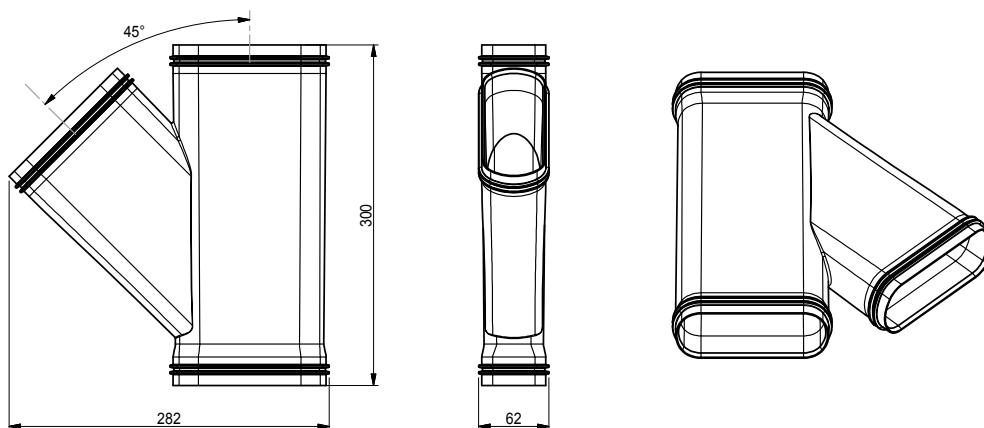
### PRODUCT CHARACTERISTICS

- Made of PVC RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013120  
Dimensions: 300 x 282 x 62 mm  
Packaging: 12 pieces per box



# EASYFLEX®

## Technical data sheet round duct Ø 125 mm - G0013130

### DESCRIPTION

Round ducts are usually used on vertical lengths up to the ventilation system. We recommend a 125 mm diameter for spaces with an air flow rate of > 50 m³/h.

The 125 mm round duct is characterized by its very low pressure drop. High air flow rates are achievable at low air flow velocities.

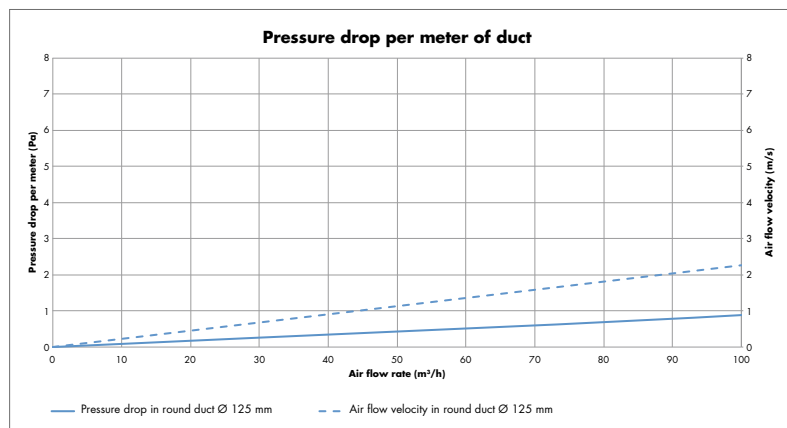
The length of the concrete duct [G0013132] is 250 mm.



Round duct Ø 125 mm - G0013130

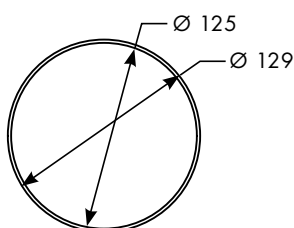
### PRODUCT CHARACTERISTICS

- Made of PVC RAL 9002
- Anti-static
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013130  
 Diameter: 125 mm  
 Length: 3 m  
 UV-protected: Wrapped in foil  
 End caps: Every duct is carefully sealed with end caps



Type of duct	Round duct Ø 125 mm					
Air flow velocity [m/s]	0,50	1,00	1,50	2,00	2,50	3,00
Air flow rate [m³/h]	22,09	44,2	66,34	88,4	110,4	132,5
Duct length [m]	Pressure drop [Pa]					
1	0,06	0,21	0,42	0,68	1,00	1,37
2	0,13	0,42	0,84	1,37	2,00	2,73
3	0,19	0,63	1,26	2,05	3,00	4,10
4	0,26	0,84	1,67	2,74	4,01	5,47
5	0,32	1,05	2,09	3,42	5,01	6,84
6	0,39	1,26	2,51	4,11	6,01	8,20
7	0,45	1,47	2,93	4,79	7,01	9,57
8	0,51	1,68	3,35	5,47	8,01	10,94
9	0,58	1,89	3,77	6,16	9,01	12,31
10	0,64	2,10	4,19	6,84	10,02	13,67
11	0,71	2,31	4,61	7,53	11,02	15,04
12	0,77	2,51	5,02	8,21	12,02	16,41
13	0,83	2,72	5,44	8,90	13,02	17,78
14	0,90	2,93	5,86	9,58	14,02	19,14
15	0,96	3,14	6,28	10,26	15,02	20,51
16	1,03	3,35	6,70	10,95	16,03	21,88
17	1,09	3,56	7,12	11,63	17,03	23,25
18	1,16	3,77	7,54	12,32	18,03	24,61
19	1,22	3,98	7,96	13,00	19,03	25,98
20	1,28	4,19	8,37	13,69	20,03	27,35

# EASYFLEX®

## Technical data sheet connector with integrated rubber gaskets, round $\varnothing$ 125 mm - G0013122

### DESCRIPTION

The unique coupling system ensures an almost perfect airtightness. The connector is equipped with two integrated double rubber seals.

Thanks to these seals, the Easyflex® air duct system qualifies for airtightness class D, meaning the system is three times less liable to leak than class C.

The round connector  $\varnothing$  125 mm can be used to couple:

- Round duct  $\varnothing$  125 mm
- Concrete duct  $\varnothing$  125 mm
- All accessories  $\varnothing$  125 mm

The coupling can be reinforced with PVC tape [66014115].



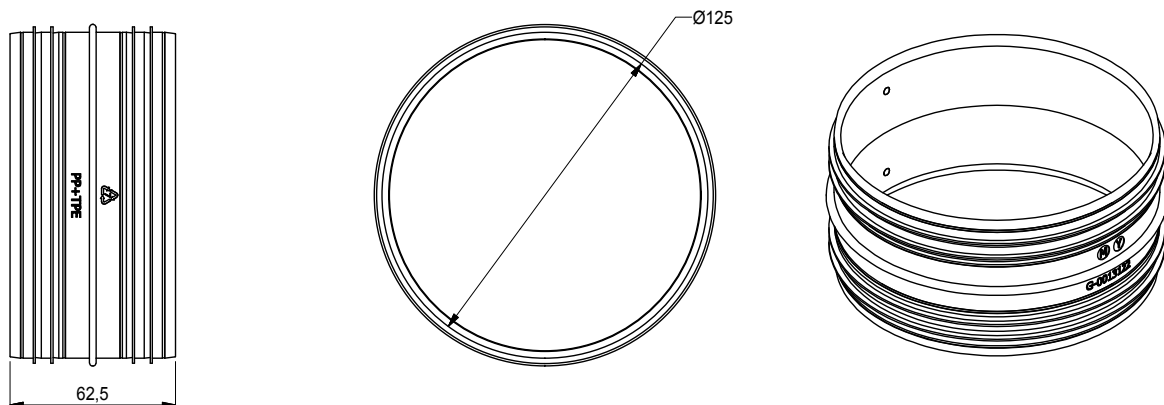
Connector with integrated rubber gaskets, round  $\varnothing$  125 mm - G0013122

### PRODUCT CHARACTERISTICS

- Made of polypropylene
- Rubber sealing: TPE [ThermoPlastic Elastomer]
- Best airtightness class D [[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: G0013122  
Dimensions: 125 x 62,5 mm  
Packaging: 50 pieces per box



# EASYFLEX®

## Technical data sheet valve connection Ø 125 mm - G0013117

### DESCRIPTION

You can make seamless connections between RENSON® design extraction louvres or SQair valves and valve connectors in an Easyflex® air duct system. Valve connectors come in two diameters: Ø 80 mm in-line connectors for spaces with an extraction air flow rate  $\leq 50 \text{ m}^3/\text{h}$  and Ø 125 mm for spaces with an extraction air flow rate  $\geq 50 \text{ m}^3/\text{h}$ .

You can connect extraction grills directly to the valve transits, if they are built into a Gyproc wall. If the extraction louver is fitted in a vaulted surface, you can use a connector that you can saw along its length.

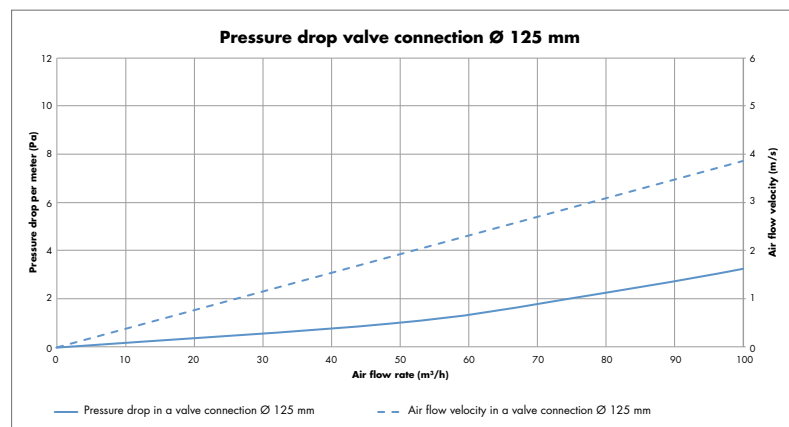
You can also use valve connectors as a connecting piece to join flat, oval ducts to round ducts.



Valve connection Ø 125 mm - G0013117

### PRODUCT CHARACTERISTICS

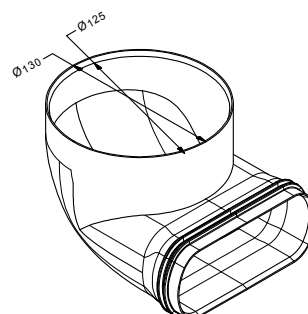
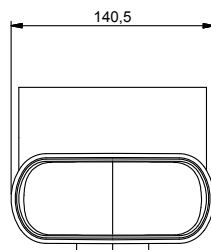
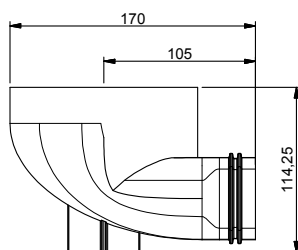
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013117  
 Dimensions: 170 x 140 x 114 mm  
 Packaging: 20 pieces per box

Type of accessory	Valve connection Ø 125 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	0,83	1,67	2,50
Pressure drop [Pa]	0,33	1,05	2,05



# EASYFLEX®

## Technical data sheet double valve connection $\varnothing$ 125 mm - G0013118

### DESCRIPTION

You can make seamless connections between RENSON® design extraction louvres and valve connectors in an Easyflex® air duct system. Double valve connectors are used for spaces requiring high air flow rates.

You can connect extraction grills directly to the valve transits, if they are built into a Gyproc wall. If the extraction louver is fitted in a vaulted structure, you use a connecting piece that can be sawn in its length.

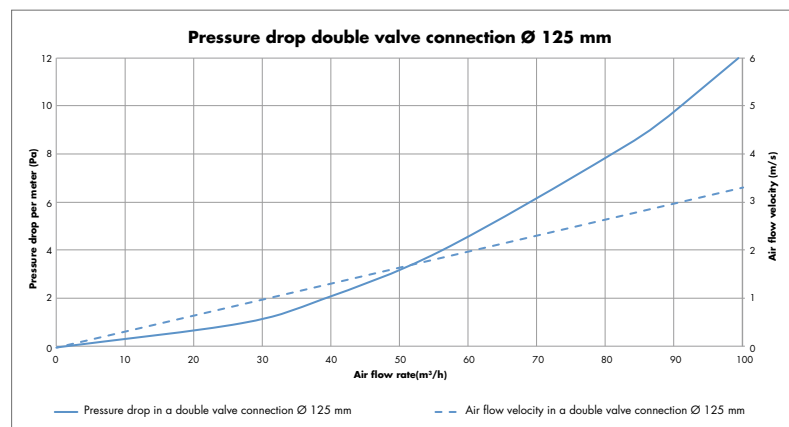
You can also use a double valve connection as a connecting piece to join flat, oval ducts to round ducts.



Double valve connection  $\varnothing$  125 mm - G0013118

### PRODUCT CHARACTERISTICS

- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

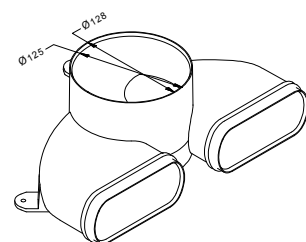
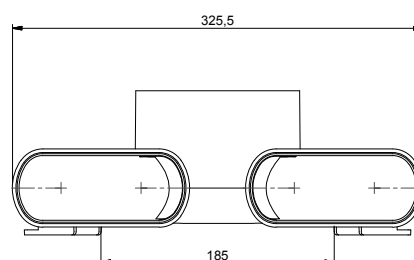
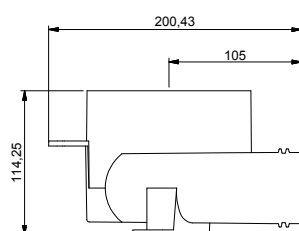


### PACKAGING

Art. No.: G0013118  
 Dimensions: 200 x 325 x 114 mm  
 Packaging: 10 pieces per box

Type of accessory	Double valve connection $\varnothing$ 125 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	0,97	1,93	2,90
Pressure drop [Pa]	0,87	3,23	6,94

Attention: values per flat oval duct



# EASYFLEX®

## Technical data sheet adaptor flat to round - G0013124

### DESCRIPTION

You can make a transition connection between the oval and round duct by using an in-line connector. You can use Ø 80 mm in-line connectors for spaces with an extraction air flow rate  $\leq 50 \text{ m}^3/\text{h}$  and Ø 125 mm for spaces with an extraction air flow rate  $\geq 50 \text{ m}^3/\text{h}$ .

You can connect extraction grills directly to in-line connectors, if they are built into a Gyproc wall.

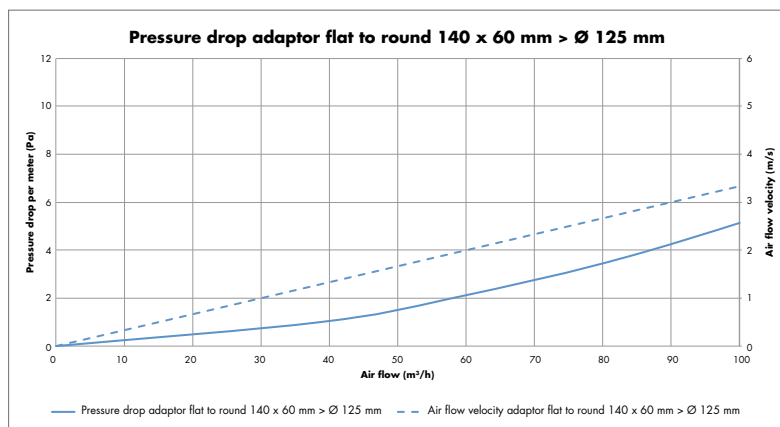
And you can use in-line connectors to join flat, oval ducts to round ducts.



Adaptor flat to round  
140 x 60 mm > Ø 125 mm - G0013124

### PRODUCT CHARACTERISTICS

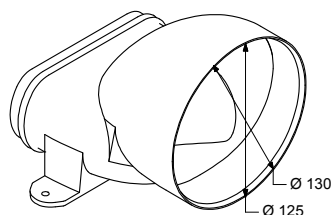
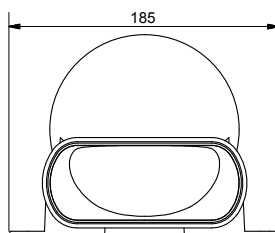
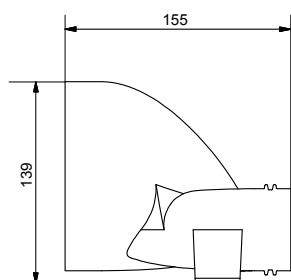
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013124  
Dimensions: 155 x 185 x 139 mm  
Packaging: 20 pieces per box

Type of accessory	Adaptor flat to round Ø 125 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	0,83	1,67	2,50
Pressure drop [Pa]	0,48	1,55	3,10





# EASYFLEX®

## Technical data sheet straight double adaptor - G0013141

### DESCRIPTION

A connection can be made from two flat, oval channels to a round channel using a straight adaptor piece  $\varnothing 125$  mm for areas with an extraction flow  $> 50$  m<sup>3</sup>/h.

The extraction grids can be coupled directly to the straight adaptor if incorporated in a plasterboard wall.

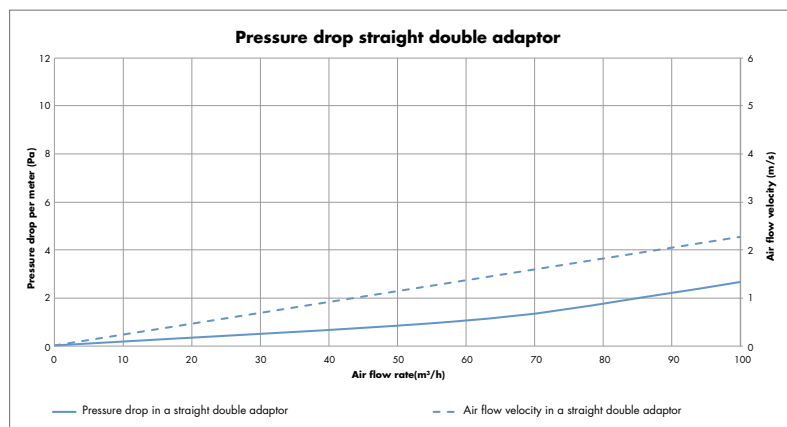
The adaptors may also be used as a transition piece between the flat oval ducts and the round ducts.



Straight double adaptor  
2 x 140 x 60 mm x  $\varnothing 125$  mm -  
G0013141

### PRODUCT CHARACTERISTICS

- Made of HDPE RAL 9002
- Anti-static
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

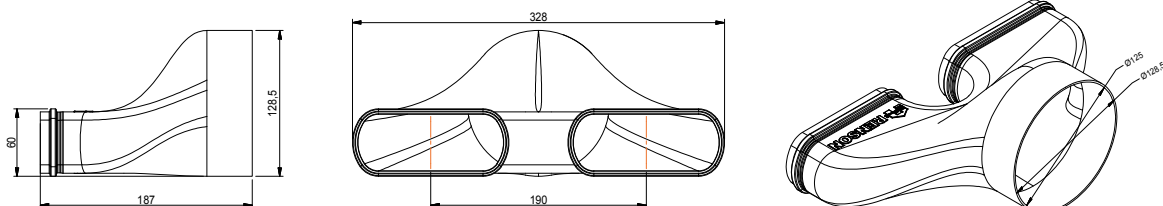


### PACKAGING

Art. No.: G0013141  
Dimensions: 187 x 320 x 129 mm  
Packaging: 12 pieces per box

Type of accessory	Straight double adaptor $\varnothing 125$ mm		
Air flow rate [m <sup>3</sup> /h]	25	50	75
Air flow velocity [m/s]	0,22	0,76	1,57
Pressure drop [Pa]	0,57	1,13	1,70

Attention: values per flat oval duct



# EASYFLEX®

## Technical data sheet round duct Ø 80 mm - G0013131

### DESCRIPTION

Round ducts are usually used on vertical lengths up to the ventilation system.  
We recommend an 80 mm diameter for spaces with an air flow rate of < 50 m³/h.

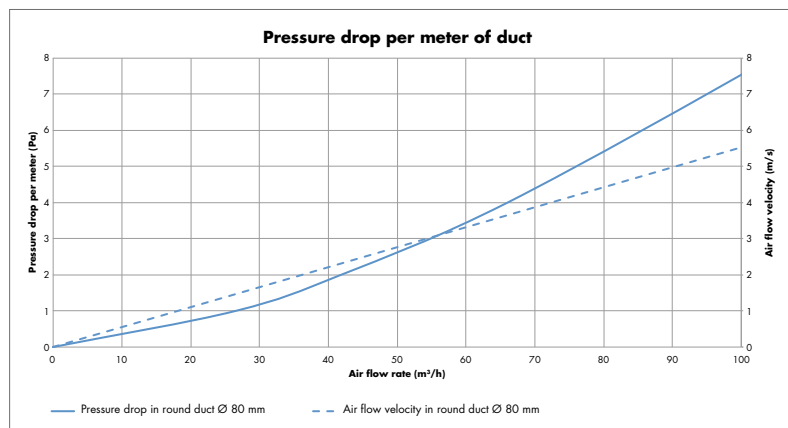
The length of the concrete duct [G0013133] is 250 mm.



Round duct Ø 80 mm - G0013131

### PRODUCT CHARACTERISTICS

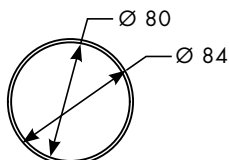
- Made of PVC RAL 9002
- Anti-static
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013131  
 Diameter: 80 mm  
 Length: 3 m  
 UV-protected: Wrapped in foil  
 End caps: Every duct is carefully sealed with end caps

Type of duct	Round duct Ø 80 mm					
	Air flow velocity [m/s]	0,50	1,00	1,50	2,00	2,50
Air flow rate [m³/h]	9,05	18,10	27,14	36,19	45,24	54,29
Duct length [m]	Pressure drop [Pa]					
1	0,20	0,56	1,04	1,60	2,25	2,97
2	0,39	1,12	2,07	3,21	4,50	5,94
3	0,59	1,68	3,11	4,81	6,75	8,91
4	0,78	2,24	4,15	6,42	9,00	11,88
5	0,98	2,80	5,18	8,02	11,26	14,85
6	1,17	3,36	6,22	9,62	13,51	17,82
7	1,37	3,92	7,25	11,23	15,76	20,79
8	1,56	4,48	8,29	12,83	18,01	23,75
9	1,76	5,04	9,33	14,44	20,26	26,72
10	1,95	5,60	10,36	16,04	22,51	29,69
11	2,15	6,16	11,40	17,65	24,76	32,66
12	2,34	6,72	12,44	19,25	27,01	35,63
13	2,54	7,28	13,47	20,85	29,27	38,60
14	2,74	7,84	14,51	22,46	31,52	41,57
15	2,93	8,40	15,55	24,06	33,77	44,54
16	3,13	8,96	16,58	25,67	36,02	47,51
17	3,32	9,52	17,62	27,27	38,27	50,48
18	3,52	10,08	18,65	28,87	40,52	53,45
19	3,71	10,64	19,69	30,48	42,77	56,42
20	3,91	11,20	20,73	32,08	45,02	59,39



# EASYFLEX®

## Technical data sheet connector with integrated rubber gaskets, round Ø 80 mm - G0013121

### DESCRIPTION

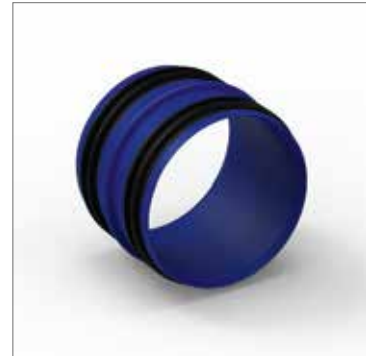
The unique coupling system ensures an almost perfect airtightness. The connector is equipped with two integrated double rubber seals.

Thanks to these seals, the Easyflex® air duct system qualifies for airtightness class D, meaning the system is three times less liable to leak than class C.

The round connector Ø 80 mm can be used to couple:

- Round duct Ø 80 mm [G0013131]
- Concrete duct Ø 80 mm [G0013133]
- All accessories Ø 80 mm

The coupling can be reinforced with PVC tape [66014115].



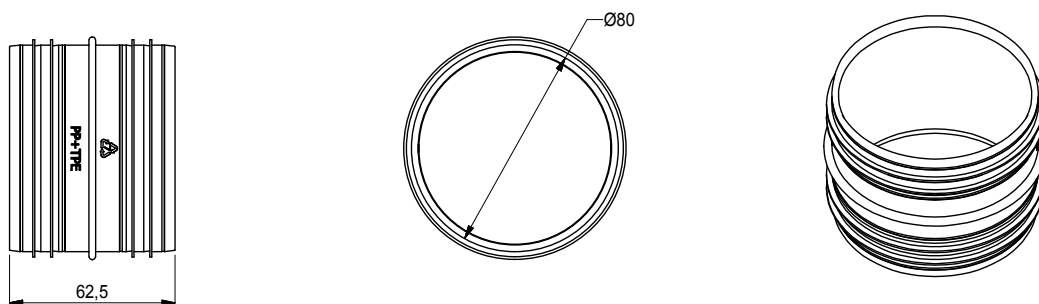
Connector with integrated rubber gaskets, round Ø 80 mm - G0013121

### PRODUCT CHARACTERISTICS

- Made of polypropylene
- Rubber sealing: TPE [ThermoPlastic Elastomer]
- Best airtightness class D [[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: G0013121  
Dimensions: 80 x 62,5 mm  
Packaging: 100 pieces per box



# EASYFLEX®

## Technical data sheet valve connection Ø 80 mm - G0013116

### DESCRIPTION

You can make seamless connections between RENSON® design extraction louvres or SQair valves and valve connectors in an Easyflex® air duct system. Valve connectors come in two diameters: Ø 80 mm in-line connectors for spaces with an extraction air flow rate  $\leq 50 \text{ m}^3/\text{h}$  and Ø 125 mm for spaces with an extraction air flow rate  $\geq 50 \text{ m}^3/\text{h}$ .

You can connect extraction grills directly to the valve transits, if they are built into a Gyproc wall. If the extraction louver is fitted in a vaulted surface, you can use a connector that you can saw along its length.

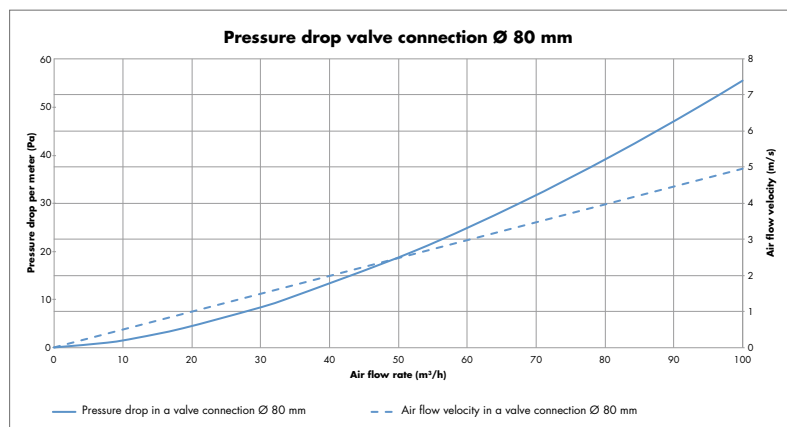
You can also use valve connectors as a connecting piece to join flat, oval duct to round ducts.



Valve connection Ø 80 mm - G0013116

### PRODUCT CHARACTERISTICS

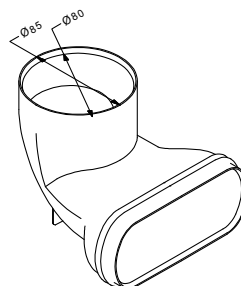
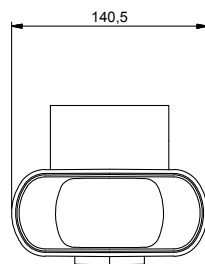
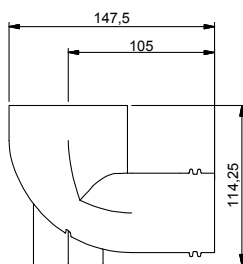
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013116  
 Dimensions: 147 x 140 x 114 mm  
 Packaging: 20 pieces per box

Type of accessory	Valve connection Ø 80 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	1,24	2,48	3,72
Pressure drop [Pa]	6,28	18,68	35,33



# EASYFLEX®

## Technical data sheet adaptor flat to round - G0013123

### DESCRIPTION

You can make a transition connection between an oval and round duct by using an in-line connector. You can use Ø 80 mm in-line connectors for spaces with an extraction air flow rate  $\leq 50 \text{ m}^3/\text{h}$  and Ø 125 mm for spaces with an extraction air flow rate  $\geq 50 \text{ m}^3/\text{h}$ .

You can connect extraction grills directly to in-line connectors, if they are built into a Gyproc wall.

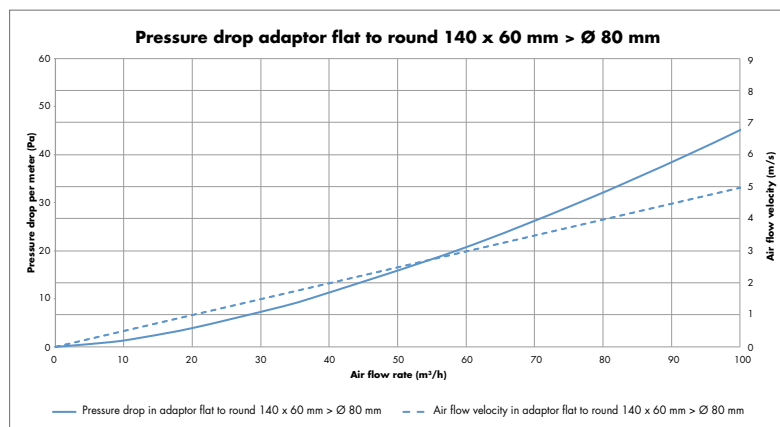
And you can use in-line connectors to join flat, oval ducts to round ducts.



Adaptor flat to round  
140 x 60 mm > Ø 80 mm - G0013123

### PRODUCT CHARACTERISTICS

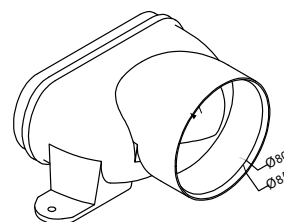
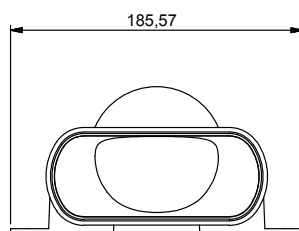
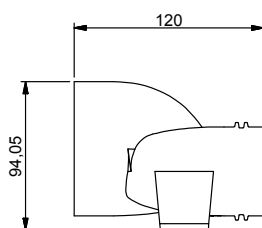
- Made of polypropylene RAL 9002
- Anti-static and antibacterial
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013123  
Dimensions: 120 x 185 x 94 mm  
Packaging: 20 pieces per box

Type of accessory	Adaptor flat to round Ø 80 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	1,24	2,48	3,72
Pressure drop [Pa]	5,49	15,72	29,11



# EASYFLEX®

## Technical data sheet concrete duct kit $\varnothing$ 80 mm - G0013146

### DESCRIPTION

The RENSON® design extraction louvres and the SQair extractor vents can be seamlessly connected to the right-angled concrete duct kit of the EASYFLEX® air ducting system. These kits are available in two diameters:  $\varnothing$  80 mm for rooms with an extraction airflow of  $\leq 50 \text{ m}^3/\text{h}$  and  $\varnothing$  125 mm for rooms with an extraction airflow of  $\geq 50 \text{ m}^3/\text{h}$ .

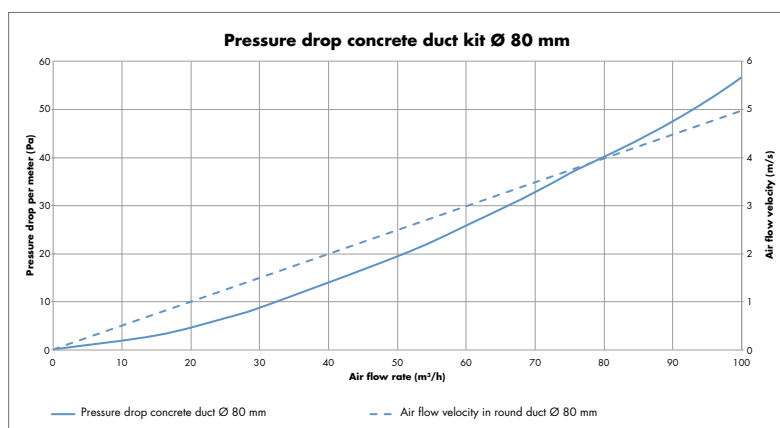
This concrete duct kit provides extra installation comfort and saves time for the installer.



Concrete duct kit  $\varnothing$  80 mm - G0013146

### PRODUCT CHARACTERISTICS

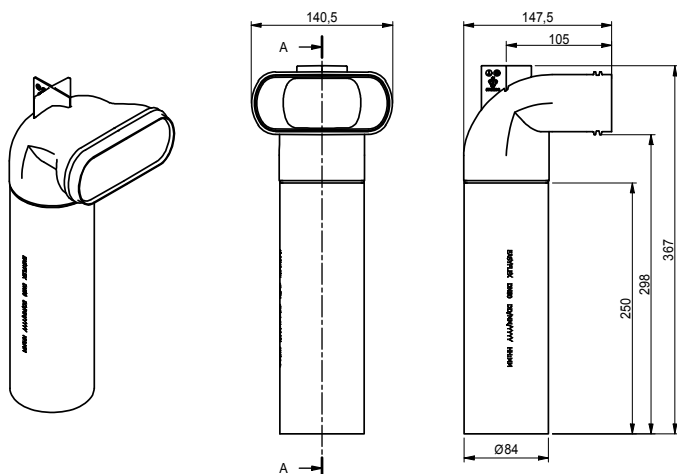
- Made of PVC RAL 9002
- Antistatic and antibacterial
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low airflow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013146 (80 mm)  
 Dimensions: 367 x 140,5 x 147,5 mm  
 Packaging: 16 kits per package

Type of accessory	Concrete duct kit $\varnothing$ 80 mm		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	1,24	2,48	3,72
Pressure drop [Pa]	6,51	19,33	36,54



# EASYFLEX®

## Technical data sheet concrete duct kit $\varnothing$ 125 mm - G0013147

### DESCRIPTION

The RENSON® design extraction louvres and the SQair extractor vents can be seamlessly connected to the right-angled concrete duct kit of the EASYFLEX® air ducting system. These kits are available in two diameters:  $\varnothing$  80 mm for rooms with an extraction airflow of  $\leq 50 \text{ m}^3/\text{h}$  and  $\varnothing$  125 mm for rooms with an extraction airflow of  $\geq 50 \text{ m}^3/\text{h}$ .

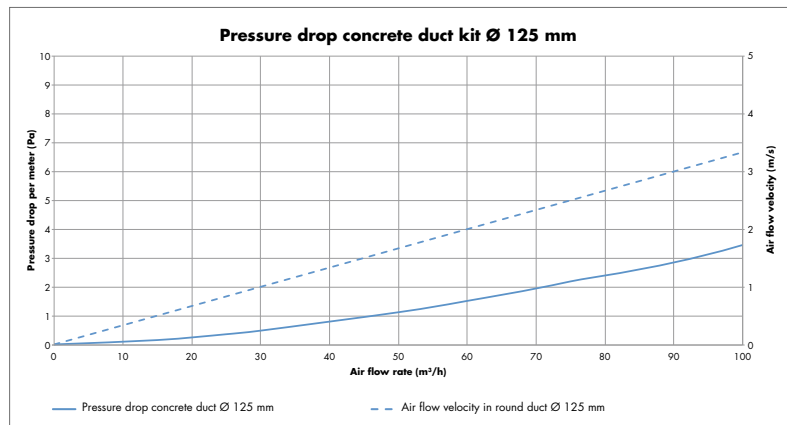
This concrete duct kit provides extra installation comfort and saves time for the installer.



Concrete duct kit  $\varnothing$  125 mm - G0013147

### PRODUCT CHARACTERISTICS

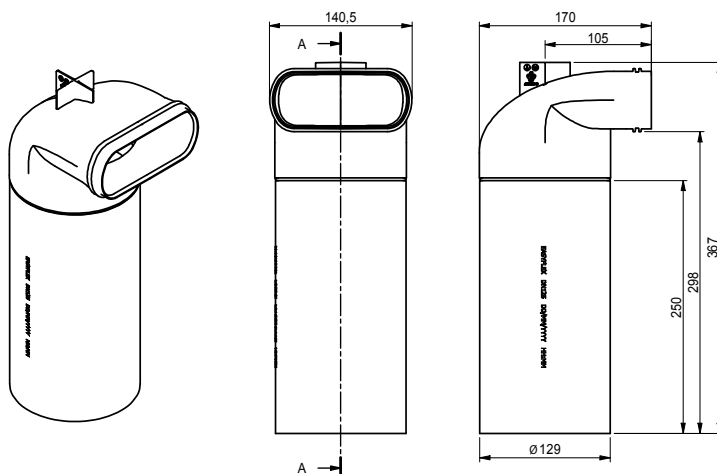
- Made of PVC RAL 9002
- Antistatic and antibacterial
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low airflow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013147 [125 mm]  
 Dimensions: 367 x 140,5 x 170 mm  
 Packaging: 10 kits per package

Type of accessory	Concrete duct kit $\varnothing$ 125 mm		
Air flow rate [ $\text{m}^3/\text{h}$ ]	25	50	75
Air flow velocity [m/s]	0,84	1,67	2,50
Pressure drop [Pa]	0,35	1,12	2,18



# EASYFLEX®

## Technical data sheet cross piece pivot - G0013145

### DESCRIPTION

The cross piece is included in the Easyflex range. This cross piece allows Easyflex ducts to cross and to maintain a height of 65 mm.

The pivoting feature ensures you can determine the angle in which the lines cross each other for yourself. In this way, no extra distances and turns are required to meet a 90° angle. With the pivot cross piece, it is possible to bridge angles from 45° to 135°.

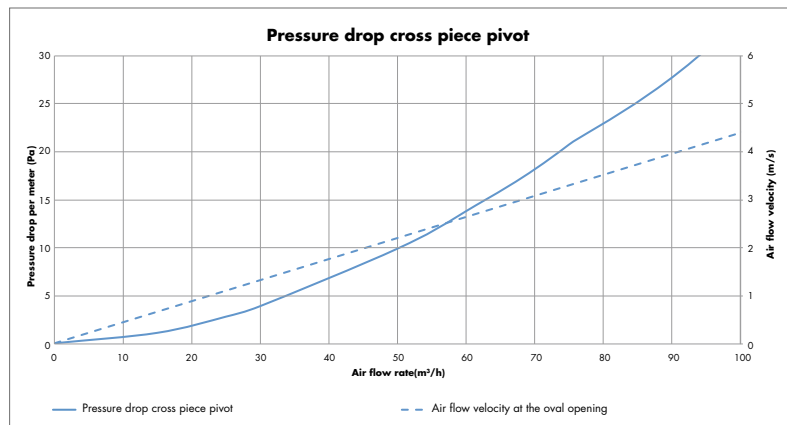
Bridging obstacles up to 30 mm in height is also possible with this piece. Support with 'pur' is recommended.



Cross piece pivot - G0013145

### PRODUCT CHARACTERISTICS

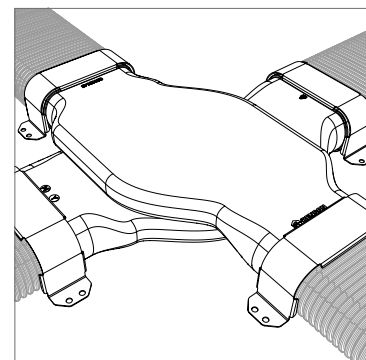
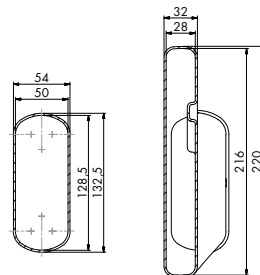
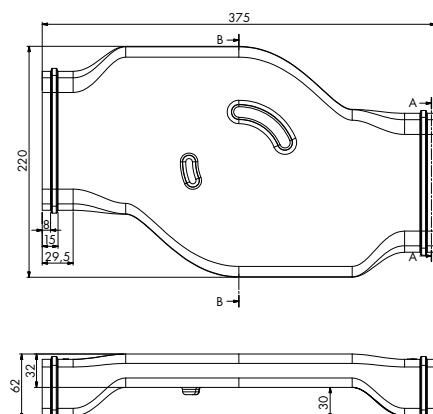
- Made of HDPE RAL 9002
- Anti-static
- Best airtightness class D  
([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean



### PACKAGING

Art. No.: G0013145  
 Set contains: 2 x bridge piece (together they form the cross piece)  
 4 x fastening bracket (G0013137)  
 Dimensions: 385 x 230 x 145 mm

Type of accessory	Cross piece pivot		
Air flow rate [m³/h]	25	50	75
Air flow velocity [m/s]	1,10	2,20	3,30
Pressure drop [Pa]	2,78	9,88	20,74





# EASYFLEX®

## Technical data sheet distribution box angled 160 mm - G0013135

### DESCRIPTION

The distribution box is part of the Easyflex® range. This distribution box has an angled main connection of 160 mm and there are up to 6 ducts that can be connected to it.

By joining the distribution box to the supply and extract ducts of a ventilation system D, an easy installation is guaranteed. The Easyflex® ducts can directly be connected to the distribution box by means of the supplied Easyflex® fastening brackets [G0013137].

The limited height of the Easyflex® distribution box makes it easy to recess the box and its ducts in screed, concrete or stud walls or false ceilings.

The distribution box's broad cross section and the tube connections allow high air flow rates at low velocities, which leads to quiet ventilation system operation.



Distribution box angled 160 mm - G0013135

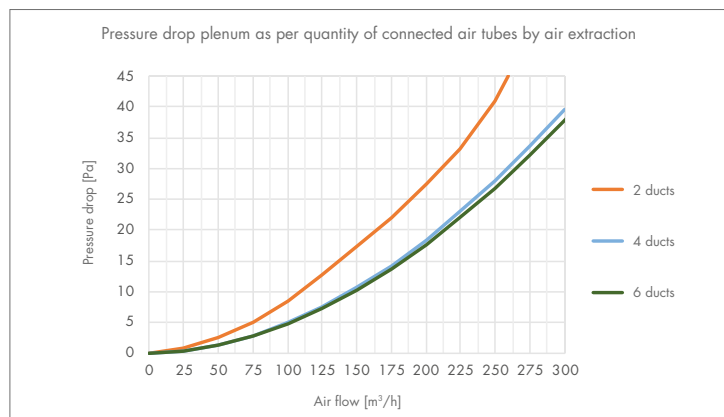
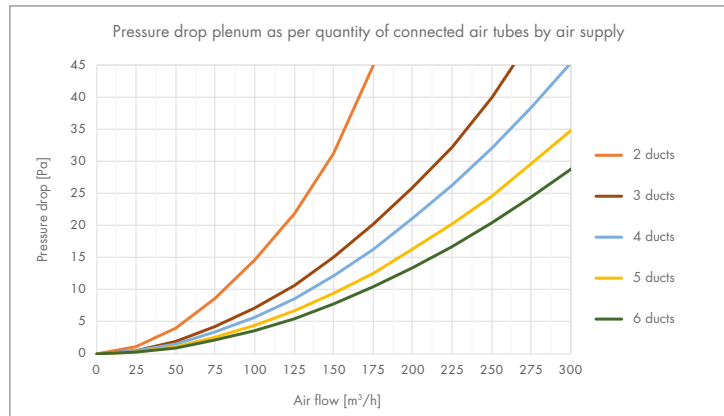
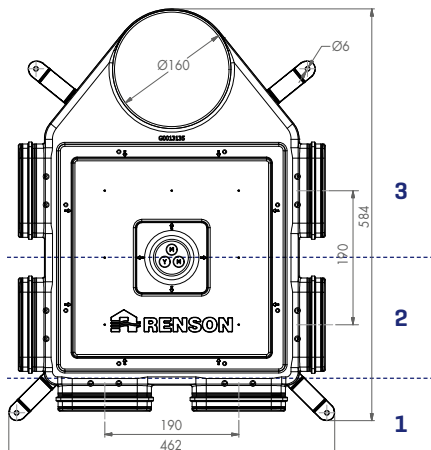
### PRODUCT CHARACTERISTICS

- Made of HDPE RAL 9002
- Anti-static
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: 1 set = 2 x G0013135  
 Set contains: 2 x distribution box [G0013135]  
 12 x fastening bracket [G0013137]  
 Dimensions: 470 x 590 x 190 mm

To limit pressure drop, tubes should be connected in the following order [1 - 2 - 3] if possible.



# EASYFLEX®

## Technical data sheet distribution box 8 connections - G0013136

### DESCRIPTION

The distribution box is part of the Easyflex® range. This distribution box can provide supply using two Easyflex® ducts and can be connected to up to six ducts. In this way, the distribution box can be placed centrally, rather than coupled directly to the main duct.

The two supply lines can be coupled using the double valve connection [G0013118] or the straight double adapter [G0013141].

By joining the distribution box to the supply and extract ducts of a ventilation system D, an easy installation is guaranteed. The Easyflex® ducts can directly be connected to the distribution box by means of the supplied Easyflex® fastening brackets [G0013137].

The limited height of the Easyflex® distribution box makes it easy to recess the box and its ducts in screed, concrete or stud walls or false ceilings.

The distribution box's broad cross section and the tube connections allow high air flow rates at low velocities, which leads to quiet ventilation system operation.



Distribution box 8 connections - G0013136

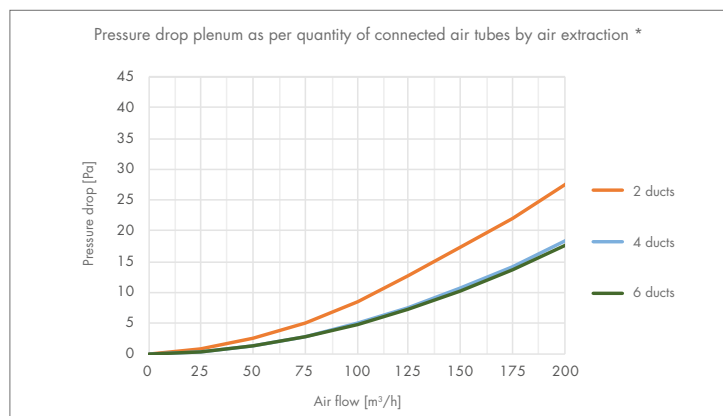
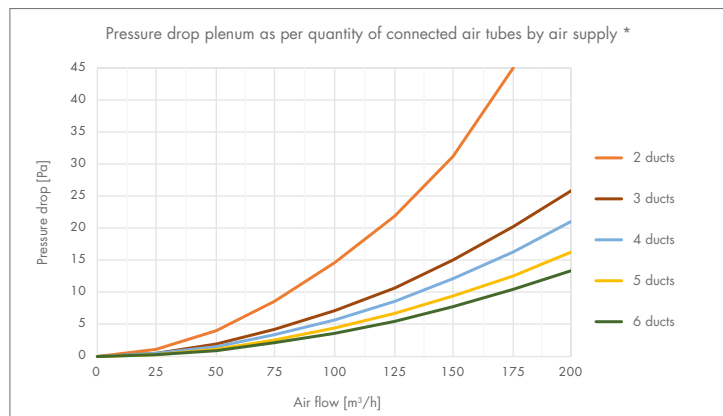
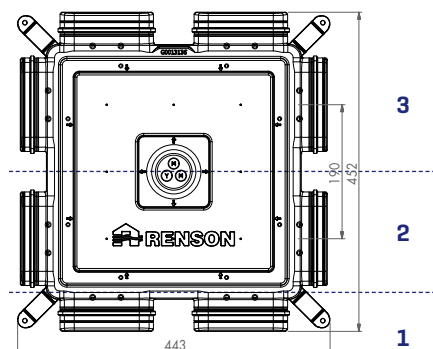
### PRODUCT CHARACTERISTICS

- Made of HDPE RAL 9002
- Anti-static
- Best airtightness class D ([www.eurovent-certification.com](http://www.eurovent-certification.com))
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: 1 set = 2 x G0013136  
 Set contains: 2 x distribution box [G0013136]  
 16 x fastening bracket [G0013137]  
 Dimensions: 443 x 452 x 64 mm

To limit pressure drop, tubes should be connected in the following order [1 - 2 - 3] if possible.



\* Provisional results



# EASYFLEX®

## Technical data sheet distribution box straight 160 mm - G0013140

### DESCRIPTION

The distribution box is part of the Easyflex® range. This distribution box has a straight main connection of 160 mm, and can be connected to up to six ducts.

By joining the distribution box to the supply and extract ducts of a ventilation system D, an easy installation is guaranteed. The Easyflex® ducts can directly be connected to the distribution box by means of the supplied Easyflex® fastening brackets [G0013137].

The limited height of the Easyflex® distribution box makes it easy to recess the box and its ducts in screed, concrete or stud walls or false ceilings.

The distribution box's broad cross section and the tube connections allow high air flow rates at low velocities, which leads to quiet ventilation system operation.



Distribution box straight 160 mm - G0013140

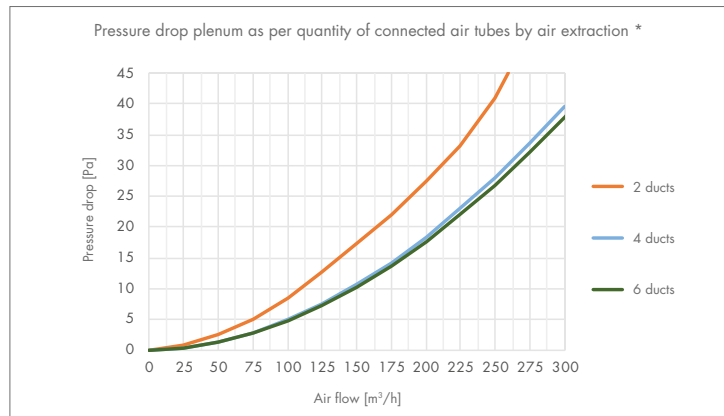
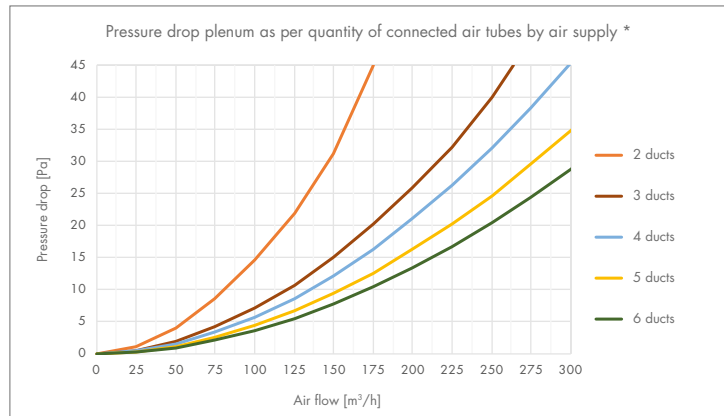
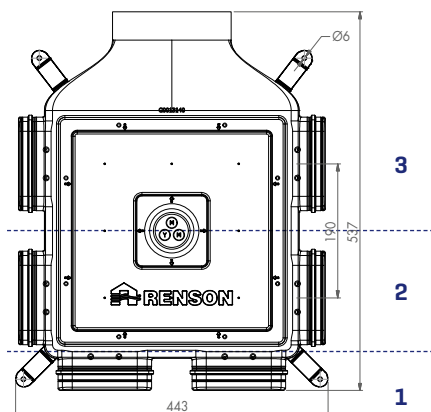
### PRODUCT CHARACTERISTICS

- Made of HDPE RAL 9002
- Anti-static
- Best airtightness class D  
[[www.eurovent-certification.com](http://www.eurovent-certification.com)]
- Smooth inner wall
  - Low air flow resistance
  - Easy to clean

### PACKAGING

Art. No.: 1 set = 2 x G0013140  
 Set contains: 2 x distribution box [G0013140]  
 12 x fastening bracket [G0013137]  
 Dimensions: 470 x 590 x 190 mm

To limit pressure drop, tubes should be connected in the following order [1 - 2 - 3] if possible.



\* Provisional results



# EASYFLEX®

## Technical data sheet inspection hatch - 76050405

### DESCRIPTION

Each distribution box can be transformed into a distribution box with inspection hatch within a few minutes. The screws are included and make sure that the inspection hatch can be installed [opened and closed] in no time at all. It can be built in at the top as at the bottom and is therefore fit for use in screed, concrete, stud walls or false ceilings.

The durable inspection hatch of high quality, allows a permanent access to the Easyflex® air duct system for cleaning and/or inspecting its parts.

The inspection date, the person responsible and all possible remarks can be indicated on the inspection label, so that maintenance can continuously and precisely be followed-up.

Thanks to the sealing foam there is perfect tightness of the air duct system, so that the air flow is optimized.

The inspection hatch can be built-in in:

- Distribution box straight 160 mm [G0013140]
- Distribution box angled 160 mm [G0013135]
- Distribution box 8 connections [G0013136]



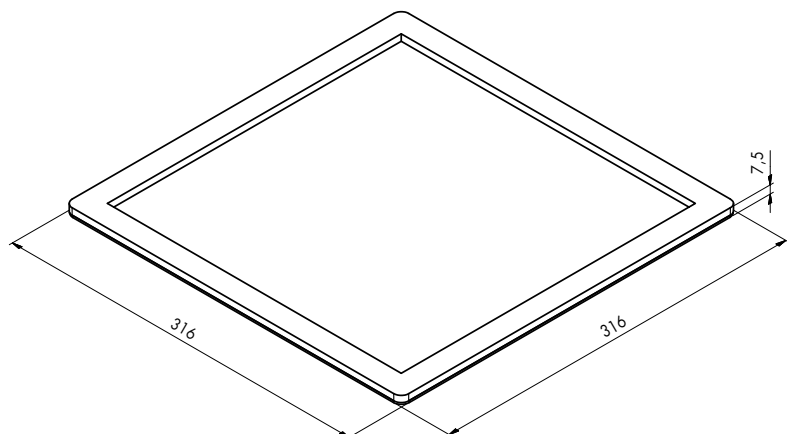
Inspection hatch - 76050405

### PRODUCT CHARACTERISTICS

- Made of galvanized steel
- Sealing foam

### PACKAGING

Art. No.:	76050405
Set contains:	1 x inspection hatch [76050405] 8 x screws 8 x clips
Dimensions:	316 x 316 x 7,5 mm
Packaging:	Per piece



# EASYFLEX®

## Technical data sheet insulation tube 160 mm - 66031400

### DESCRIPTION

The Easyflex insulation tube can be used for insulating the flat oval ducts and is therefore ideal for non-insulated areas.

The low thermal conductivity of the foam ensures the correct surface temperature and thus prevents formation of condensation water. The great water vapor diffusion resistance guarantees this feature throughout the life cycle of the installation, resulting in minimal energy loss and higher efficiency.

The insulation tube is also acoustically damping.

The Easyflex ducts that can be insulated with the insulation tube are:

- The flexible Easyflex® duct [G0013110]
- The flat oval duct Easyflex® [G0013126]



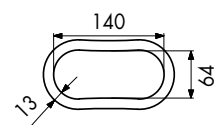
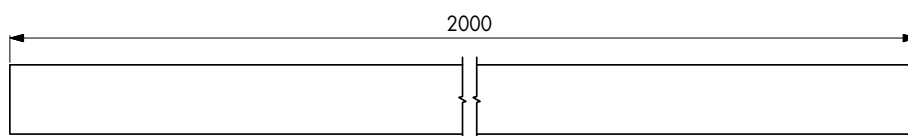
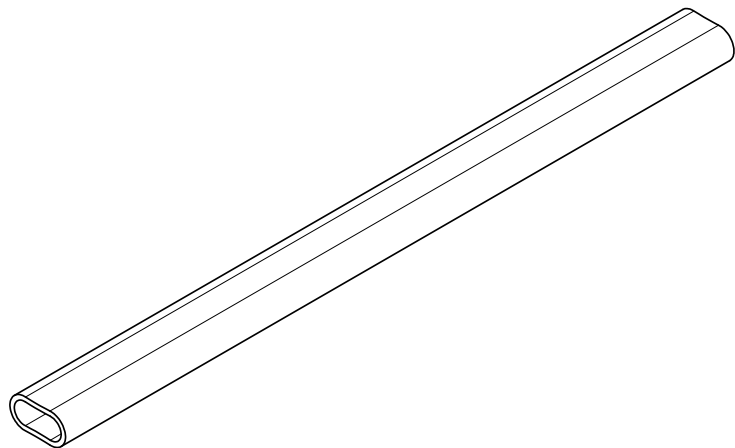
Insulation tube - 66031400

### PRODUCT CHARACTERISTICS

- Made of elastomeric foam
- Thermal conductivity: 0,034 W/mK at 0°C [EN ISO 8497]
- Temperature range: -30 to 100°C [EN 14707]

### PACKAGING

Art. No.: 66031400  
Dimensions: 140 x 60 x 13 mm  
Length: 2000 mm  
Packaging: Per piece



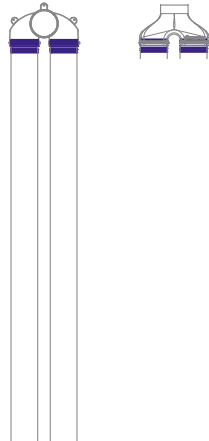
# EASYFLEX®

## Technical data sheet Easyflex® for multiple rooms

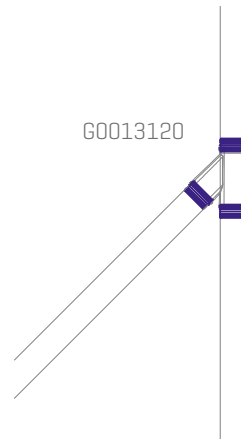
### 2 ROOMS

Ø 125 → 2 x [140 x 60]

G0013118 or G0013141



140 x 60 → 2 x [140 x 60]

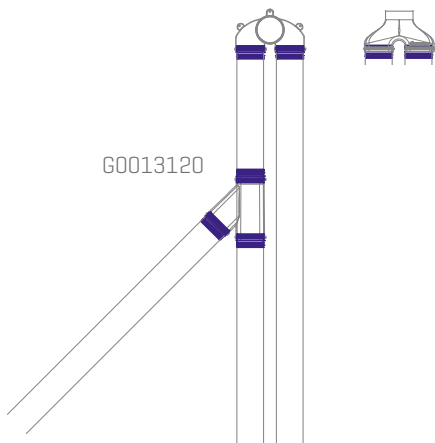


G0013120

### 3 ROOMS

Ø 125 → 3 x [140 x 60]

G0013118 or G0013141

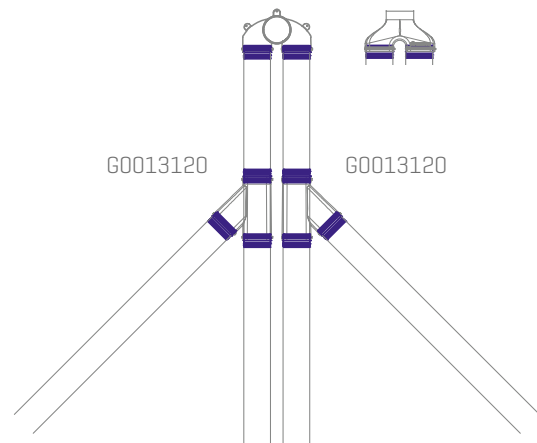


G0013120

### 4 ROOMS

Ø 125 → 4 x [140 x 60]

G0013118 or G0013141



G0013120

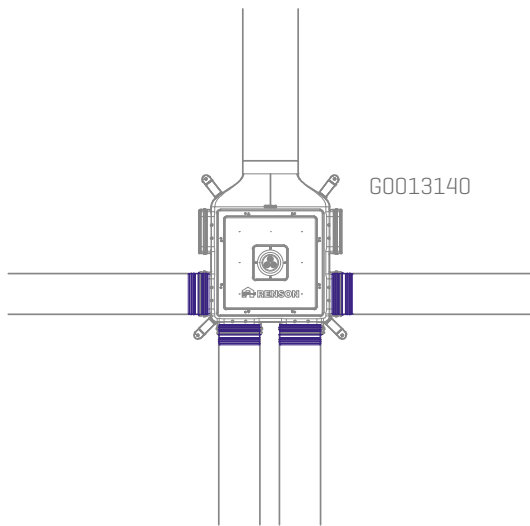
G0013120

# EASYFLEX®

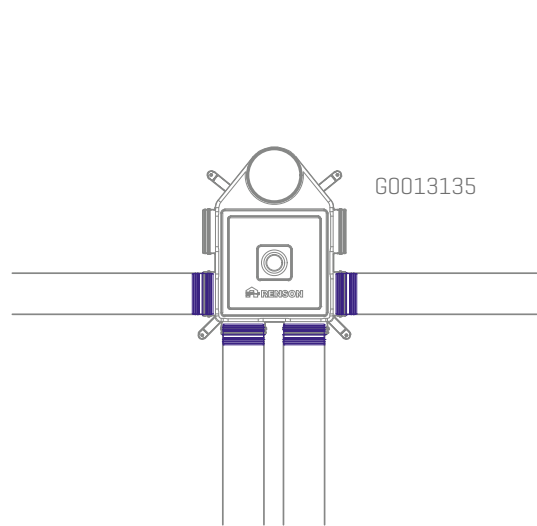
## Technical data sheet Easyflex® for multiple rooms

### 4 to 6 ROOMS

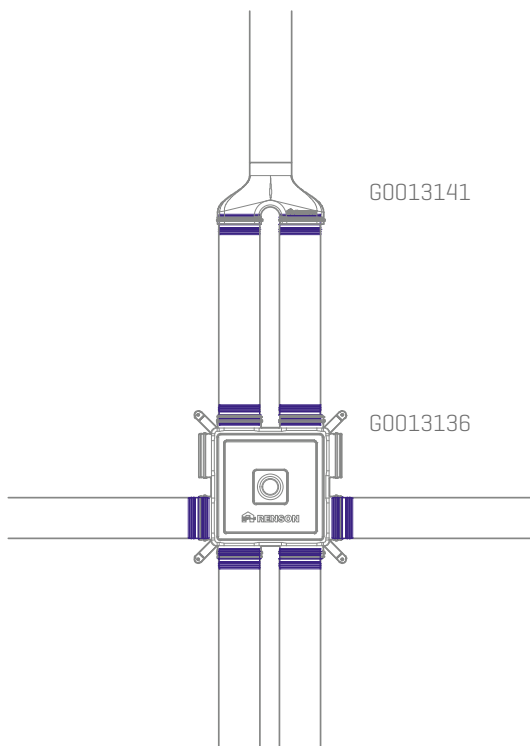
Ø 160 → 4 to 6 x [140 x 60]



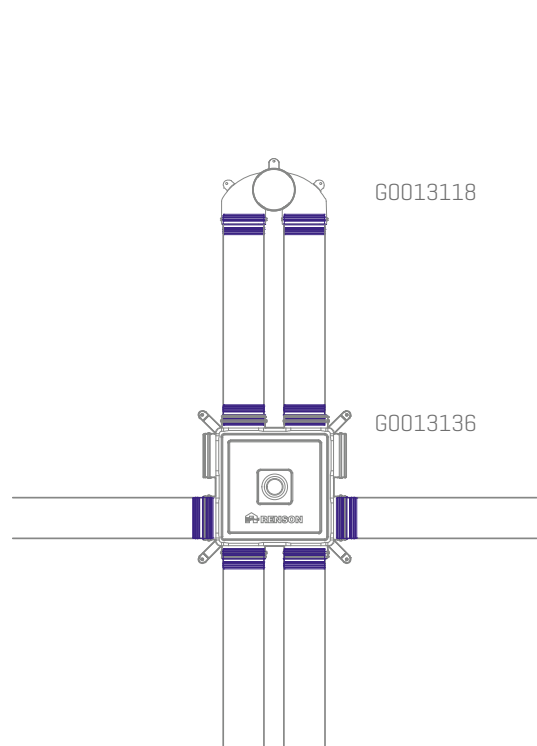
Ø 160 → 4 to 6 x [140 x 60]



Ø 125 → 4 to 6 x [140 x 60]



Ø 125 → 4 to 6 x [140 x 60]







# EASYDUCT

The Easyduct fixed insulated ducts and accompanying accessories can be used to bridge the distance from the blow off or supply of a ventilation system to the roof/wall passage. Especially in non-insulated rooms, it is recommended to use fixed insulated ducts or insulated cables.

## Easyduct insulated EPP tube

**76015009**

Ø150  
1 m  
Black  
Incl. slave



## Easyduct insulated EPP tube

**76015022**

Ø180  
1 m  
Black  
Incl. slave



## Easyduct curve insulated EPP 90°

**76015010**

Ø150  
Black  
Incl. slave  
Can be cut in 2 curves of 45°



## Easyduct curve insulated EPP 90°

**76015023**

Ø180  
Black  
Incl. slave  
Can be cut in 2 curves of 45°



## Easyduct insulated EPP slave

**76015012**

Ø150  
Black



## Easyduct insulated EPP slave

**76015024**

Ø180  
Black





# EASYDUCT

## Technical data sheet insulated fixed ducts



**76050311**  
Ventilation collector insulated EPP,  
8 connections  
[6 x Ø80 + 2 x Ø125] p. 124



**76015012**  
Insulated EPP slave Ø150  
black p. 131



**76050312**  
Ventilation collector insulated EPP,  
2 connections Ø80 p. 125



**76015024**  
Insulated EPP slave Ø180  
black p. 131



**76050313**  
Ventilation collector insulated EPP,  
2 connections Ø125 p. 126



**76015013**  
Coupler XYZ insulated EPP  
[4 x Ø150] p. 132



**76015009**  
Tube insulated EPP Ø150,  
1 meter black [slave included] p. 127



**76015015**  
Set filterbox insulated EPP Ø150 p. 133



**76015022**  
Tube insulated EPP Ø180,  
1 meter black [slave included] p. 128



**76050316**  
Outdoor control valve insulated EPP  
Ø150 p. 134



**76015010**  
Curve insulated EPP 90° Ø150  
black [slave included] p. 129



**76050314**  
Endcap insulated EPP Ø80 p. 135



**76015023**  
Curve insulated EPP 90° Ø180  
black [slave included] p. 130



**76050315**  
Endcap insulated EPP Ø125/150 p. 135

# EASYDUCT

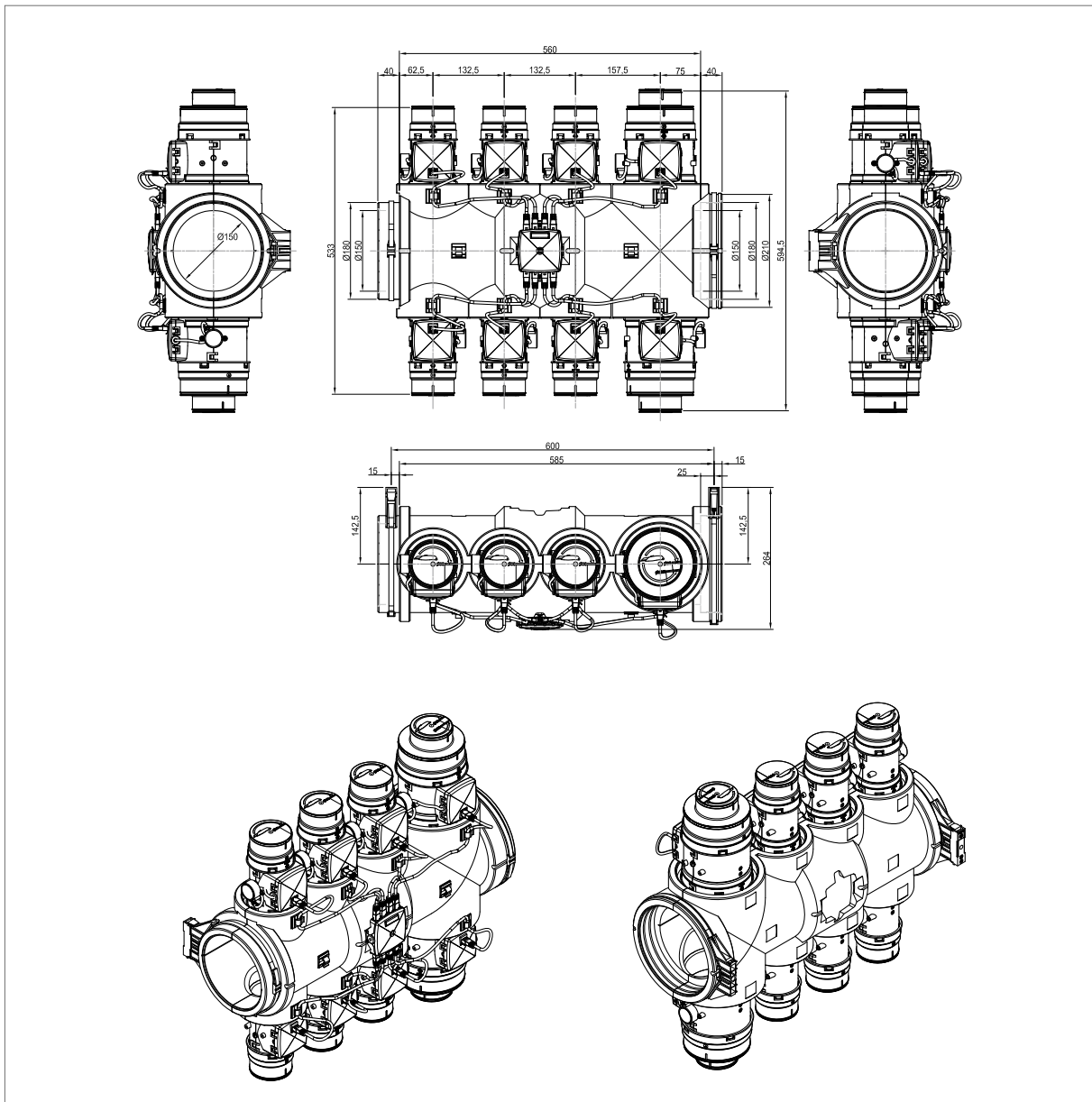
## Technical data sheet ventilation collector insulated EPP, 8 connections - 76050311

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  (thermal conductivity) 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

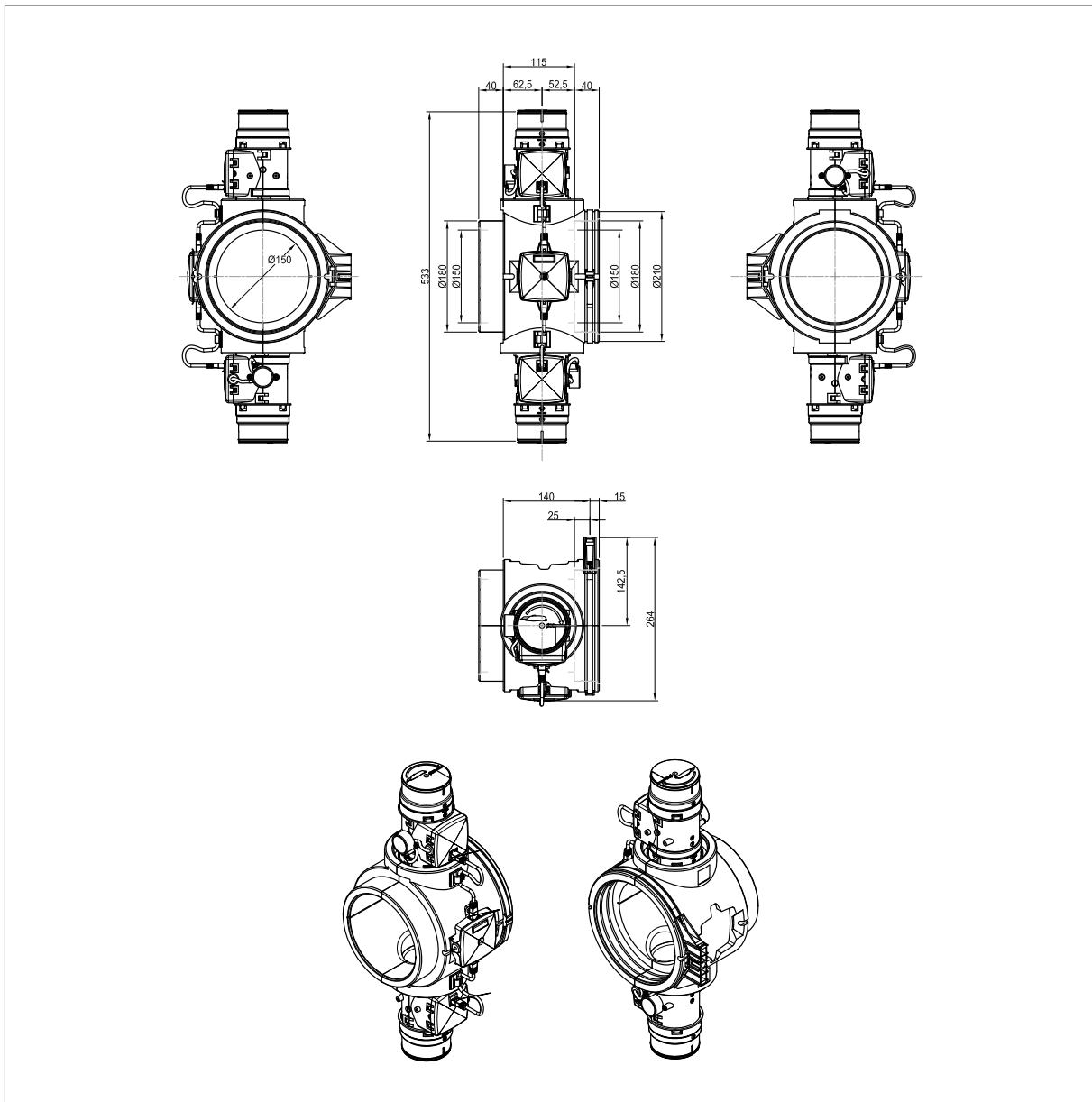
## Technical data sheet ventilation collector insulated EPP, 2 connections Ø80 - 76050312

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  (thermal conductivity) 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

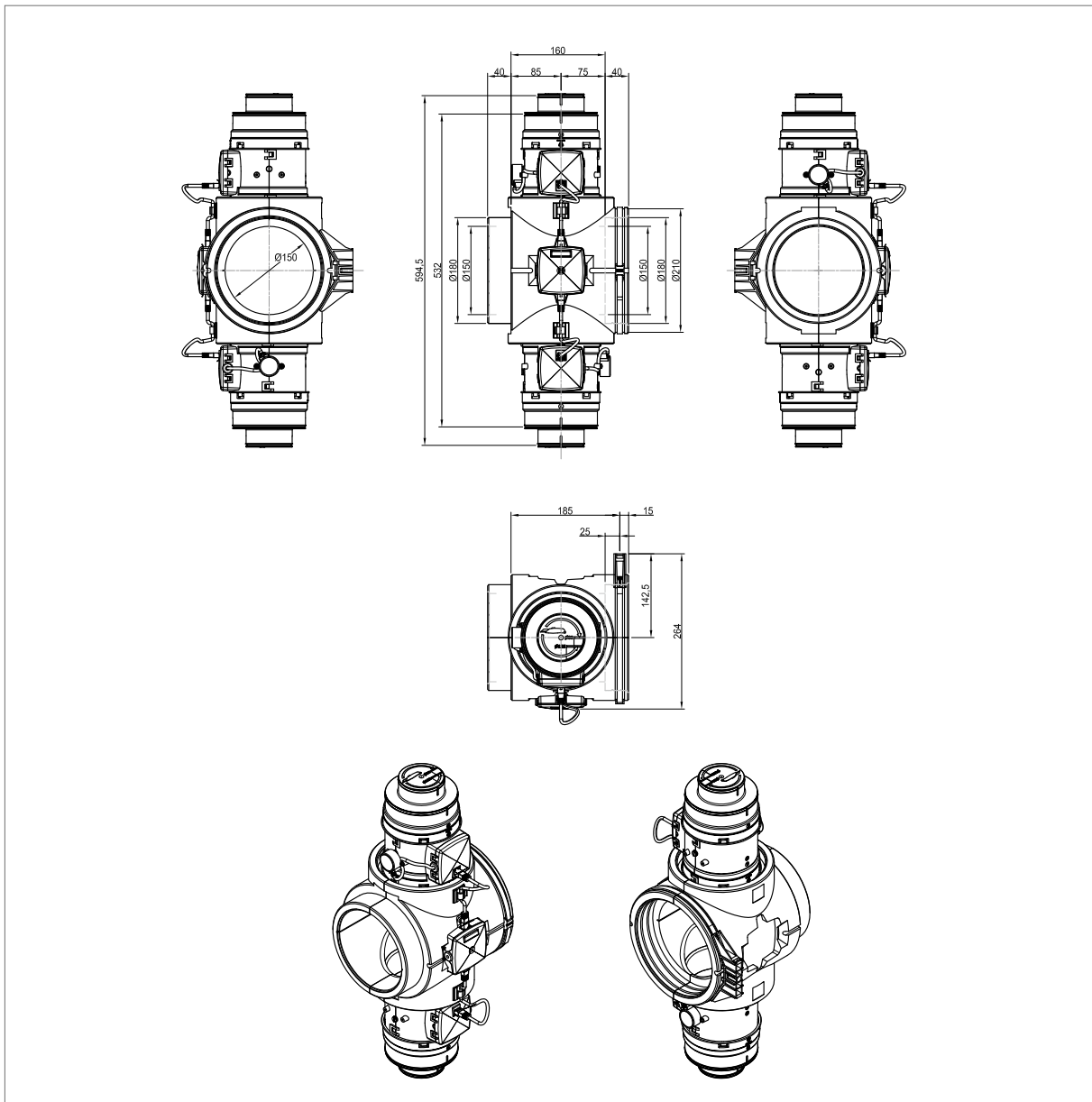
## Technical data sheet ventilation collector insulated EPP, 2 connections Ø125 - 76050313

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS

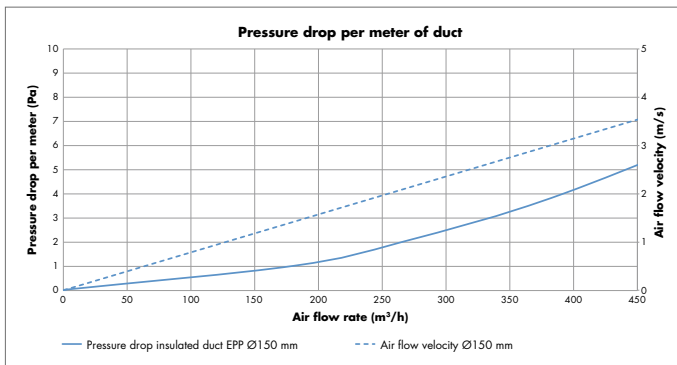


# EASYDUCT

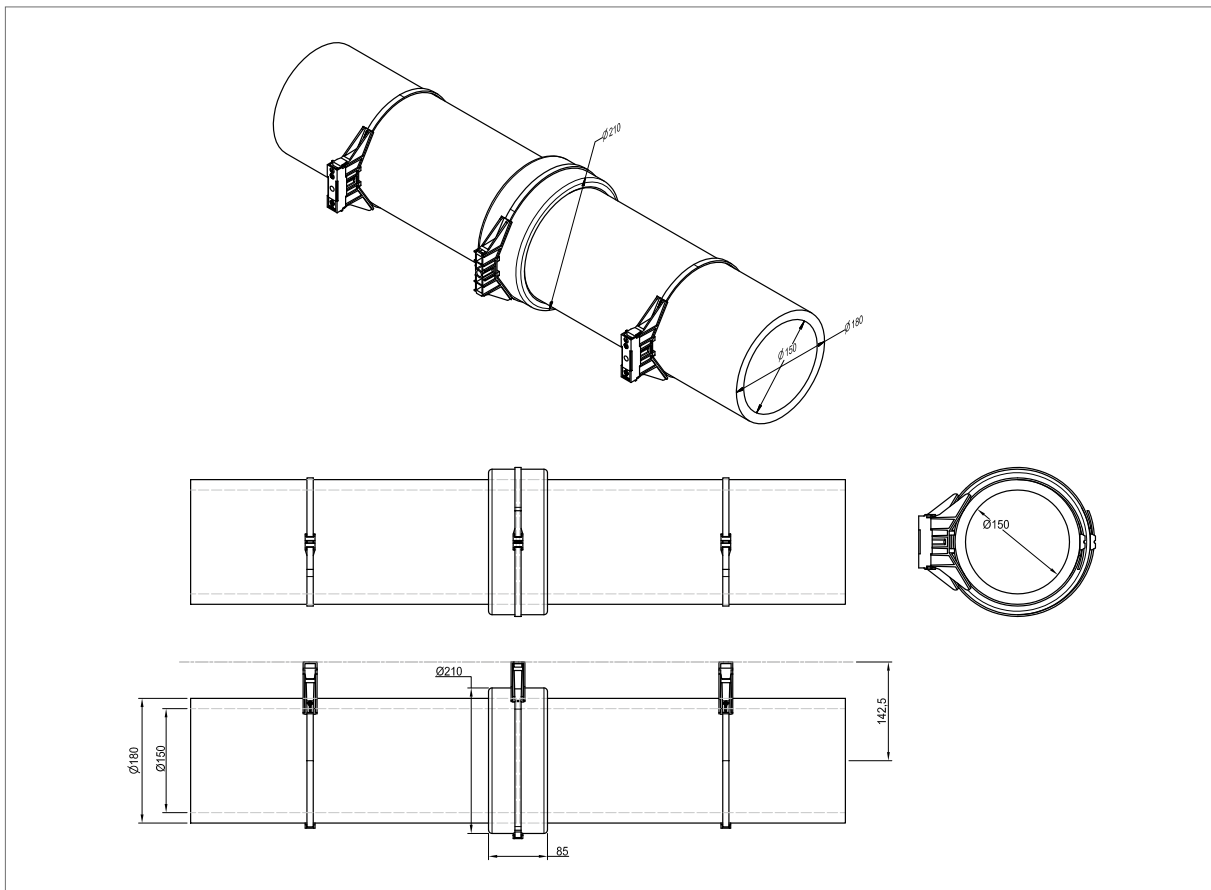
## Technical data sheet tube insulated EPP Ø150 - 76015009

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS

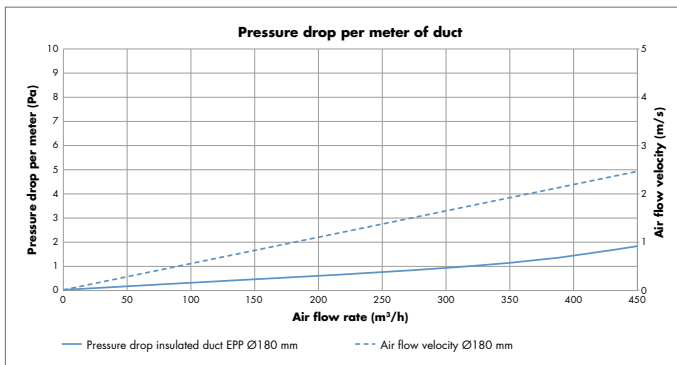


# EASYDUCT

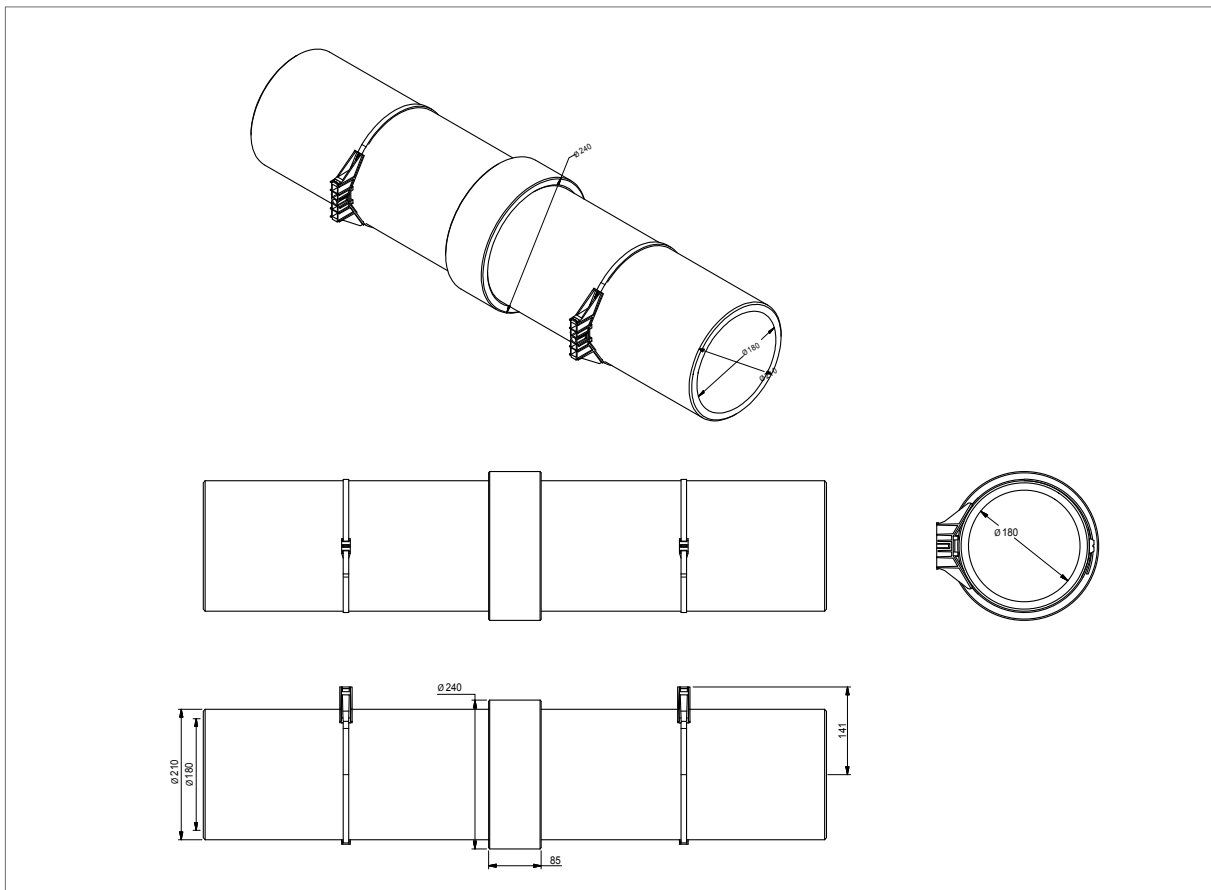
## Technical data sheet tube insulated EPP Ø180 - 76015022

### PRODUCT CHARACTERISTICS

- Inner diameter 180 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



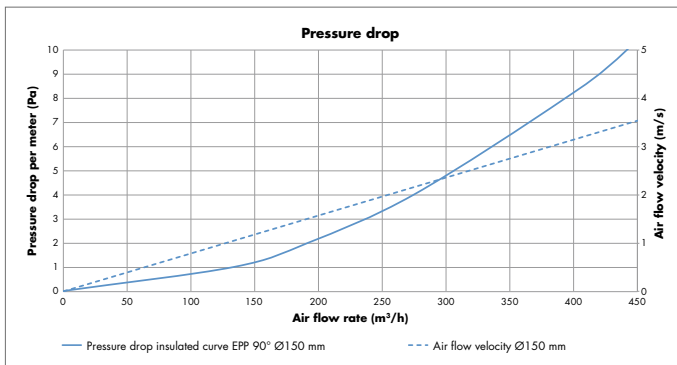


# EASYDUCT

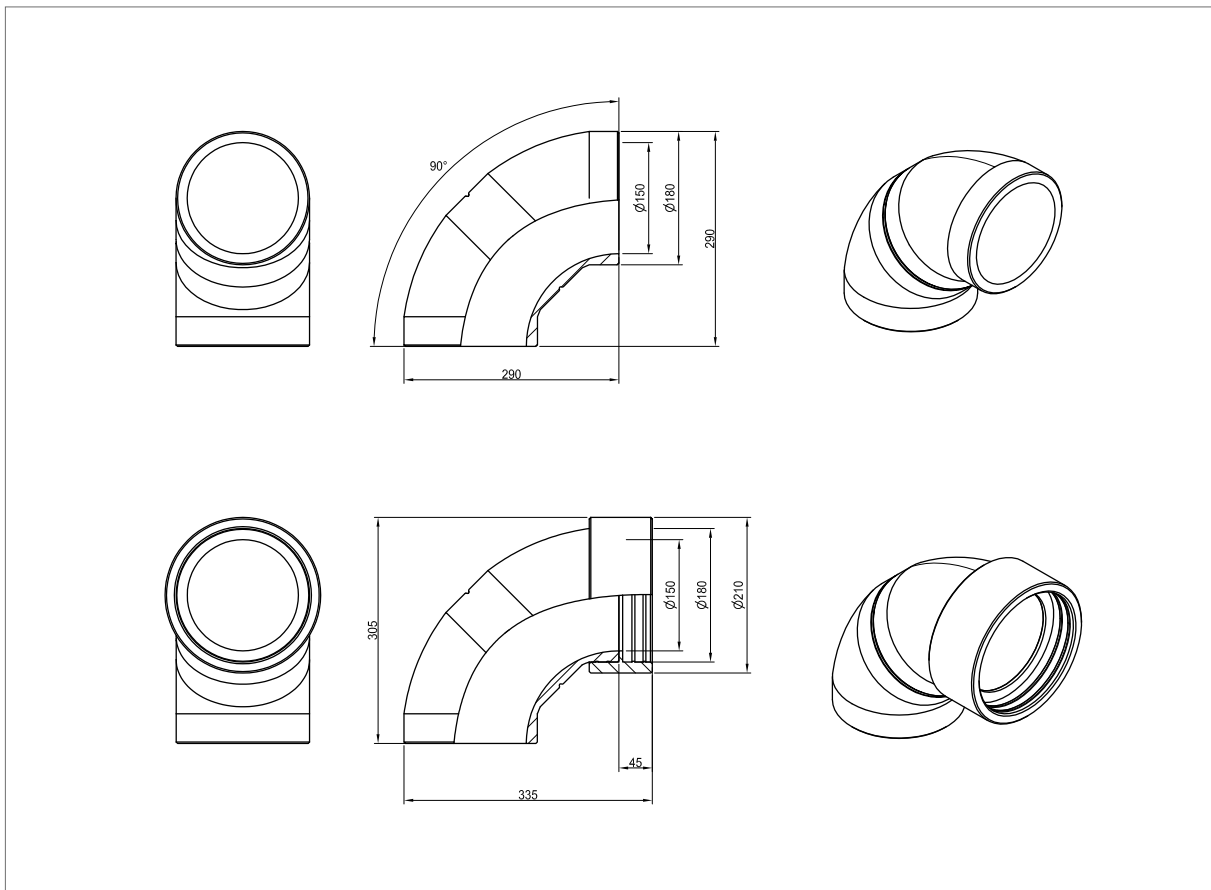
## Technical data sheet curve insulated EPP 90° Ø150 - 76015010

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS

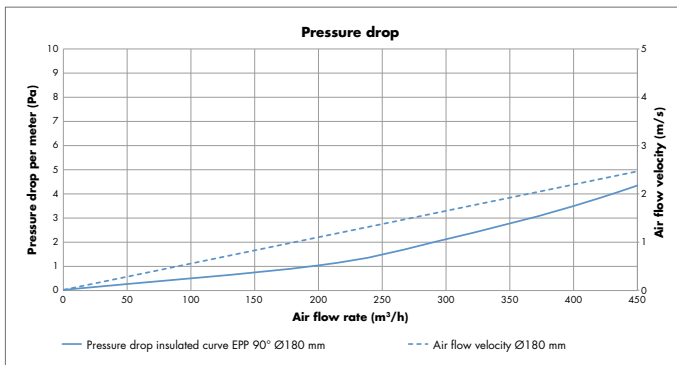


# EASYDUCT

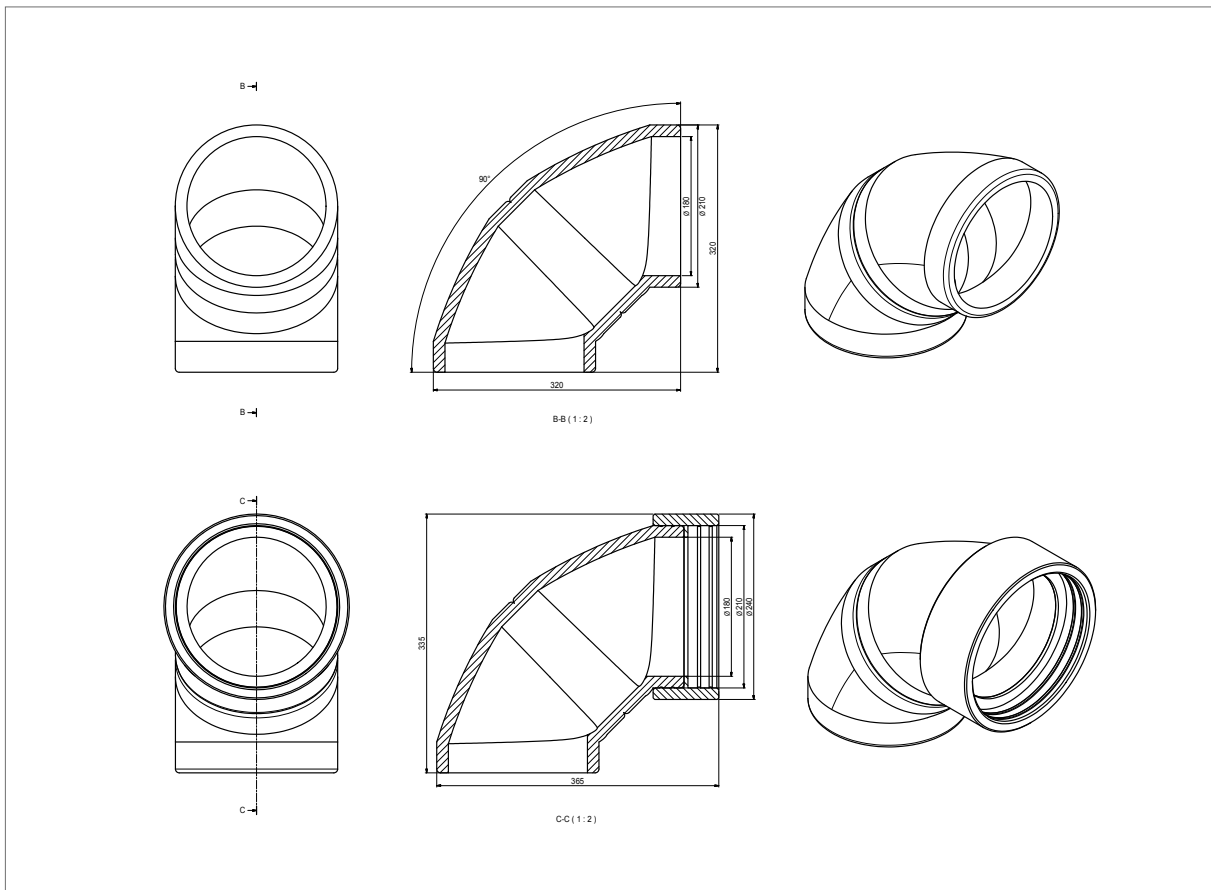
## Technical data sheet curve insulated EPP 90° Ø180 - 76015023

### PRODUCT CHARACTERISTICS

- Inner diameter 180 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

## Technical data sheet insulated EPP slave Ø150 / Ø180 - 76015012 - 76015024

### Insulated EPP slave Ø150 - 76015012

#### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### Insulated EPP slave Ø180 - 76015024

#### PRODUCT CHARACTERISTICS

- Inner diameter 180 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C

# EASYDUCT

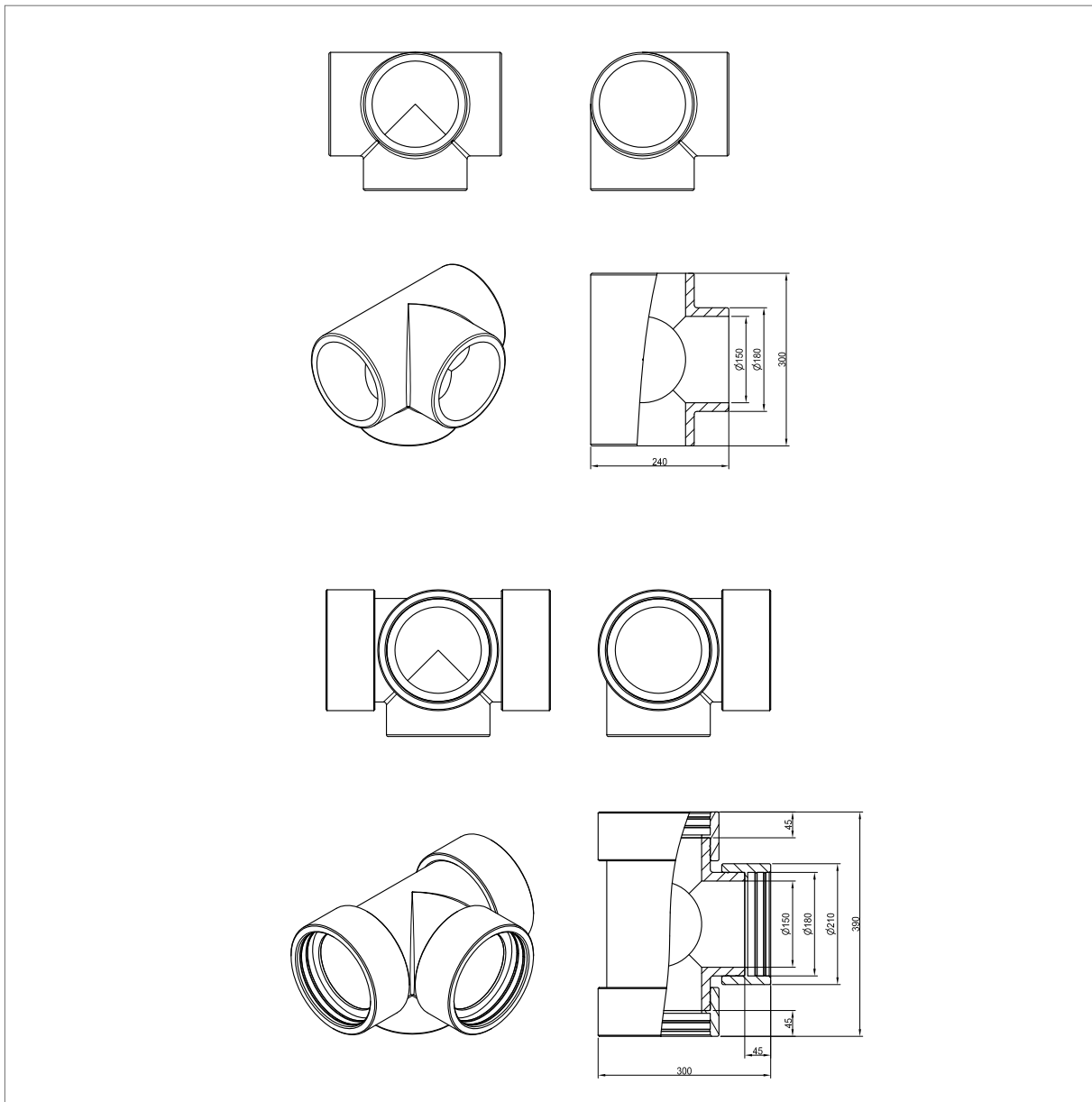
## Technical data sheet coupler XYZ insulated EPP - 76015013

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

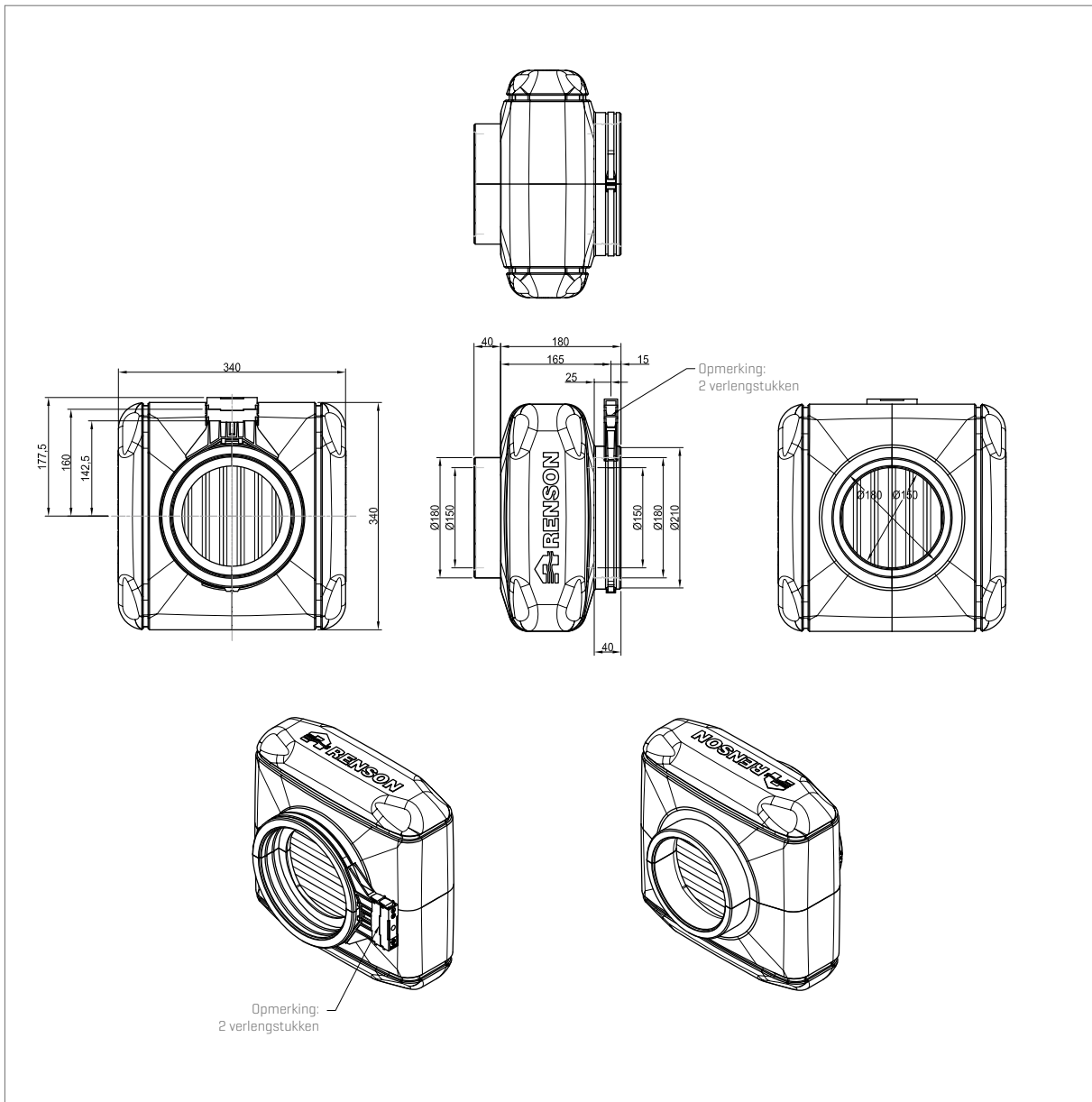
## Technical data sheet set filterbox insulated EPP Ø150 - 76015015

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

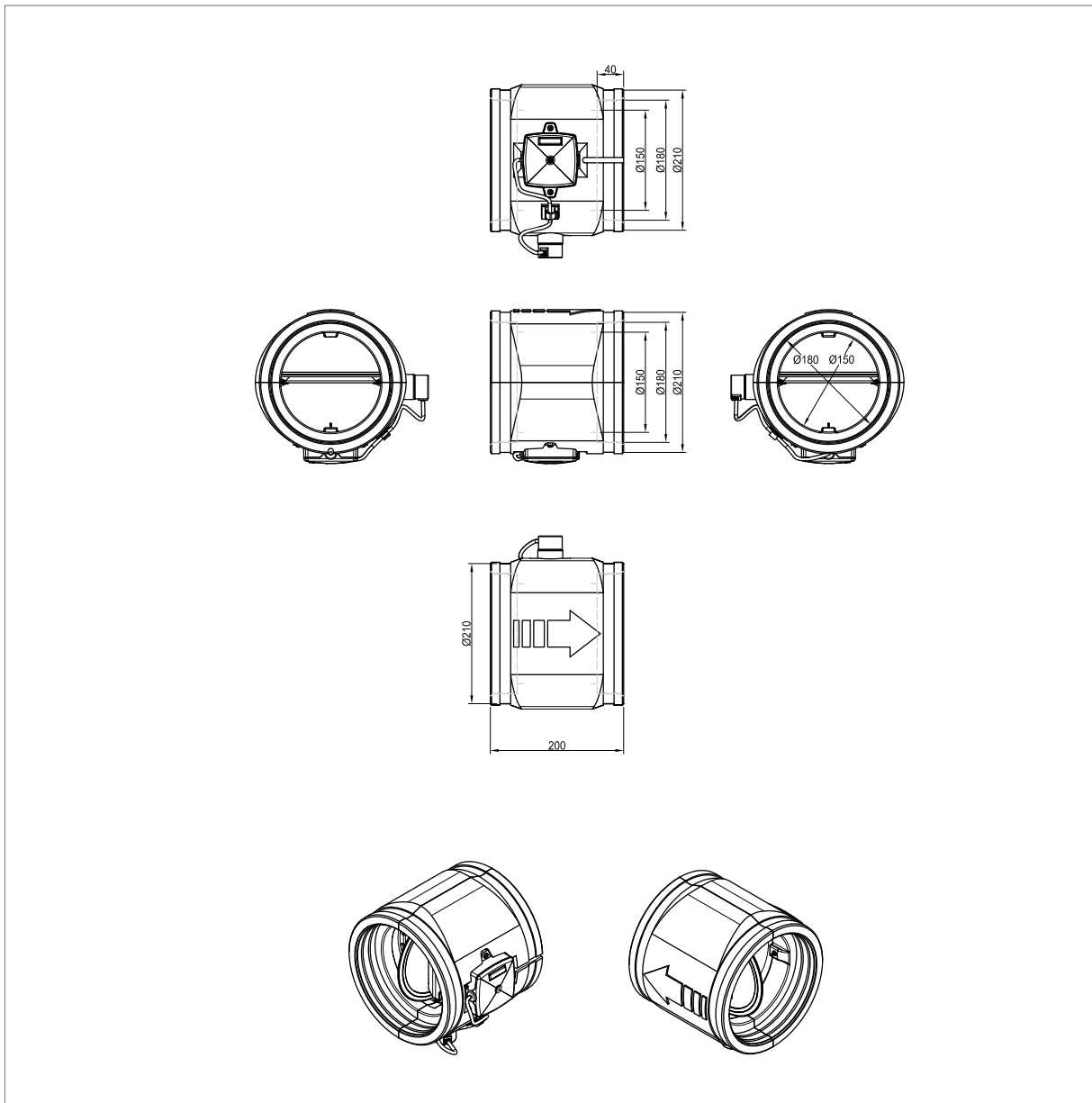
## Technical data sheet outdoor control valve insulated EPP Ø150 - 76050316

### PRODUCT CHARACTERISTICS

- Inner diameter 150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### TECHNICAL DRAWINGS



# EASYDUCT

## Technical data sheet endcap insulated EPP Ø80 / Ø125 / Ø150 - 76050314 - 76050315

### Endcap insulated EPP Ø80 - 76050314

#### PRODUCT CHARACTERISTICS

- Inner diameter 80 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C



### Endcap insulated EPP Ø125/150 - 76050315

#### PRODUCT CHARACTERISTICS

- Inner diameter 125/150 mm
- Material EPP
- $\Delta$  [thermal conductivity] 0.039 [W/m.K]
- Airtightness class C





# DESIGN EXTRACTION LOUVRES

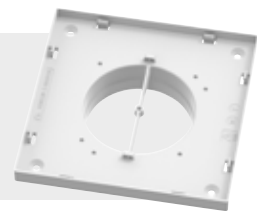
All Renson® design extraction louvres consist of 2 parts: a grill frame and a cover plate. The grill frames are available in 2 diameters (Ø80 mm and Ø125 mm) and in 2 versions (modular or non modular). With Healthbox II / Compact / SmartZone and Endura 300, the black grill frame is included in the kit and you only need to purchase a cover plate. With Healthbox 3.0, the white grill frame is included in the kit.

## Grill frame Ø80

Ø80 black  
Ø80 white

66031626  
66031675

1 x grill frame Ø80  
1 x plaster cardboard

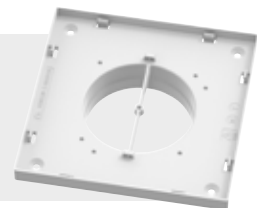


## Grill frame Ø125

Ø125 black  
Ø125 white

66031627  
66031676

1 x grill frame Ø125  
1 x plaster cardboard

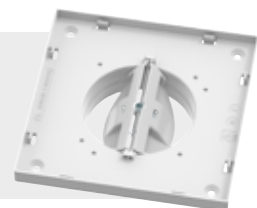


## Modular grill frame Ø80

Ø80 black  
Ø80 white

66031624  
66031687

1 x grill frame Ø80  
1 x plaster cardboard

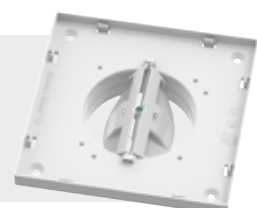


## Modular grill frame Ø125

Ø125 black  
Ø125 white

66031625  
66031686

1 x grill frame Ø125  
1 x plaster cardboard

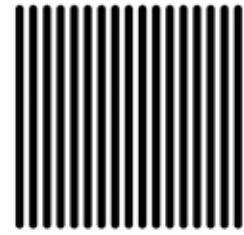


# DESIGN EXTRACTION LOUVRES

## Cover plate Puro

Ø80  
Ø125

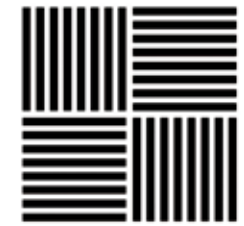
66031630  
66031631



## Cover plate Square

Ø80  
Ø125

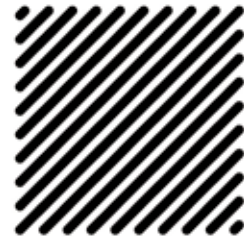
66031632  
66031633



## Cover plate Diagonal

Ø80  
Ø125

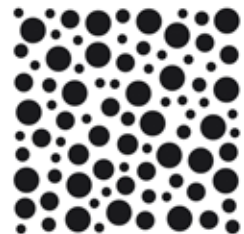
66031634  
66031635



## Cover plate Aqua

Ø80  
Ø125

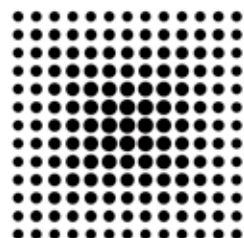
66031636  
66031637



## Cover plate Artist

Ø80  
Ø125

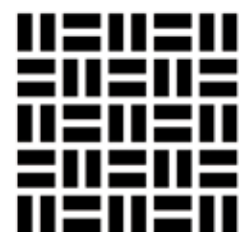
66031638  
66031639



## Cover plate Deco

Ø80  
Ø125

66031642  
66031643



# DESIGN EXTRACTION LOUVRES

## Accessoires design extraction louvres

The gypkit and panel kit can be used with the Renson® design valves in plastering in a plaster wall/ceiling or panel wall.

### Gypkit Ø80 mm

**66031622**

Can be combined with grill frame Ø80  
For plasterboard 9.5-12.5 mm  
Incl. fixing screws (11 pieces) for gypkit, grill frame and angular bend



### Gypkit Ø125 mm

**66031623**

Can be combined with grill frame Ø125  
For plasterboard 9.5-12.5 mm  
Incl. fixing screws (11 pieces) for gypkit, grill frame and angular bend



### Panel kit Ø80 mm

**66031620**

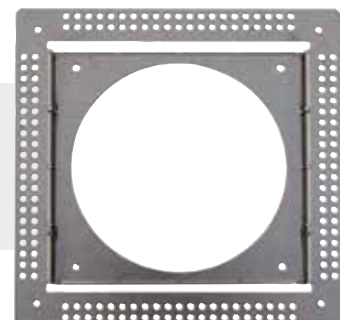
Can be combined with grill frame Ø80  
For panel thickness 5-30 mm  
Incl. fixing screws (8 pieces) for panel kit and grill frame



### Panel kit Ø125 mm

**66031621**

Can be combined with grill frame Ø80  
For panel thickness 5-30 mm  
Incl. fixing screws (8 pieces) for panel kit and grill frame



### Angular bend Ø80 mm

**66031628**

Can be combined with grill frame Ø80  
For panel thickness 5-30 mm  
Incl. fixing screws (8 pieces) for panel kit and grill frame



### Angular bend Ø125 mm

**66031629**

Can be combined with grill frame Ø125  
For panel thickness 5-30 mm  
Incl. fixing screws (8 pieces) for panel kit and grill frame



# DESIGN EXTRACTION LOUVRES

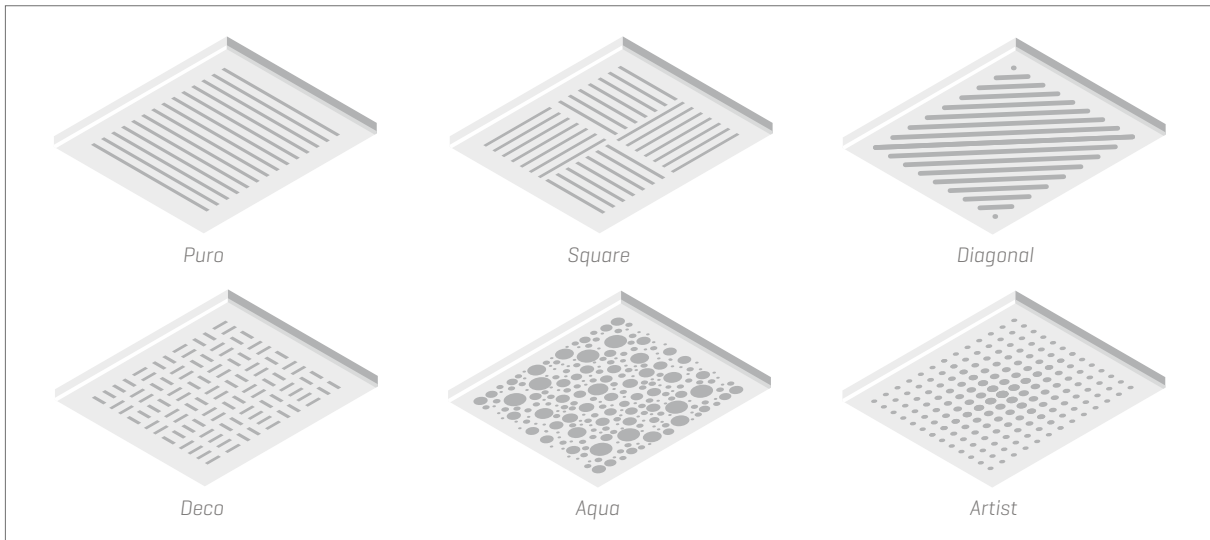
## Technical data sheet grill frame with design grill

### TYPES OF DESIGN GRILLS

There are 6 different design grills.

All design grills are available for connection to Ø 80 mm and Ø 125 mm grill frames.

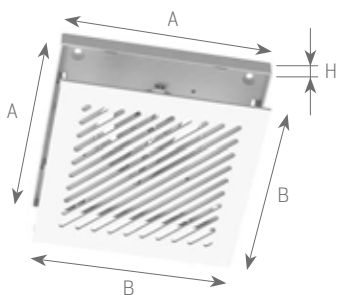
The aluminium design grills are executed in RAL9010 matte [white], but can perfectly be repainted.



### PRODUCT CHARACTERISTICS

#### Dimensions in mm

- Grill frame Ø 80 + design grill:  
A = 134 / B = 130 / H = 11
- Grill frame Ø 125 + design grill:  
A = 174 / B = 170 / H = 11







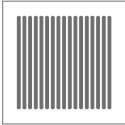

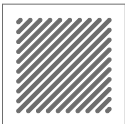

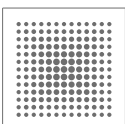
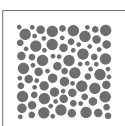
#### References

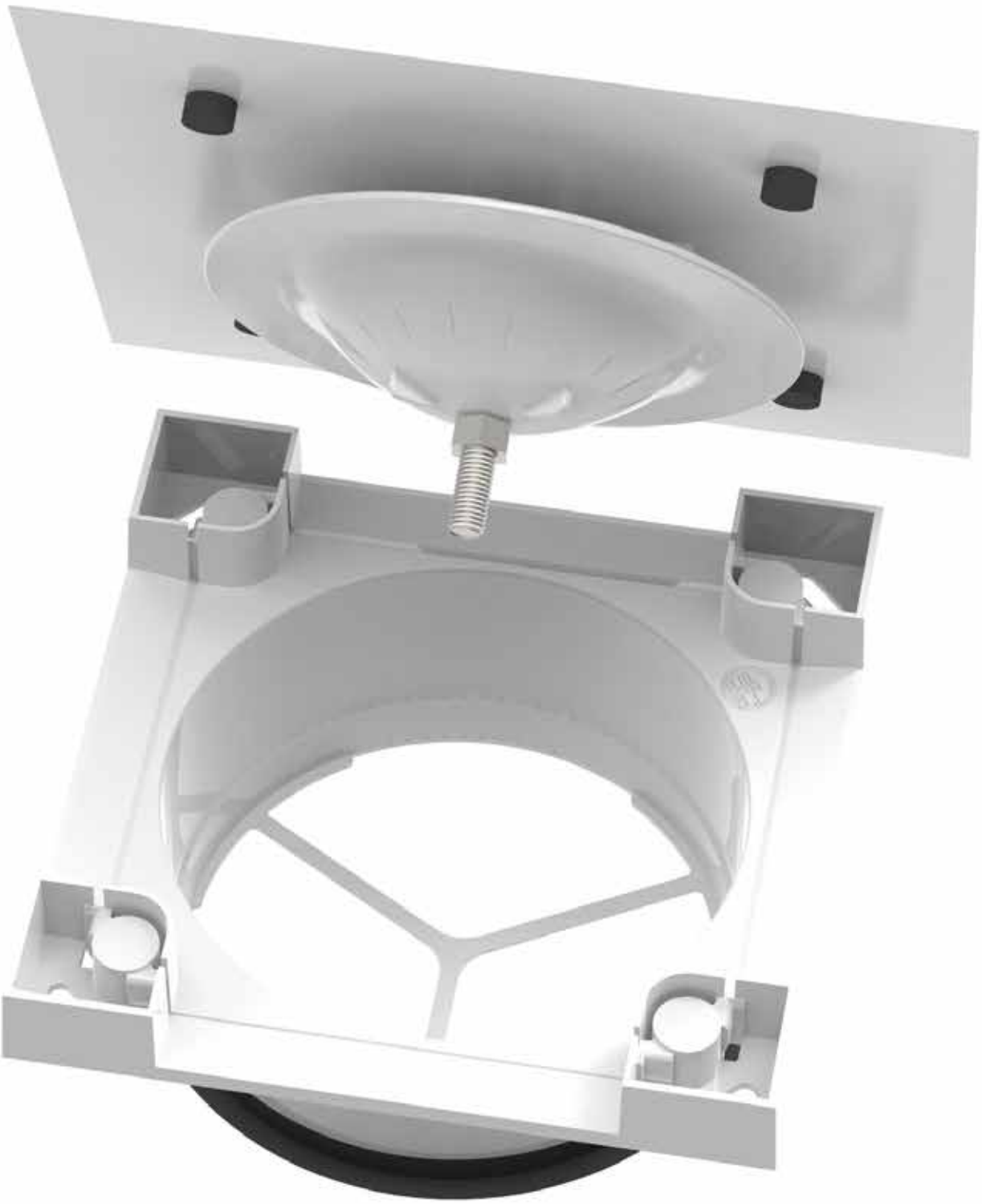
	Diameter 80 mm	Diameter 125 mm
<b>Cover plate grill PURO</b>	<b>66031630</b> XD25-50 130 x 130, Ø 80	<b>66031631</b> XD75 170 x 170, Ø 125
<b>Cover plate grill SQUARE</b>	<b>66031632</b> XD25-50 130 x 130, Ø 80	<b>66031633</b> XD75 170 x 170, Ø 125
<b>Cover plate grill DIAGONAL</b>	<b>66031634</b> XD25-50 130 x 130, Ø 80	<b>66031635</b> XD75 170 x 170, Ø 125
<b>Cover plate grill DECO</b>	<b>66031642</b> XD25-50 130 x 130, Ø 80	<b>66031643</b> XD75 170 x 170, Ø 125
<b>Cover plate grill AQUA</b>	<b>66031636</b> XD25-50 130 x 130, Ø 80	<b>66031637</b> XD75 170 x 170, Ø 125
<b>Cover plate grill ARTIST</b>	<b>66031638</b> XD25-50 130 x 130, Ø 80	<b>66031639</b> XD75 170 x 170, Ø 125
<b>Grill frame modular</b>	<b>66031687</b> Ø 80 - 134 x 134 Modular - White	<b>66031686</b> Ø 125 - 174 x 174 Modular - White
<b>Grill frame non modular</b>	<b>66031675</b> Ø 80 - 134 x 134 White	<b>66031676</b> Ø 125 - 174 x 174 White

# DESIGN EXTRACTION LOUVRES

## Technical data sheet grill frame with design grill

### PRESSURE LOSS – AIRFLOW

	Grill frame Ø 80 mm + Design grill Mounted on duct diameter 82 mm						Grill frame Ø 125 mm + Design grill Mounted on duct diameter 127 mm					
	Non modular execution		Modular execution				Non modular execution		Modular execution			
												
	Open		Open		Closed		Open		Open		Closed	
Qnom (m³/h)	ΔP (Pa)	Qnom (m³/h)	ΔP (Pa)	Qnom (m³/h)	ΔP (Pa)	Qnom (m³/h)	ΔP (Pa)	Qnom (m³/h)	ΔP (Pa)	Qnom (m³/h)	ΔP (Pa)	
 PURE	19,1	2	17,5	2	13,8	100	46,9	2	44,9	2	27,1	100
	75	30,9	75	36,3	75	1661	75	5,1	75	5,6	75	462,1
	50	13,7	50	16,2	50	847	50	2,3	50	2,5	50	250,9
	25	3,4	25	4,1	25	267,8	25	0,6	25	0,6	25	88,3
 SQUARE	20,2	2	18,5	2	13,3	100	48,5	2	46,7	2	26,2	100
	75	29,1	75	33,9	75	2320,3	75	4,8	75	5,1	75	548,2
	50	12,7	50	15	50	1110,5	50	2,1	50	2,3	50	284,3
	25	3,1	25	3,7	25	315	25	0,5	25	0,6	25	92,5
 DIAGONAL	19,1	2	17,6	2	13,8	100	48,5	2	46	2	26,9	100
	75	31,8	75	37,3	75	1830	75	4,9	75	5,2	75	443
	50	14	50	16,5	50	912,2	50	2,1	50	2,4	50	246,1
	25	3,4	25	4,1	25	277,5	25	0,5	25	0,6	25	90,1
 DECO	17,7	2	16,4	2	13,1	100	42,8	2	41,8	2	26,3	100
	75	37,7	75	42,8	75	2053,9	75	6,2	75	6,4	75	506,5
	50	16,5	50	18,9	50	1018,6	50	2,7	50	2,9	50	270,7
	25	4	25	4,7	25	307,1	25	0,7	25	0,7	25	92,7
 ARTIST	18,5	2	17,2	2	13,3	100	43,6	2	41,9	2	25,8	100
	75	33,8	75	39,4	75	1962,4	75	6	75	6,4	75	474,6
	50	14,9	50	17,4	50	976,3	50	2,6	50	2,9	50	262,5
	25	3,7	25	4,3	25	296	25	0,6	25	0,7	25	95,4
 AQUA	17,7	2	16,1	2	13,7	100	45,4	2	43,8	2	26,8	100
	75	37,7	75	44,9	75	1768,9	75	5,4	75	5,8	75	455,3
	50	16,6	50	19,8	50	892,3	50	2,4	50	2,6	50	250,5
	25	4,1	25	4,9	25	277	25	0,6	25	0,7	25	90,2



# SQAIR VALVE

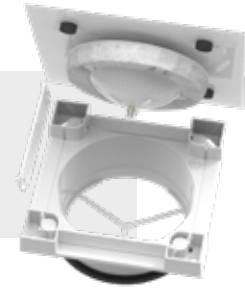
## Ventilate quietly and stylishly

The SQair valve combines both a supply and discharge valve within one single sleek look. The ventilation system is thus integrated into the design of a home in a simple and uniform way. Additional acoustic material has been integrated into the supply valve to ensure whisper-silent ventilation. The deflectors allow you to control the airflow direction in such a way that dirt deposits in corners are prevented.

### SQair pulsion valve [Deluxe]

Aluminium version [RAL9010]  
Removable front panel [magnetic fixing]  
With acoustic damper  
With deflectors

**76050400**



### SQair extraction valve [Deluxe]

Aluminium version [RAL9010]  
Removable front plate [magnetic fixing]

**76050401**



### SQair pulsion valve [Basic]

uPVC model [RAL9010]  
Removable front panel [clamp into place]  
With acoustic damper

**76050403**



### SQair extraction valve [Basic]

uPVC model [RAL9010]  
Removable front plate [clamp into place]

**76050404**



# SQAIR VALVE

## Technical data sheet SQair valve

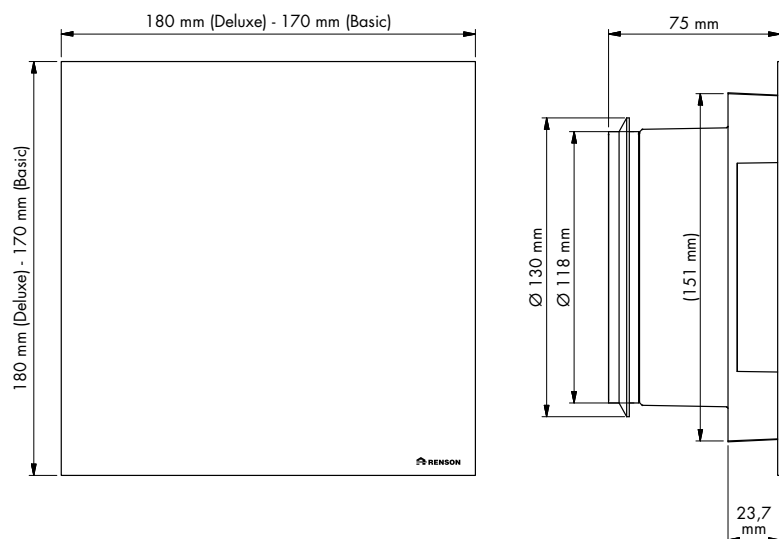
### OMSCHRIJVING PRODUCT

- Regelbaar ventiel in 4 uitvoeringen
  - Extractieventiel:
    - Deluxe: aluminium frontplaat (gelakt RAL 9010)
    - Basic: kunststof frontplaat RAL 9010 (in de massa)
  - Pulsieventiel:
    - Deluxe: aluminium frontplaat (gelakt RAL 9010)
    - Basic: kunststof frontplaat RAL 9010 (in de massa)
- Opbouw: roosterbasis + frontplaat
- Steekt slechts 24 mm uit t.o.v. de wand of het plafond
  - Bredere frontplaat zorgt ervoor dat de ventilatieopeningen aan het oog onttrokken worden
- Rechtstreekse koppeling op het luchtkanaalsysteem
  - Ø 125 mm
  - Geïntegreerde rubber dichting voor luchtdichte koppeling
- Frontplaat:
  - Deluxe: met magneten bevestigd aan de roosterbasis
  - Basic: klikt op de roosterbasis
  - Makkelijke demontage voor reiniging
  - Dankzij een contra-roer blijft de instelling van het ventiel behouden tijdens het reinigen
- Pulsieventiel is uitgerust met akoestisch materiaal
  - Voorkomt smoorgeluid aan het ventiel
- Pulsieventiel Deluxe is voorzien van 2 deflectorplaatjes
  - Er kunnen 2 van de 4 ventilatieopeningen afgesloten worden m.b.v. deflectorplaatjes
  - Bv: indien het ventiel dicht tegen een wand geplaatst is kan die zijde afgesloten worden om vuilafzetting te voorkomen [zal gevolgen hebben voor het debiet]



### VERPAKKING

- ART. nr.:
  - 76050400 Deluxe pulsie
  - 76050403 Basic pulsie
  - 76050401 Deluxe extractie
  - 76050404 Basic extractie
- Afmetingen: 200 x 190 x 85 mm





# SQAIR VALVE

## Technical data sheet SQair valve

### PRODUCTKENMERKEN

	DELUXE	BASIC
Frontplaat	Aluminium	Kunststof [ASA]
Afmetingen frontplaat	180 x 180 mm	170 x 170 mm
Afmetingen roosterbasis	150 x 150 mm	150 x 150 mm
Kleur	RAL 9010	RAL 9010
Bevestiging	Magneten	Kliksysteem
Overschilderbaar	Ja	-
Akoestisch materiaal	Ja [pulsie]	Ja [pulsie]
Deflectorplaatjes	2 stuks [pulsie]	-
Afmetingen deflectorplaatjes	92 x 20 mm	-

### EXTRACTIE

Q [m <sup>3</sup> /h]	100% open		66% open		33% open	
	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]
30	2	15,0	3	14,8	14	17,9
50	6	16,9	10	20,0	40	30,2
60	8	20,3	15	24,6	56	34,7
75	13	25,5	23	31,4	82	40,5

### PULSIE zonder akoestische demping

Q [m <sup>3</sup> /h]	100% open		66% open		33% open	
	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]
30	3	15,0	5	15,1	14	24,5
40	6	16,3	8	18,8	25	33,5
50	8	17,5	12	22,5	37	39,9
60	11	19,3	17	28,0	54	45,5
75	16	24,5	26	35,0	83	51,5

### PULSIE met akoestische demping

Q [m <sup>3</sup> /h]	100% open		66% open		33% open	
	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]	dP [Pa]	LwA [dB(A)]
30	9	16,0	19	17,6	58	21,0
50	19	23,0	41	26,0	131	35,4
60	25	26,6	55	29,6	180	40,9
75	37	32,3	78	35,0	263	46,3



# CONNECTION

## Aludec flexible duct

Aludec Ø82 mm  
Aludec Ø127 mm  
Aludec Ø152 mm  
Aludec Ø162 mm

**66014103**  
**66014104**  
**66014107**  
**66014137**

1 box = 10m



## Isodec insulated flexible duct

Isodec Ø82 mm - 10m  
Isodec Ø127 mm - 10m  
Isodec Ø152 mm - 10m  
Isodec Ø162 mm - 10m  
Isodec Ø180 mm with sleeve 1m

**66014100**  
**66014101**  
**66014106**  
**66014138**  
**66014129**



## Acoudec flexible sound damper

0,5 m  
Acoudec Ø82 mm  
Acoudec Ø127 mm  
Acoudec Ø152 mm  
Acoudec Ø162 mm  
Acoudec Ø200 mm

**66014133**  
**66014134**  
**66014135**  
**66014136**  
**66014140**

1 m  
Acoudec Ø82 mm  
Acoudec Ø127 mm  
Acoudec Ø152 mm  
Acoudec Ø162 mm  
Acoudec Ø180 mm with sleeve  
Acoudec Ø200 mm

**66014125**  
**66014126**  
**66014127**  
**66014128**  
**66014139**  
**66014141**



**Coupling sleeve for 2 flexibles**  
For flexibels Ø80 mm

**66014062**



# CONNECTION

## Reduction ring extraction grill

Reduction ring Ø125 > Ø80

**66014052**



## Female socket

Female socket Ø125

**66014066**



## Serrated mounting flange

Serrated mounting flange Ø80

130 mm high

**66014001**

Serrated mounting flange Ø125

130 mm high

**66014005**



## Fixing straps

Fixing strap Ø50- Ø90

Fixing strap Ø60- Ø165

**66014110**

**66014111**



## PVC tape

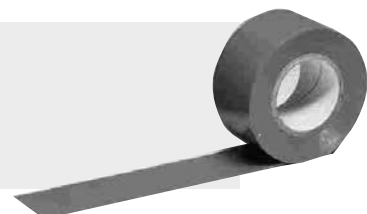
PVC tape

50 mm wide

10m per roll

for connecting and sealing rigid ventilation channels

**66014115**



# CONNECTION

## Technical data sheet flexible ducts - Aludec

### RENSON® FLEXIBLE LAMINATED DUCTS: ALUDEC

**RENSON ALUDEC** is a flexible, strong laminate duct for various purposes. The duct consists of several layers of aluminium and polyester, with a high tensile steel spiral helix enclosed between the layers. The duct can be attached to round and oval connection parts without any problems.

Due to the "sandwich construction", the different layers of polyester and aluminium are overlapping each other completely. In case of fire, the system is able to function longer.



### TYPES

REFERENCE	DESCRIPTION
66014103	Aludec-245 diameter 82 mm x 10 meter
66014104	Aludec-245 diameter 127 mm x 10 meter
66014107	Aludec-245 diameter 152 mm x 10 meter

### APPLICATION

- General air supply systems, without special demands
- Air conditioning systems, without special demands

### RESTRICTIONS

The Aludec ducts are not suitable for discharging combustion products from open fireplaces and oil-fired boilers. Neither are the Aludec ducts suitable for transporting air with a high concentration of acid and base.

### SPECIFICATIONS

- Temperature range: -30 °C to 140 °C
- Operating pressure: max. +2500 Pa
- Operating air velocity: max. 30 m/s
- Bending radius: min. 0.54 x Ø
- Standard length: 10 m

### CONSTRUCTION

- Number of layers: 5
  - whereof aluminium: 3 à 7 micron
  - whereof polyester: 2 à 12 micron
- Total thickness: 45 micron [without adhesive]
- Wire spacing: 18 mm
- Colour: aluminium

# CONNECTION

## Technical data sheet flexible ducts - Aludec

The **Aludec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings - Ductwork - Dimensions and mechanical requirements for flexible ducts".

The consultant is responsible for the actual installation and mounting of the product. The mentioned values with respect to temperatures are not appropriate to be used to determine the physical properties. These properties are also dependent on humidity and the temperature of the air inside and outside of the H.V.A.C. system.

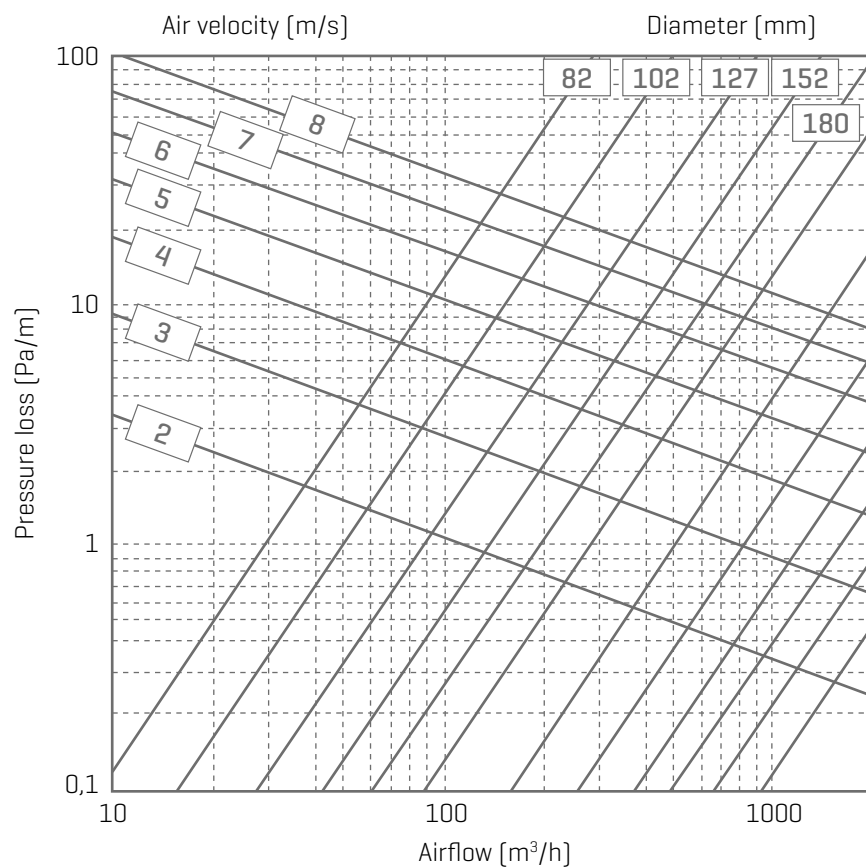
### DETERMINATION OF THE ACUTE TOXICITY

Stated by the "Institut für Arbeitsmedizin" of the medical faculty of the technical university of Aken. Under the supervision of prof. dr. med. H.J. Einbrodt [specialist] classified as "non toxic".

## DIMENSIONS

	DIAMETER INNER FLEXIBLE	DIAMETER OUTER FLEXIBLE
Aludec 25 mm Ø 82	Ø 80	Ø 82
Aludec 25 mm Ø 127	Ø 125	Ø 127
Aludec 25 mm Ø 152	Ø 150	Ø 152

## PRESSURE LOSS (stretched tube)



# CONNECTION

## Technical data sheet flexible ducts - Isodec

### RENSON® FLEXIBLE INSULATED DUCTS: ISODEC

**RENSON ISODEC** consists of an aluminium laminate inner duct, thermally insulated with a glass wool layer and provided with an aluminium laminated outer jacket.

The thermal insulation is suitable for preventing condensation and minimizing heat loss and loss of cold.



### TYPES

REFERENCE	DESCRIPTION
66014100	Isodec diameter 82 mm x 10 meter
66014101	Isodec diameter 127 mm x 10 meter
66014106	Isodec diameter 152 mm x 10 meter
66014129	Isodec diameter 180 mm x 1 meter
66014138	Isodec diameter 162 mm x 10 meter

### APPLICATION

- Insulation in air supply systems
- Ventilation systems
- Thermal insulation in order to prevent heat or cold loss
- Prevention / removal of condensation

### RESTRICTIONS

The Isodec ducts are not suitable for discharging combustion products from open fireplaces and oil-fired boilers. Neither are the Isodec ducts suitable for transporting air with a high concentration of acid and base.

### SPECIFICATIONS

- Temperature range: -30 °C to 140 °C
- Operating pressure: max. +2500 Pa
- Operating air velocity: max. 30 m/s
- Bending radius: min.  $0.54 \times \varnothing + 25\text{mm}$
- Standard length: 10 m

### CONSTRUCTION

- Inner duct: Alu/poly laminate
- Glass wool blanket: 25 mm, 16 kg/m<sup>3</sup>
- Outer jacket: Alu/poly laminate
- R-value glass wool: 0.65 m<sup>2</sup> K/W [ASTM C177-76]
- Colour: Aluminium

# CONNECTION

## Technical data sheet flexible ducts - Isodec

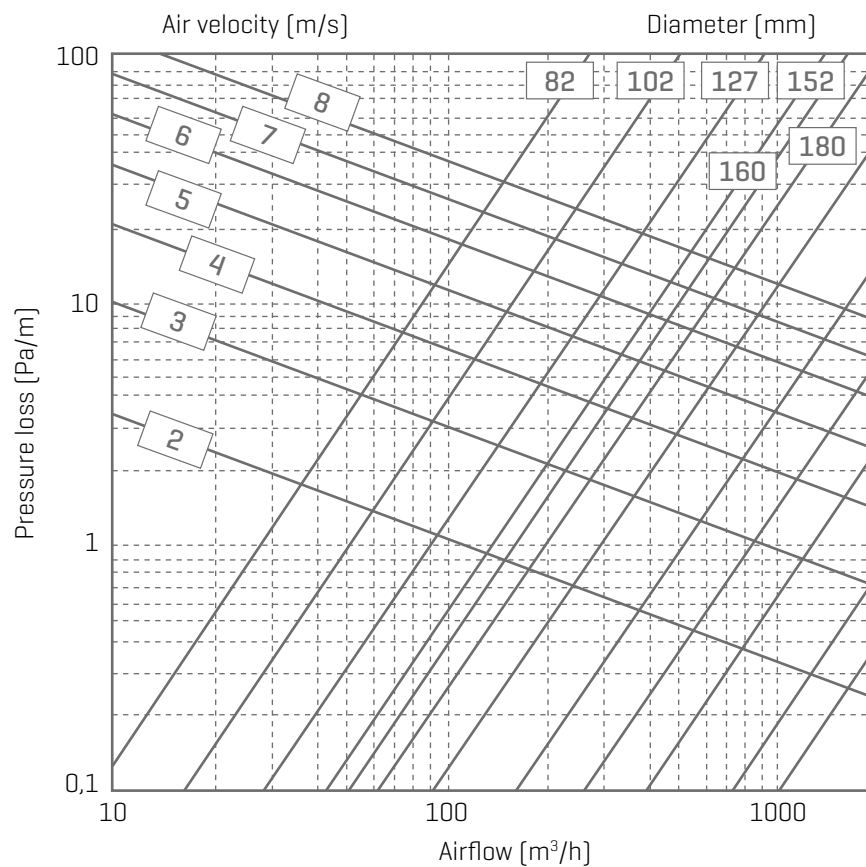
The **Isodec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings – Ductwork – Dimensions and mechanical requirements for flexible ducts".

The consultant is responsible for the actual installation and mounting of the product. The mentioned values with respect to temperatures are not appropriate to be used to determine the physical properties. These properties are also dependent on humidity and the temperature of the air inside and outside of the HVAC system.

### DIMENSIONS

	DIAMETER INNER FLEXIBLE	DIAMETER OUTER FLEXIBLE
Isodec 25 mm Ø 82	Ø 80	Ø 82
Isodec 25 mm Ø 127	Ø 125	Ø 127
Isodec 25 mm Ø 152	Ø 150	Ø 152
Isodec 25 mm Ø 162	Ø 160	Ø 162

### PRESSURE LOSS (stretched tube)





# CONNECTION

## Technical data sheet flexible ducts - Acoudec

### RENSON® FLEXIBLE SOUND DAMPER: ACOUDEC (25 mm - 0.5 or 1 meter)

The **RENSON ACOUDEC** consists of an inner tube of polypropylene fabric, thermal and acoustic insulated with fibreglass and a laminate outer cover with sealed ends for the connections.



### TYPES

REFERENCE	DESCRIPTION	REFERENCE	DESCRIPTION
66014133	Acoudec 25 mm Ø 82 x 0.5 meter	66014125	Acoudec 25 mm Ø 82 x 1 meter
66014134	Acoudec 25 mm Ø 127 x 0.5 meter	66014126	Acoudec 25 mm Ø 127 x 1 meter
66014135	Acoudec 25 mm Ø 152 x 0.5 meter	66014127	Acoudec 25 mm Ø 152 x 1 meter
66014136	Acoudec 25 mm Ø 162 x 0.5 meter	66014128	Acoudec 25 mm Ø 162 x 1 meter
-	-	66014139	Acoudec 25 mm Ø 180 x 1 meter
66014140	Acoudec 25 mm Ø 200 x 0.5 meter	66014141	Acoudec 25 mm Ø 200 x 1 meter

### APPLICATION

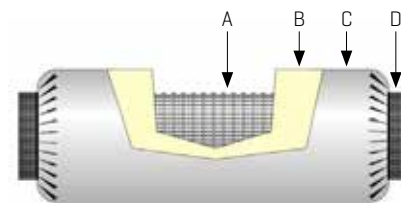
- Ventilation systems: recommended use when the length of the extraction point to the ventilation unit ≤ 3m
- Sound dampening
- Machine sounds reduction

### SPECIFICATIONS

- Temperature range: -30 °C tot 140 °C
- Working pressure: max. +2500 Pa
- Airspeed: max. 25 m/s
- Bow radius: 0.54 x Ø + 25 mm

### CONSTRUCTION

- Inner tube: Non-woven polypropylene fabric
- Fibreglass: 25 mm, 16 kg/m<sup>3</sup>
- Outer cover: alu/poly laminate
- R-Value fibreglass: 0.65 m<sup>2</sup> K/W [ASTM C177-76]
- Exterior: aluminium



- A. Inner tube
- B. Fibreglass
- C. Outer cover
- D. Connexion

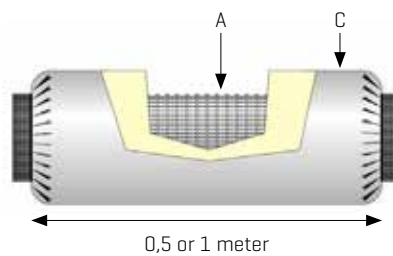
The **Acoudec** duct fulfills all the requirements and is qualified as specified within EN 13180: "Ventilation for buildings – Ductwork – Dimensions and mechanical requirements for flexible ducts".

# CONNECTION

## Technical data sheet flexible ducts - Acoudec

### DIMENSIONS

	DIAMETER INNER FLEXIBLE [A]	DIAMETER OUTER FLEXIBLE [C]
Acoudec 25 mm Ø 82	Ø 80	Ø 130
Acoudec 25 mm Ø 127	Ø 125	Ø 175
Acoudec 25 mm Ø 152	Ø 150	Ø 200
Acoudec 25 mm Ø 162	Ø 160	Ø 210



### ACOUSTIC DAMPING

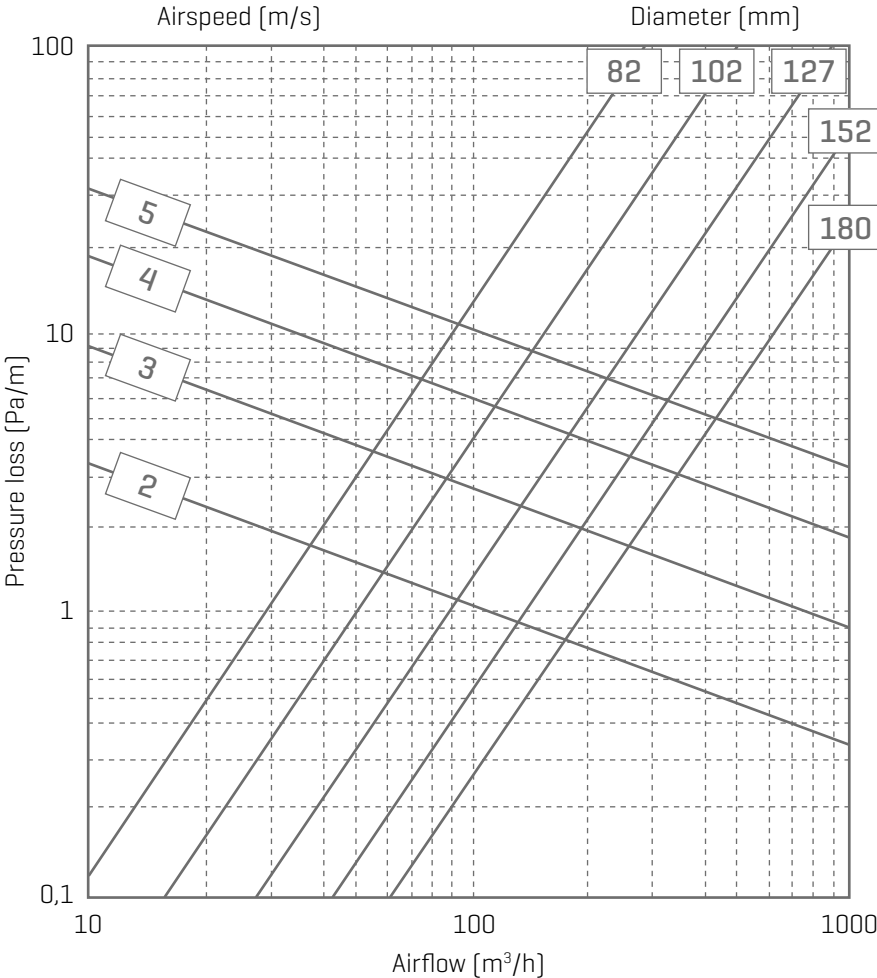
Dn [mm]	L [m]	Damping, dB - Mid-frequency, Hz								Di [dB]
		63	125	250	500	1000	2000	4000	8000	
Ø 80	0,5	18.2	9.3	27.2	28.8	26.4	33.2	48.7	31.7	30
Ø 125	0,5	14.8	8.1	19.1	20.7	19.9	26.4	26.7	13.0	35
Ø 150	0,5	16.9	4.0	11.1	16.7	19.7	28.5	19.4	12.0	33
Ø 160	0,5	10.2	7.8	11.2	17.3	18.8	26.1	17.7	12.5	32
Ø 80	1,0	13.6	22.4	40.2	38.7	36.5	41.3	51.6	45.8	39
Ø 125	1,0	11.7	18.9	32.4	29.9	28.8	34.5	40.9	24.5	32
Ø 150	1,0	12.2	10.9	29.7	30.1	29.0	38.3	34.6	20.4	32
Ø 160	1,0	19.3	25.4	30.5	27.1	23.8	32.2	27.8	17.3	28

Di = average damping [Test report number A1672-1 Peutz e.g. - The Netherlands]

# CONNECTION

## Technical data sheet flexible ducts - Acoudec

### PRESSURE LOSS (stretched tube)



# DESIGN ROOF EXHAUSTS

## Design roof exhaust

### Design roof exhaust

Ø150/Ø160  
Black RAL9005  
For tiled roofs

66014096



## Design roof exhaust

### Design roof exhaust

Ø150/Ø160  
Terracotta RAL8004  
For tiled roofs

66014097



## Design roof exhaust

### Design roof exhaust

Ø150/Ø160  
Black RAL9005  
For slated roofs

66014095

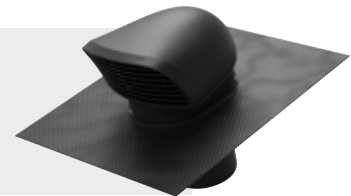


## Design roof exhaust

### Design roof exhaust

Ø150/Ø160  
Black RAL9005  
Flex for tiled roofs

66014150

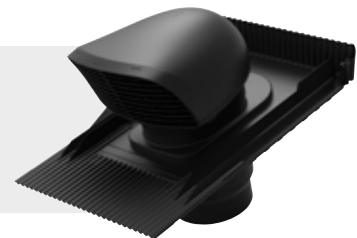


## Design roof exhaust XL

### Design roof exhaust

Ø180/Ø200  
Black RAL9005  
Flex for tiled roofs

66014152

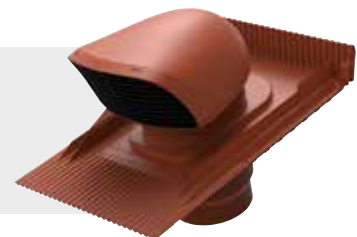


## Design roof exhaust XL

### Design roof exhaust

Ø180/Ø200  
Terracotta RAL8004  
Flex for tiled roofs

66014154



## Design roof exhaust XL

### Design roof exhaust

Ø180/Ø200  
Black RAL9005  
For slated roofs

66014153



## Design roof exhaust for flat roofs

### Design roof exhaust (afblaas)

**66014262**

Ø125

Black

Plat dak – tot 11,5° hellingsgraad



## Design roof exhaust for flat roofs XL

### Design roof exhaust (afblaas)

**66014263**

Ø160

Black

Plat dak – tot 11,5° hellingsgraad



## Design roof exhaust XL

### Design roof exhaust

**66014151**

Ø180/Ø200

Flex for tiled roofs



## Roof supply All weather

### Design roof supply All weather

**76050402**

Ø160

Black

Order accompanying tile seperately

**Universal roof tile black**

**66032302**

**Universal roof tile terracotta**

**66032303**

**Felt pass through for flat roof**

**66032304**



## Dakdoorvoer plat dak

Dakdoorvoer plat dak Ø133/150

**66014250**

Dakdoorvoer plat dak Ø166/150

**66014260**



## Dakdoorvoer plat dak

Dakdoorvoer plat dak Ø133/150

**66014251**

Dakdoorvoer plat dak Ø166/150

**66014061**

Voor licht hellende platte daken 5°-20°





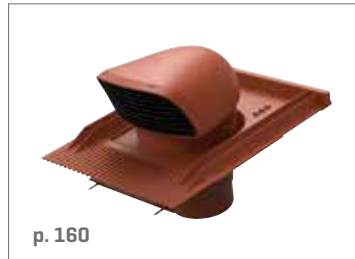
# DESIGN ROOF EXHAUSTS

## Overview design roof exhausts



p. 160

*Design roof exhaust  
66014096*



p. 160

*Design roof exhaust  
66014097*



p. 161

*Design roof exhaust for slate roofs  
66014095*



p. 162

*Design roof exhaust for flat roofs  
66014262*



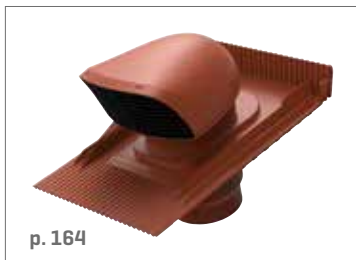
p. 163

*Design roof exhaust Flex  
66014150*



p. 164

*Design roof exhaust XL  
66014152*



p. 164

*Design roof exhaust XL  
66014154*



p. 165

*Design roof exhaust XL for slate roofs  
66014153*



p. 166

*Design roof exhaust XL  
for flat roofs - 66014263*



p. 167

*Design roof exhaust Flex XL  
66014151*



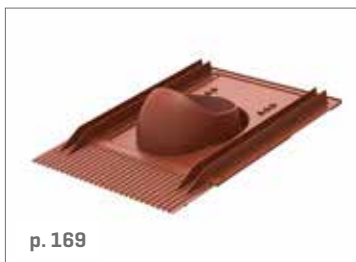
p. 168

*Roof supply All Weather  
76050402*



p. 169

*Universal roof tile  
66032302*



p. 169

*Universal roof tile  
66032303*



p. 170

*Felt pass through flat roof  
66032304*



p. 171

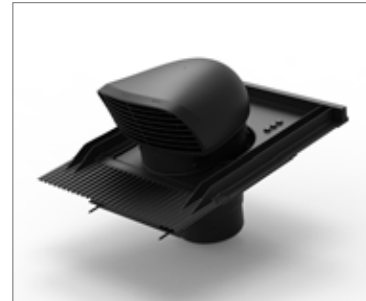
*EPDM collar  
66032305*

# DESIGN ROOF EXHAUSTS

Technical data sheet design roof exhaust: 66014096 - 66014097

## PRODUCT CHARACTERISTICS

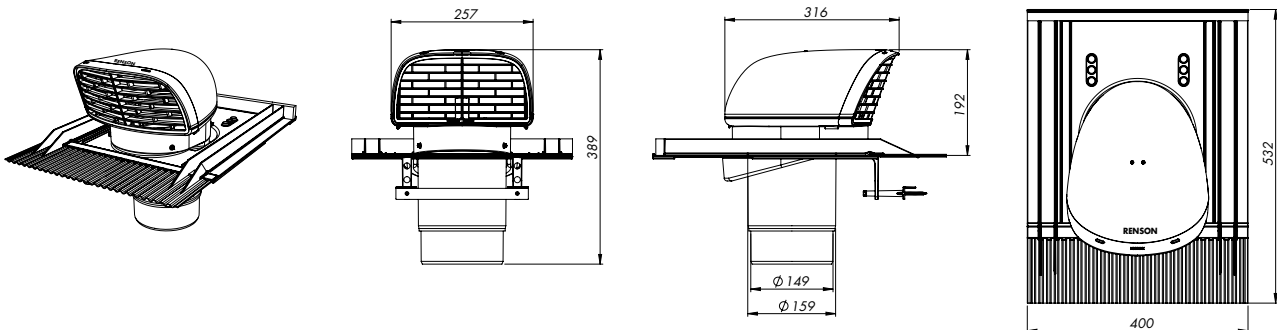
- Low pressure drop:
  - 14 Pa at 250 m<sup>3</sup>/h
  - 30 Pa at 375 m<sup>3</sup>/h
- Connection diameter: 150/160 mm
- Material: polypropylene RAL 9005 or RAL 8004
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with universal roof tile
  - Lead replacement material
  - Possibility for different angles of inclination
  - Compatible with most types of roof tiles
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 316 x 257 x 389 mm [L x W x H]
  - Universal roof tile: 532 x 400 mm [L x W]



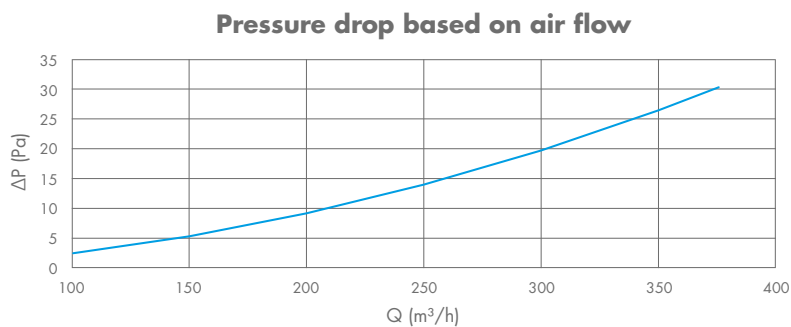
66014096



66014097



## CURVE PRESSURE DROP (exhaust)



Q [m <sup>3</sup> /h]	Δp [Pa]
100	2,5
150	5,3
200	9,2
250	14
300	19,8
350	26,6
375	30,3

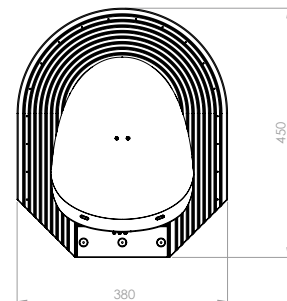
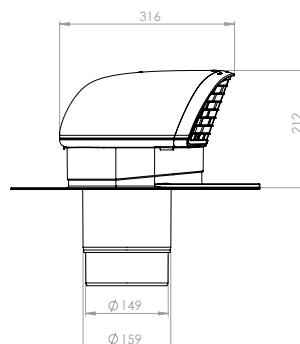
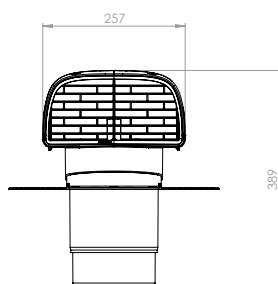
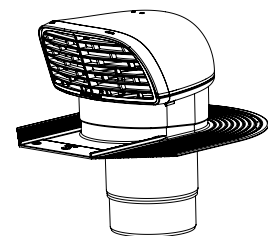


# DESIGN ROOF EXHAUSTS

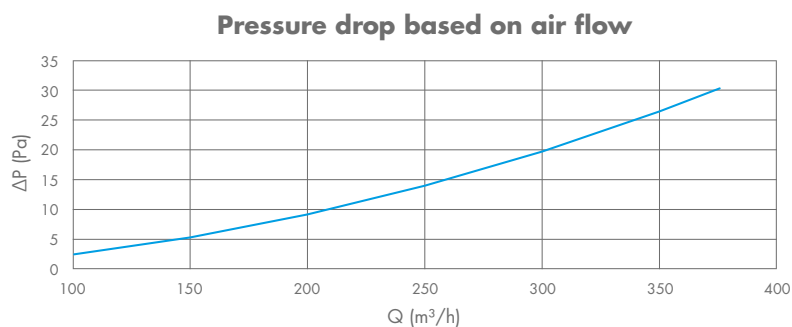
## Technical data sheet design roof exhaust for slate roofs - 66014095

### PRODUCT CHARACTERISTICS

- Low pressure drop:
  - 14 Pa at 250 m<sup>3</sup>/h
  - 30 Pa at 375 m<sup>3</sup>/h
- Connection diameter: 150/160 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with slate roof tile
  - Lead replacement material
  - Possibility for different angles of inclination
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 316 x 257 x 389 mm [L x W x H]
  - Slate roof tile: 450 x 380 mm [L x W]



### CURVE PRESSURE DROP (exhaust)



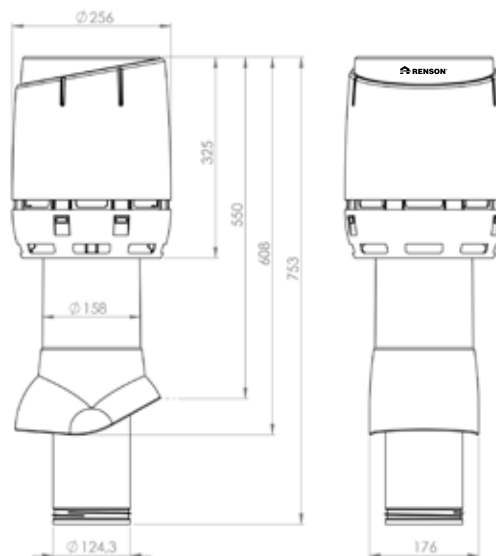
Q [m <sup>3</sup> /h]	Δp [Pa]
100	2,5
150	5,3
200	9,2
250	14
300	19,8
350	26,6
375	30,3

# DESIGN ROOF EXHAUSTS

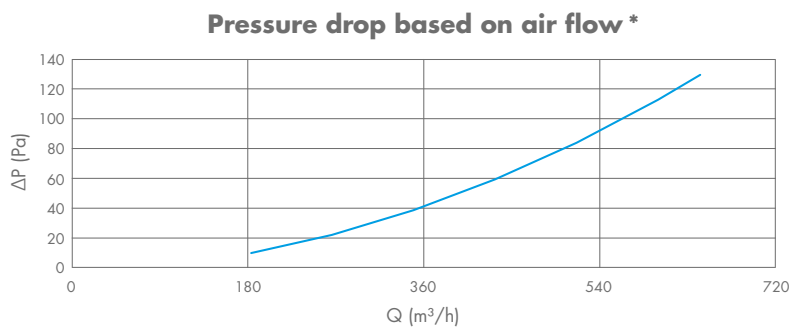
## Technical data sheet design roof exhaust for flat roofs - 66014262

### PRODUCT CHARACTERISTICS

- Low pressure drop
- Connection diameter: 125 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Insulated with polyurethane and Styrofoam
- For flat roofs with an angle of inclination up to 11,5°
- Compatible with the EPDM collar (66032305) for flat EPDM roofs
- Built-in spirit level for a perfect installation
- Aesthetic design with internal mechanism against water penetration
- Removable top part for cleaning, if necessary
- Dimensions: 256 x 753 mm [W x H]



### CURVE PRESSURE DROP (exhaust)



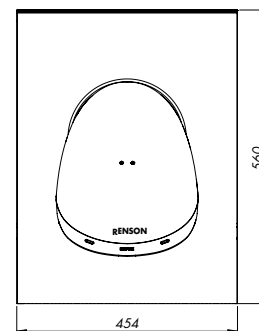
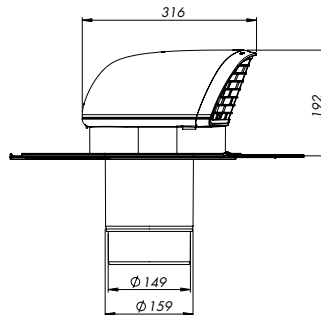
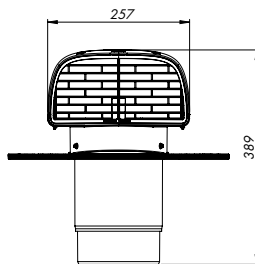
\* Provisional results

# DESIGN ROOF EXHAUSTS

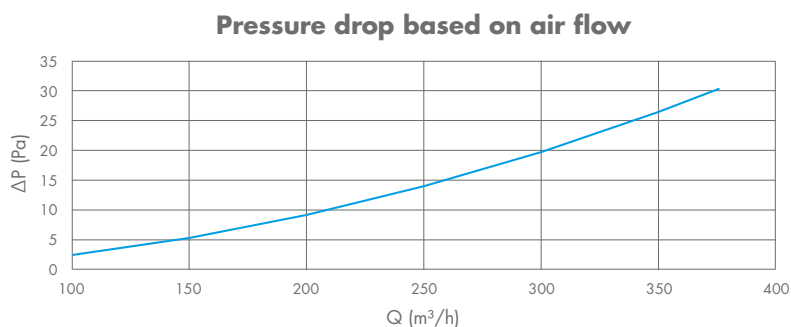
## Technical data sheet design roof exhaust Flex - 66014150

### PRODUCT CHARACTERISTICS

- Low pressure drop:
  - 14 Pa at 250 m<sup>3</sup>/h
  - 30 Pa at 375 m<sup>3</sup>/h
- Connection diameter: 150/160 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with a fierce lead-free flexible slab:
  - Lead replacement based on silicone with aluminium reinforcement
  - Remains strong and sustainable within a big range of temperatures: -30 °C/+180 °C
  - UV-resistant
  - Does not react with roofing and does not cause stripes
  - Faster to process than lead or other lead replacement materials
  - Easy to crease by hand or by lead beaters
  - Harmless for people and environment and light weighted
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 316 x 257 x 389 mm [L x W x H]
  - Flexible slab: 560 x 454 mm [L x W]



### CURVE PRESSURE DROP (exhaust)



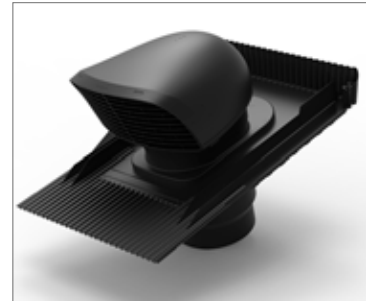
Q [m <sup>3</sup> /h]	Δp [Pa]
100	2,5
150	5,3
200	9,2
250	14
300	19,8
350	26,6
375	30,3

# DESIGN ROOF EXHAUSTS

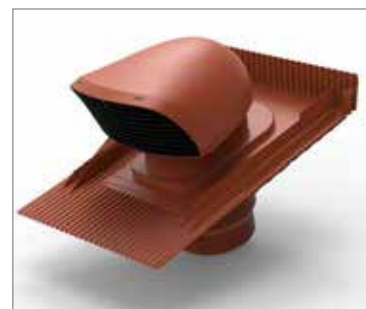
## Technical data sheet design roof exhaust XL - 66014152 - 66014154

### PRODUCT CHARACTERISTICS

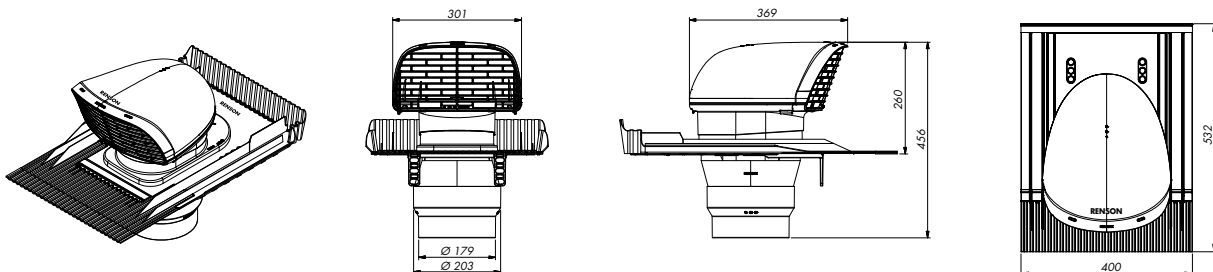
- Low pressure drop:
  - Exhaust: 10 Pa at 404 m<sup>3</sup>/h - 20 Pa at 584 m<sup>3</sup>/h
  - Intake: 10 Pa at 334 m<sup>3</sup>/h - 20 Pa at 467 m<sup>3</sup>/h
- Connection diameter: 180/200 mm
- Material: polypropylene RAL 9005 or RAL 8004
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with universal roof tile
  - Lead replacement material
  - Possibility for different angles of inclination
  - Compatible with most types of roof tiles
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 369 x 301 x 456 mm [L x W x H]
  - Universal roof tile: 532 x 400 mm [L x W]



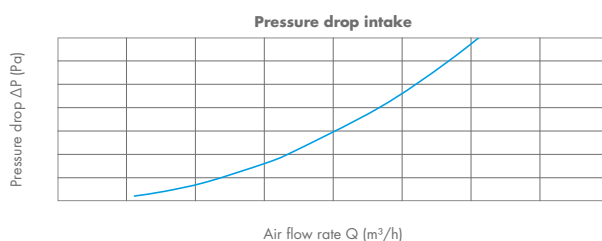
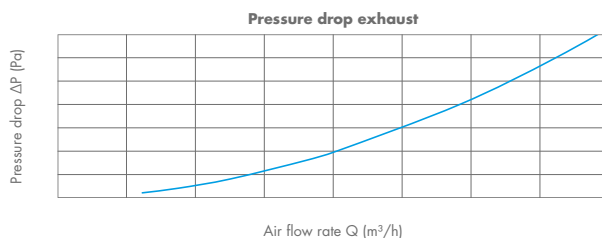
66014152



66014154



### CURVES PRESSURE DROP [exhaust-intake]



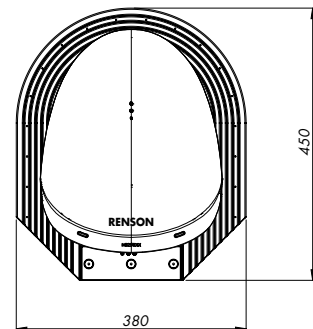
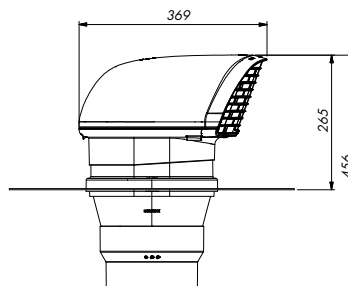
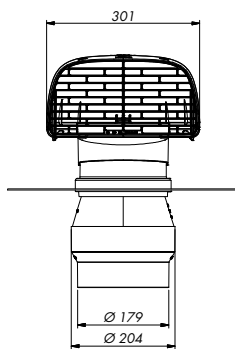
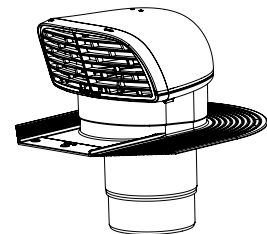
$\Delta p$ [Pa]	Intake Q [m <sup>3</sup> /h]	Exhaust Q [m <sup>3</sup> /h]
1	110	120
2	153	173
4	214	249
8	300	359
10	334	404
20	467	584
30	568	723

# DESIGN ROOF EXHAUSTS

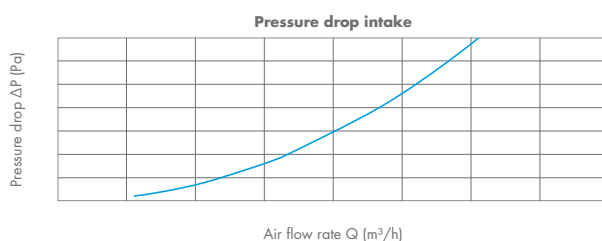
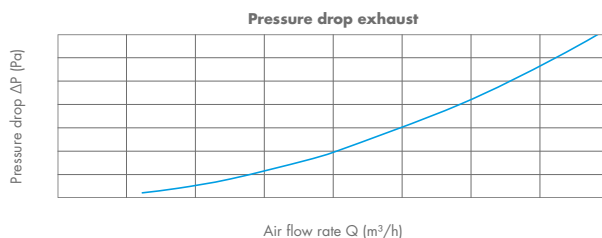
## Technical data sheet design roof exhaust XL for slate roofs - 66014153

### PRODUCT CHARACTERISTICS

- Low pressure drop:
  - Exhaust: 10 Pa at 404 m<sup>3</sup>/h - 20 Pa at 584 m<sup>3</sup>/h
  - Intake: 10 Pa at 334 m<sup>3</sup>/h - 20 Pa at 467 m<sup>3</sup>/h
- Connection diameter: 180/200 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with slate roof tile
  - Lead replacement material
  - Possibility for different angles of inclination
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 369 x 301 x 456 mm [L x W x H]
  - Slate roof tile: 450 x 380 mm [L x W]



### CURVES PRESSURE DROP (exhaust-intake)



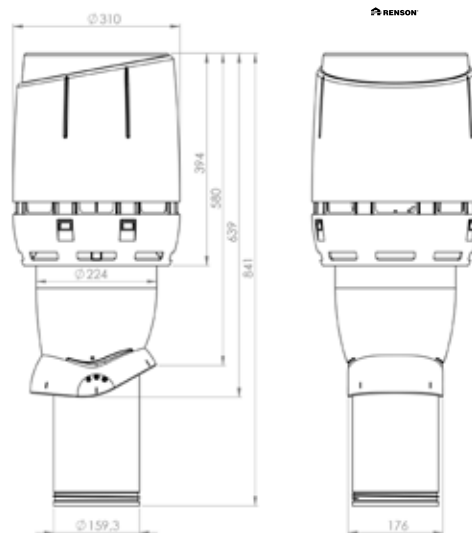
$\Delta p$ [Pa]	Intake $Q$ [m <sup>3</sup> /h]	Exhaust $Q$ [m <sup>3</sup> /h]
1	110	120
2	153	173
4	214	249
8	300	359
10	334	404
20	467	584
30	568	723

# DESIGN ROOF EXHAUSTS

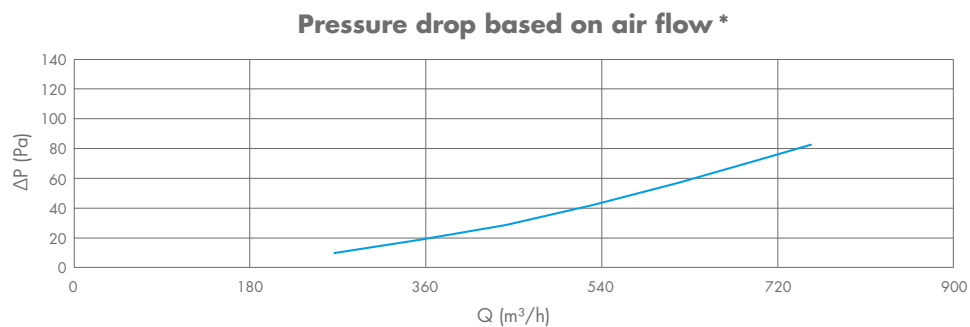
## Technical data sheet design roof exhaust XL for flat roofs - 66014263

### PRODUCT CHARACTERISTICS

- Low pressure drop
- Connection diameter: 160 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Insulated with polyurethane and Styrofoam
- For flat roofs with an angle of inclination up to 11,5°
- Compatible with the EPDM collar (66032305) for flat EPDM roofs
- Built-in spirit level for a perfect installation
- Aesthetic design with internal mechanism against water penetration
- Removable top part for cleaning, if necessary
- Dimensions: 310 x 841 mm (W x H)



### CURVE PRESSURE DROP (exhaust)



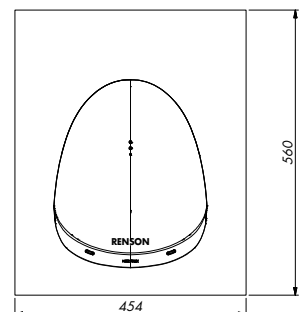
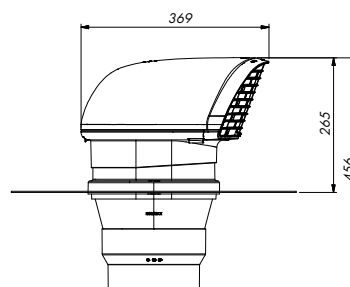
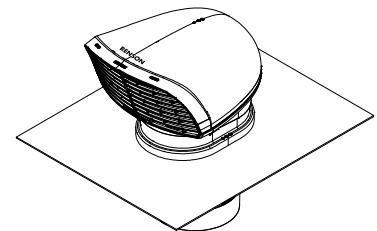
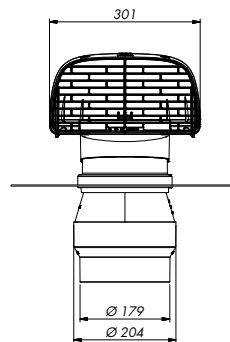
\* Provisional results

# DESIGN ROOF EXHAUSTS

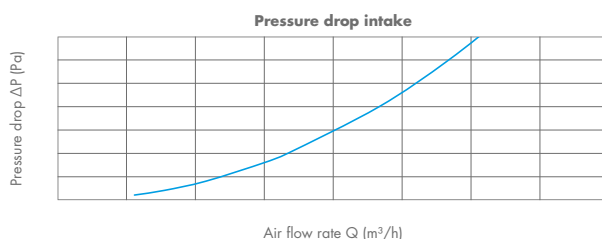
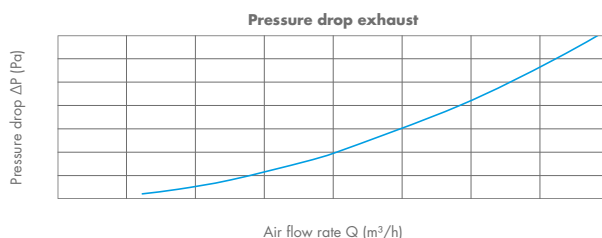
## Technical data sheet design roof exhaust Flex XL - 66014151

### PRODUCT CHARACTERISTICS

- Low pressure drop:
  - Exhaust: 10 Pa at 404 m<sup>3</sup>/h - 20 Pa at 584 m<sup>3</sup>/h
  - Intake: 10 Pa at 334 m<sup>3</sup>/h - 20 Pa at 467 m<sup>3</sup>/h
- Connection diameter: 180/200 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with a fierce lead-free flexible slab:
  - Lead replacement based on silicone with aluminium reinforcement
  - Remains strong and sustainable within a big range of temperatures: -30 °C/+180 °C
  - UV-resistant
  - Does not react with roofing and does not cause stripes
  - Faster to process than lead or other lead replacement materials
  - Easy to crease by hand or by lead beaters
  - Harmless for people and environment and light weighted
- Aesthetic design
- Exhaust parallel with the roof [less fouling]
- Removable louvre for cleaning, if necessary
- Dimensions:
  - Roof exhaust: 369 x 301 x 456 mm [L x W x H]
  - Flexible slab: 560 x 454 mm [L x W]



### CURVES PRESSURE DROP (exhaust-intake)



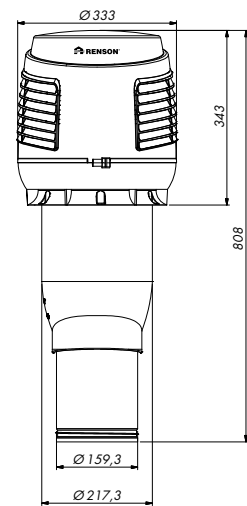
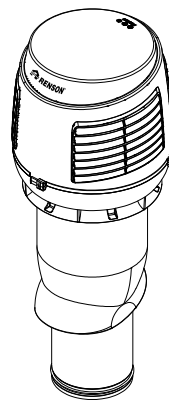
$\Delta p$ [Pa]	Intake Q [m <sup>3</sup> /h]	Exhaust Q [m <sup>3</sup> /h]
1	110	120
2	153	173
4	214	249
8	300	359
10	334	404
20	467	584
30	568	723

# DESIGN ROOF EXHAUSTS

## Technical data sheet roof supply All Weather - 76050402

### PRODUCT CHARACTERISTICS

- Water repellent roof supply: according to EN13030:2001, class A at 3 m/s
- Low pressure drop:
  - Exhaust: 10 Pa at 281 m<sup>3</sup>/h - 30 Pa at 494 m<sup>3</sup>/h
  - Intake: 10 Pa at 180 m<sup>3</sup>/h - 60 Pa at 456 m<sup>3</sup>/h
- Connection diameter: 160 mm
- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Built-in with the roof tiles mentioned below
  - Lead replacement material
  - Possibility for different angles of inclination
  - Compatible with most types of roof tiles
- Aesthetic design with internal mechanism against water penetration
- Removable top part for cleaning, if necessary
- Dimensions: 333 x 808 mm (W x H)

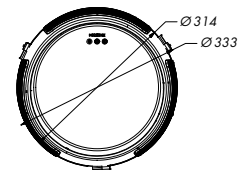
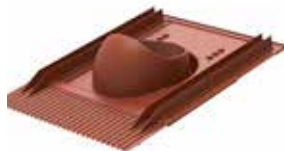
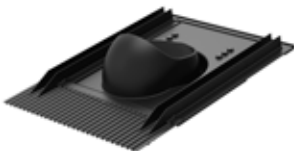


### Installation only in combination with:

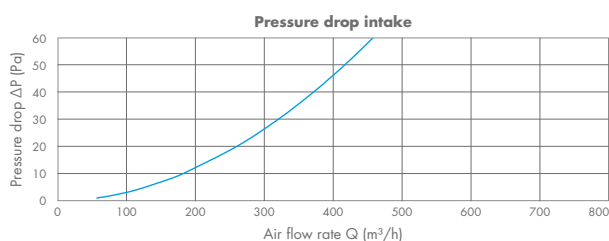
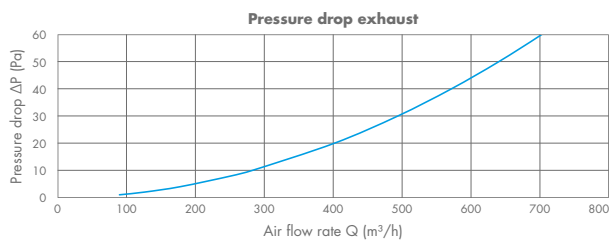
Black - 66032302

Terracotta - 66032303

Felt pass through - 66032304



### CURVES PRESSURE DROP [exhaust-intake]



Δp [Pa]	Intake Q [m <sup>3</sup> /h]	Exhaust Q [m <sup>3</sup> /h]
1	55	86
2	78	123
4	112	176
8	160	251
10	180	281
20	258	401
30	318	494
40	370	573
50	415	642
60	456	705

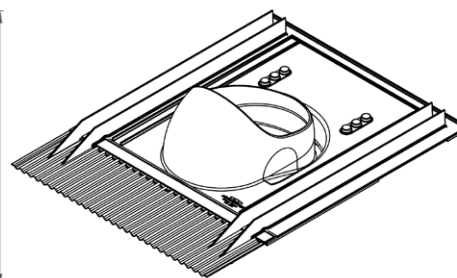
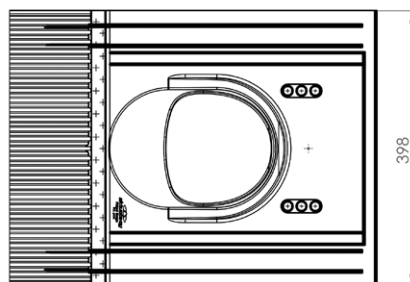
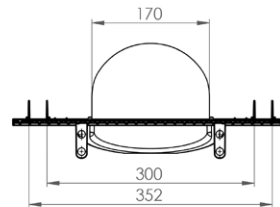
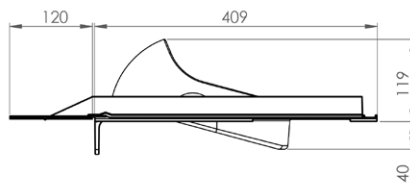
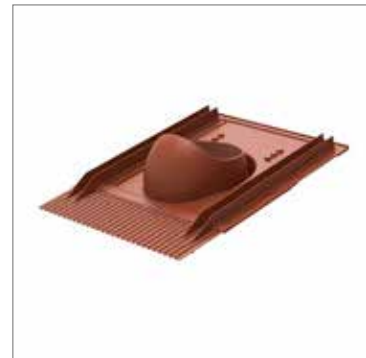


# DESIGN ROOF EXHAUSTS

Technical data sheet universal roof tile - 66032302 - 66032303

## PRODUCT CHARACTERISTICS

- Material: polypropylene RAL 9005 or RAL 8004 and thermoplastic plastic
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- Universal roof tile for all roofs with clay, ceramic and concrete tiles
- Installation with the Roof supply All Weather [76050402]
- Aesthetic design
- Dimensions: 532 x 400 x 255 mm [L x W x H]

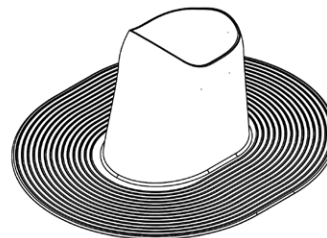
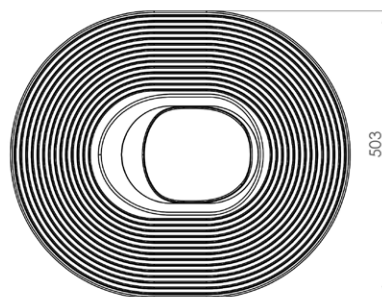
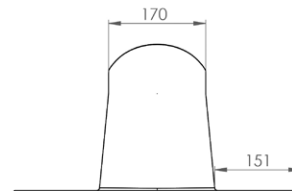
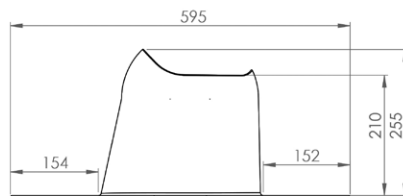


# DESIGN ROOF EXHAUSTS

## Technical data sheet felt pass through flat roof - 66032304

### PRODUCT CHARACTERISTICS

- Material: polypropylene RAL 9005
  - Weather- and shockproof
  - Recyclable
  - Resists constant temperatures between -30 °C and 80 °C
  - UV-protected
- For flat roofs with an angle of inclination up to 11,5°
- Compatible with the EPDM collar [66032305] for flat EPDM roofs
- Easy installation with the Roof supply All Weather [76050402]
- Aesthetic design
- Dimensions: 595 x 503 x 200 mm [L x W x H]

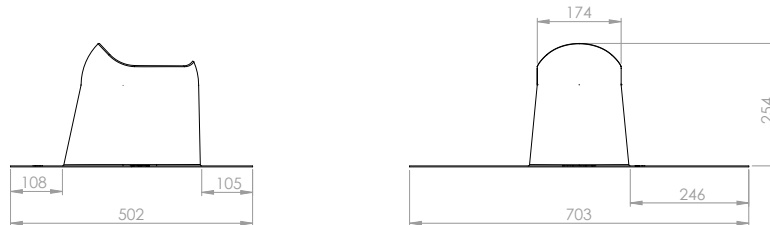


# DESIGN ROOF EXHAUSTS

## Technical data sheet EPDM collar - 66032305

### PRODUCT CHARACTERISTICS

- Material: black EPDM rubber
  - Weather- and shockproof
  - Waterproof for flat EPDM roofs
- Aesthetic design
- Easy installation
- Dimensions: 488 x 583 mm (W x H)
- Compatible with
  - Felt pass through flat roof [66032304]
  - Design roof exhaust for flat roofs [66014262]
  - Design roof exhaust XL for flat roofs [66014263]



# DESIGN ROOF EXHAUSTS

Technical data sheet roof exhaust  $\varnothing 133 / 150$  mm - 66014250 - 66014251

## TYPES

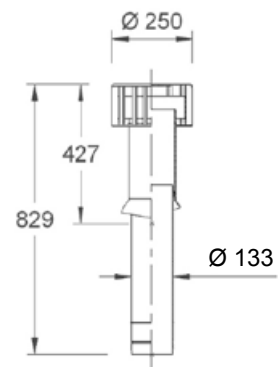
- 66014250 Roof exhaust  $\varnothing 133/150$  mm flat roof
- 66014251 Roof exhaust  $\varnothing 133/150$  mm slightly pitched roof

## PRODUCT CHARACTERISTICS

- Material: PP [sound absorbing]
- Length: 750 mm
- Diameter
  - Inner diameter: 125 mm
  - Outer diameter: 133 mm
- Incl. separate disk, pipe clamp, and adapter to  $\varnothing 150$  mm
- Cap: backdraft damper
- Colour: black
- Upper roof condensation drain

## PRESSURE DROP

	Intake	Exhaust
150 m <sup>3</sup> /h	ca. 20 Pa	ca. 2 Pa
300 m <sup>3</sup> /h	ca. 65 Pa	ca. 5 Pa
350 m <sup>3</sup> /h	ca. 85 Pa	ca. 10 Pa



# DESIGN ROOF EXHAUSTS

Technical data sheet roof exhaust Ø166 / 150 mm - 66014260 - 66014261

## TYPES

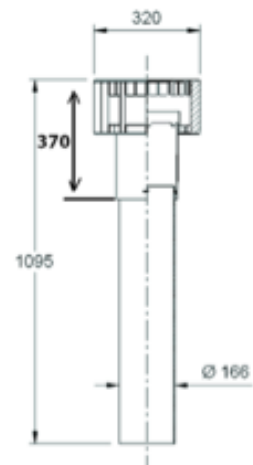
- 66014260 Roof exhaust Ø 166/150 mm flat roof
- 66014261 Roof exhaust Ø 166/150 mm slightly pitched roof

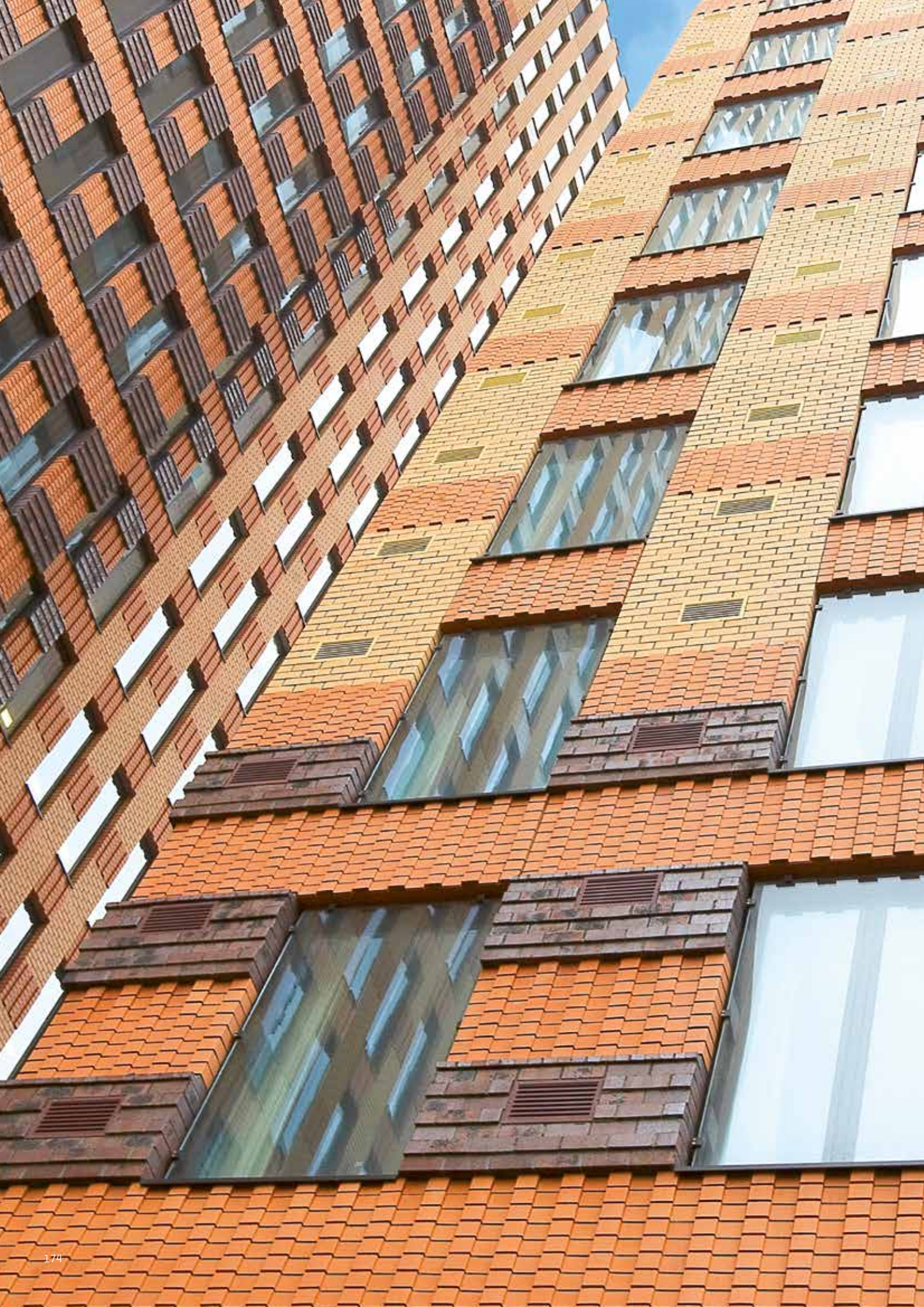
## PRODUCT CHARACTERISTICS

- Material: PP [sound absorbing]
- Length: 1100 mm
- Diameter
  - Inner diameter: 160 mm
  - Outer diameter: 166 mm
- Incl. separate disk, pipe clamp, and adapter to Ø 150 mm
- Cap: backdraft damper
- Colour: black
- Upper roof condensation drain

## PRESSURE DROP

	Intake	Exhaust
150 m <sup>3</sup> /h	ca. 10 Pa	ca. 3 Pa
300 m <sup>3</sup> /h	ca. 25 Pa	ca. 5 Pa
350 m <sup>3</sup> /h	ca. 30 Pa	ca. 5 Pa





# WALL EXHAUSTS

## Wall exhaust

Wall exhaust satin anodised  
Wall exhaust white RAL9010  
Wall exhaust brown RAL8019  
300x300 mm  
Ø160 - Ø150

**66114053**  
**66614053**  
**66714053**



## Wall exhaust

Wall exhaust black RAL7021 Ø150  
Wall exhaust wit RAL9016 Ø150  
Wall exhaust black RAL7021 Ø180  
Wall exhaust wit RAL9016 Ø180  
With drainage

**76050001**  
**76050002**  
**76050003**  
**76050004**







# WALL EXHAUSTS

Technical data sheet wall exhaust: 66114053 - 66614053 - 66714053

The plenum of the wall exhaust is attached to the grid.

## AVAILABLE MODELS

According to the available colors of the grid:

- Satin anodised [20 micron] [66114053]
- White RAL 9010 [66614053]
- Brown RAL 8019 [66714053]

## DIMENSIONS

Base of the plenum: 286 x 286 mm

Height of the plenum: 78,6 mm

Grid: 325 x 325 mm

Inside diameter: Ø 150 mm

Outside diameter: Ø 157 mm

Structural dimension [fitting dimensions]: 300 x 300 mm  
provide clips for attachment

No insect mesh

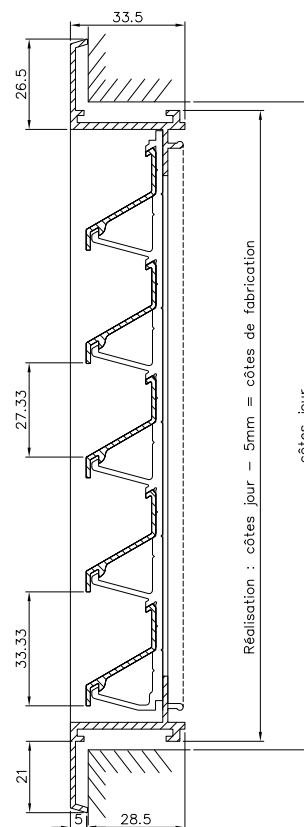
## PRESSURE DROP - FLOW

[when used as exhaust]

$\Delta p$ [Pa]	Q [m <sup>3</sup> /h]
3,8	125
9,3	200
19,8	300
26,5	350
34,1	400
51,8	500
72,9	600



Grille and plenum



# WALL EXHAUSTS

## Technical data sheet wall exhaust: 76050001 - 76050002

### Wall exhaust with drainage

- Drainage to prevent moisture on the facade

### AVAILABLE MODELS

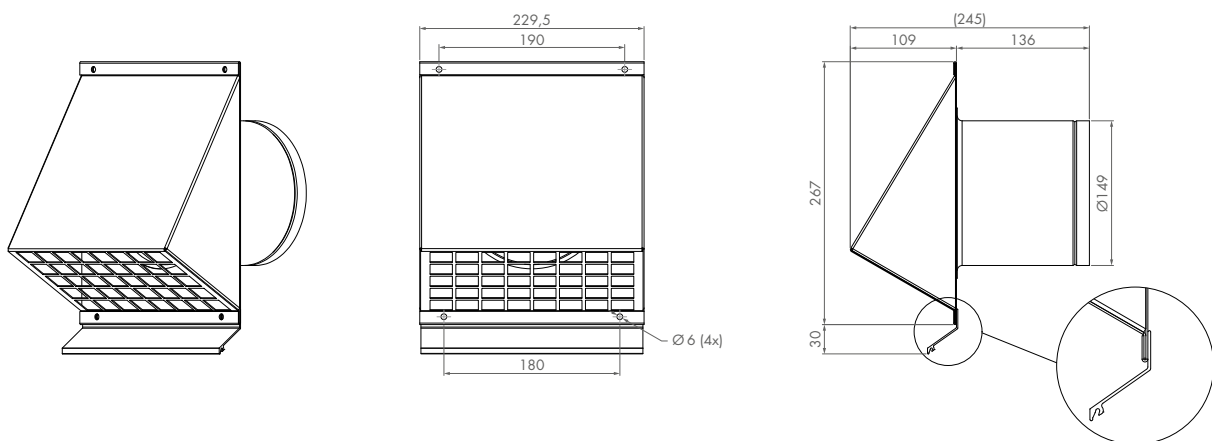
According to the available colors of the grid:

- Black [76050001]
- White [76050002]



### DIMENSIONS

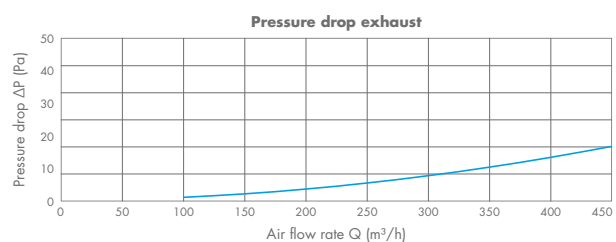
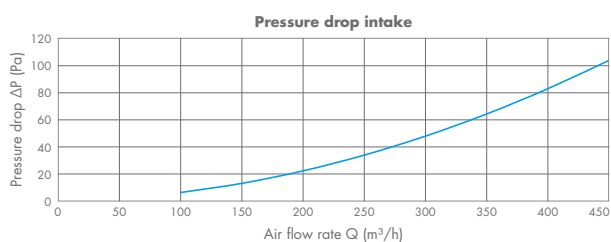
Base of the exhaust: 230 x 267 mm  
 Depth of the exhaust: 109 mm  
 Diameter: Ø 150 mm



### PRESSURE DROP - FLOW

INTAKE	
Q [m³/h]	Δp [Pa]
100	5,7
150	12,5
200	21,7
250	33,4
300	47,4
350	63,7
400	82,3
450	103,3

EXHAUST	
Q [m³/h]	Δp [Pa]
100	2,2
150	4,8
200	8,3
250	12,8
300	18,2
350	24,5
400	31,7
450	39,8



# WALL EXHAUSTS

## Technical data sheet wall exhaust: 76050003 - 76050004

### Wall exhaust with drainage

- Drainage to prevent moisture on the facade

### AVAILABLE MODELS

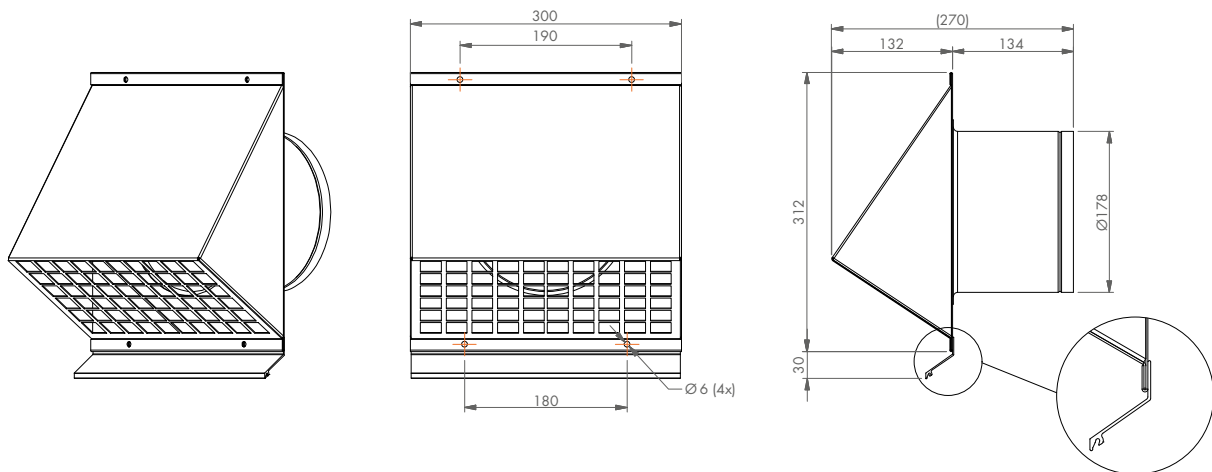
According to the available colors of the grid:

- Black [76050003]
- White [76050004]



### DIMENSIONS

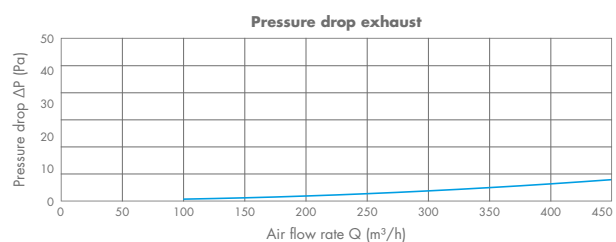
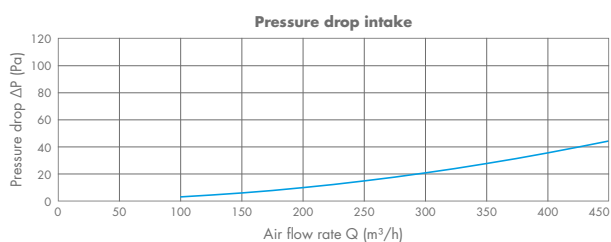
Base of the exhaust: 300 x 312 mm  
 Depth of the exhaust: 132 mm  
 Diameter: Ø 180 mm



### PRESSURE DROP - FLOW

INTAKE	
Q [m³/h]	Δp [Pa]
100	2,5
150	5,4
200	9,4
250	14,3
300	20,2
350	27,1
400	35,0
450	43,8

EXHAUST	
Q [m³/h]	Δp [Pa]
100	0,8
150	1,8
200	3,2
250	4,9
300	6,9
350	9,3
400	12,1
450	15,2





# INDOOR AIR QUALITY MONITOR

IAQ (Indoor Air Quality) is the benchmark for indoor air quality, because a comfortable indoor environment keeps people fresh, work efficient and healthy. The CO<sub>2</sub> concentration is an important indicator for good indoor air quality. The Renson® CO<sub>2</sub> monitor can be a useful tool for this.

Sense

66000010



CO<sub>2</sub> monitor

60017485



Battery CO<sub>2</sub> monitor

60017585





# INDOOR AIR QUALITY MONITOR

## Technical data sheet Sense: 66000010

### SENSE, YOUR INDOOR AIR QUALITY MONITOR

- Renson Sense measures indoor air quality.
- The device displays when air quality is poor and when something needs to be done about it.
- Sense is an objective tool that indicates how healthy or unhealthy the room you're in is.
- It provides illuminated colour-coded feedback along the rim in three different colours: light blue [good], orange [moderate], and red [poor].
- As soon as Sense detects changes in the comfort index levels, it automatically illuminates to match those changes.
- In addition, an icon or icons always displays/display to let you know what the polluting factor is.
- The continuous measurement of air quality can be viewed live with the app 'SENSE'. Historical data can be consulted and exported via the professional portal: Renson Dashboard. The data will be collected up to one year.
- Installation & configuration: via mobile application 'Sense' and/or Renson Link [desktop application for professional users].
- The device does not show measured values on the display itself.



### SCOPE OF APPLICATION

Sense can be installed in various environments:

- Ideal for placement in indoor spaces, such as the living room, playroom or bathroom, kitchen, laundry room and corridor.
- Ideal for placement in professional indoor spaces, such as companies, schools, governmental offices and public spaces.

SENSE can be left free-standing or be mounted against the wall, between waist and eye level. However, the cable supplied must always be mounted correctly.

This device needs to be used indoors in a dry location and do not place it close to doors or windows. Avoid liquid contact with Sense.

### PRIMARY FEATURES

- Objective measurement device for monitoring air quality, with integrated sensors active 24 hours a day
- Sensors: relative humidity, temperature, VOC [Volatile Organic Compounds] – odour, CO<sub>2</sub>, light and sound
- Direct feedback of the results
- Real-life environment can be accessed via the app and historical data can be consulted via the Renson Dashboard.
- Schools: continuous measurement makes it possible to check whether the room satisfies the requirements of the Belgian Royal Decree [indoor air quality must be OK 95% of the time] For more details, see below.

### RENSON DASHBOARD FOR PROFESSIONALS

The Renson Dashboard gives a clear overview of the data of all devices. The air quality in the home, school, office or workplace can be monitored in a user-friendly way.

- The Renson Dashboard includes the possibility to monitor the data of all sensors.
- The Renson Dashboard shows the history of all these sensors and gives you the possibility to export the data via chosen time intervals.
- Historical data can be consulted up to one year back.

### ARTICLE CODE

Article code	Name	Primary content	Technical specifications plug-in
66000010	Sense	Motor, cable, and adapter	230V - Type CEF
66000024	Sense UK/IRL	Motor, cable, and adapter	230V - Type G

# INDOOR AIR QUALITY MONITOR

## Technical data sheet Sense: 66000010

### SPECIFICATIONS

Sensor	Range
CO <sub>2</sub>	NDIR CO <sub>2</sub> sensor Measuring range: 400-5000ppm Accuracy: +/-5% + 40ppm [in range: 400-2000ppm]
Relative humidity	Measuring range: 0-100% Accuracy: +/-2% [in range: 10-90%]
VOC	Relative, i.e. signals whenever the Volatile Organic Compounds change
Temperature	Measuring range: -10°C -> +60°C Accuracy: +/-0.2°C [in range: 0- 60°C]
Light	No range specified
Sound	29 dBA up to 120 dbA <sup>(1)</sup>

<sup>(1)</sup> Only sound volumes are measured and no sound recordings are transmitted.

The sensors activating LED feedback (blue, orange, or red) are based on the comfort index.

#### So, what is the comfort index?

The RENSON COMFORT INDEX is a representation of the 'comfort' in a specific room. Based on data from various sensors, Renson determines an indication of the comfort, taking air quality, thermal comfort, and noise into account.

The Renson comfort index is by no means an absolute value, but a guideline value based on scientific analysis of factors that influence indoor comfort, such as CO<sub>2</sub>, temperature, relative humidity, VOCs, noise, etc.

If any change is detected in the quality levels, the LED rim will illuminate with the appropriate quality colour code.

This index was created internally and is the result of extensive laboratory research.

The Sense offers 3 ways to measure indoor air quality:

- Comfort index-based, incorporating all available sensors
- Selection of sensors via the mobile application
- CO<sub>2</sub>-based only, with colour-code illumination based on the following values:

**Blue** CO<sub>2</sub> concentration of less than 800 ppm.  
The air quality is good.

**Orange** CO<sub>2</sub> concentration of 800 ppm up to 1,200 ppm.  
Caution: air quality is degrading – please take appropriate action.

**Red** CO<sub>2</sub> concentration 1,200 ppm (legal maximum according to Belgian Royal Decree on Indoor Air Quality in Workplaces) and higher. The classroom air quality is poor. Please refresh the indoor air.

If Sense is set as a CO<sub>2</sub> monitor, the other available sensors will still measure the indoor air quality as they will be viewable in the app.

Sense is no ordinary monitor; it's a device that measures CO<sub>2</sub> concentration as per the Belgian Royal Decree on Indoor Air Quality in Workplaces [Numac: 2019201857] and meets the following requirements:

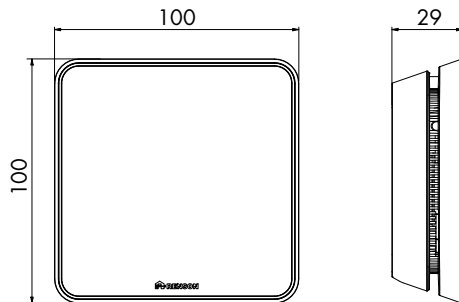
- continuous operation on standard electrical voltage with no settings disruption resulting from temporary power outages
- automatic sensor calibration
- includes a CO<sub>2</sub> meter at minimum, with:
  - a measuring range of at least 400 to 5,000 ppm
  - an operating temperature of 0-50°C
- ±5% reading accuracy +40 ppm [within a range of 400-2,000 ppm]
- measuring interval is at least 5 minutes
- alerts indoor air quality problems with clear indicators
- has at least 3 signal levels, colour coded to facilitate timely action
- comes standard with a communication interface [e.g. Wi-Fi, 3G, etc.] for connecting to the local network and/or internet
- the CO<sub>2</sub> concentration must either be readable on a clear display on the device itself or easily accessible using a mobile app on a smartphone, PC, etc.
- an option to store separate sensor data for at least 12 months in a digital log file and history is available via a PC app/report system
- ideally includes additional sensors to record light, temperature, humidity, or VOC values should the RD Indoor Air Quality in Workplaces requirements be expanded in future



# INDOOR AIR QUALITY MONITOR

Technical data sheet Sense: 66000010





## TECHNICAL DRAWINGS



## TECHNICAL SPECIFICATIONS

<b>Connection voltage</b>	5V/2,4A max.
<b>Wi-Fi</b>	802.11 b/g/n @2.4GHz Link via app plus Sense confirmation button Link always possible via WPS
<b>Dimensions and weight</b> - Device - Packaging - Device weight + packaging	100 x 100 x 29 mm [LxWxH] 135 x 135 x 88 mm [LxWxH] 375 g
<b>Wi-Fi Security</b>	WPA, WPA/WPA2, WPA2, WPA2 Enterprise [limited supported by Sense]. For more information on compatibility with your network, please contact <a href="mailto:service@renson.be">service@renson.be</a> .

## OTHER FEATURES

<b>Automatic help screens</b>	The app helps you navigate the initialisation process with useful tips.
<b>Software updates</b>	When Sense is online, the latest updates will always download automatically.
<b>User app</b>	Free download from Google Play [Android] & App Store [Apple]. <a href="http://www.my-llo.eu/apps/sense">http://www.my-llo.eu/apps/sense</a>    
<b>Renson Dashboard</b>	Get insights on the data of all your Sense devices. Free of charge via <a href="https://dashboard.renson.eu">https://dashboard.renson.eu</a>
<b>API solution</b>	With our 3rd party cloud API integration, Sense can be easily built into your building management system. For more info contact us at <a href="mailto:service@renson.be">service@renson.be</a>
<b>Supported browsers Renson Dashboard</b>	Google Chrome, Mozilla Firefox, Microsoft Edge [Chromium], Apple Safari on Mac OS
<b>Renson Link - Desktop application for professional users</b>	Operating system: Windows 10 [from version 1607] Platform: x64, x86, Arm64 Required Disk Space: 350 Mb Minimum RAM: 8 Gb
<b>IP classification</b>	IP20 [can only be used in zone 4 of the bathroom]
<b>Privacy Policy</b>	<a href="http://www.renson.eu/privacy">www.renson.eu/privacy</a>

# CO<sub>2</sub> MONITOR

## Technical data sheet - G0017485

### DESCRIPTION

IAQ is a measuring tool for the quality of indoor air, since the comfortable indoor environmental quality keeps people working efficiently, healthy and feeling well.

CO<sub>2</sub>-concentration is an important indicator for good quality of indoor air. Therefore the Renson CO<sub>2</sub> monitor can be a useful tool.

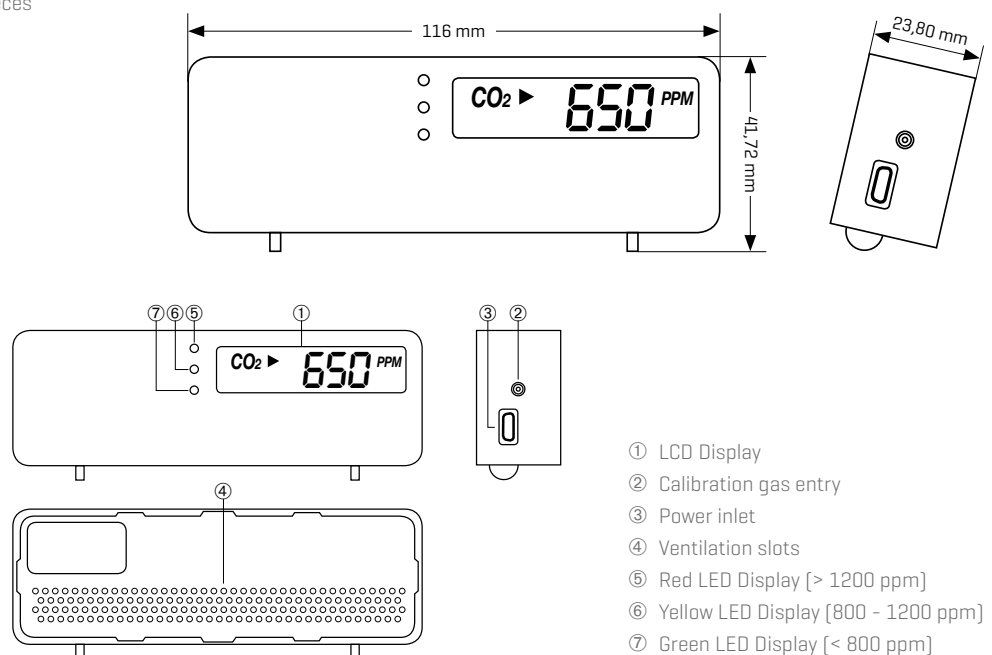


### PRODUCT CHARACTERISTICS

- Colour: black
- CO<sub>2</sub> measurement range: 0 - 3000 ppm
- Operational temperature: 0 - 50 °C
- Accuracy: 0 - 2000 ppm: ±7%, > 2000 ppm: ±10%
- AC/DC adapter: not included [Battery CO<sub>2</sub> monitor G0017585 can be bought separately]
- DC output range: 5 VDC / 300 mA
- 3 LEDs: current Indoor Air Quality [IAQ]
- Communication interface: Windows XP, Windows 7
- USB function
- Data logging:
  - Real time graph: temperature and CO<sub>2</sub>
  - History: date, time, temperature and CO<sub>2</sub>

### PACKAGING

- Art. No.: G0017485
- Dimensions: 116 x 38 x 23,8 mm
- Packaging: per 4 pieces



# BATTERY CO<sub>2</sub> MONITOR

## Technical data sheet - G0017585

### DESCRIPTION

The Renson CO<sub>2</sub> monitor (G0017485) becomes portable thanks to the Battery CO<sub>2</sub> monitor, a handy gadget with which electrical devices can be charged if there is no socket nearby.

The CO<sub>2</sub> monitor can be used longer to measure the Indoor Air Quality (IAQ) on different locations. Moreover, the Battery CO<sub>2</sub> monitor can be used for other purposes as well, such as charging a smartphone or tablet.



### PRODUCT CHARACTERISTICS

- Colour: black
- Material: aluminium
- Capacity: 2200 mAh
- Charging time: 2 hours
- Type of battery: Lithium-ion
- Indication of the charging status:
  - red while charging
  - off when fully charged
  - blue when completely depleted
- Output: 5V/1A
- USB connector

### PACKAGING

- Art. No.: G0017585
- Dimensions: 93 x 22 x 21 mm
- Packaging: per 18 pieces



# RENSON® ACADEMY

## **Why?**

The proper functioning of our products does not only depend on the quality, but also on the correct installation and adjustment by the installer. As manufacturer, we also ensure that these installers deliver good work.

## **How do we manage this?**

Installers receive a thorough technical training at our training centre. Our experienced installers show them how to install everything correctly.

## **The result?**

Properly working systems that ensure the comfort and health of the residents and meet all the technical and quality requirements.

# RENSON® PRE- & AFTERSALES

## **Why?**


A specific project? We look for a suitable solution together with you. We can also help you with questions about installation.

## **How do we manage this?**

A team of technically trained employees is ready with a suitable answer to all your questions.

## **Result?**

For every project, there is a suitable solution and an excellent after-sales service.



Get inspired in our showroom  
EXIT5 at Waregem along the E17

E X I T 5

EXPERIENCE, INNOVATION & TECHNOLOGY @ RENSON

## WE'D BE HAPPY TO HELP YOU!

Our head office - the elegant building designed by the late architect Jo Crepain, which has been the visiting card of our company for many years - is now being renovated. The bottom part of the building now has an imposing glass façade. Behind the façade, there is a new 'Customer Centre' with reception rooms for customers, conference rooms, and an auditorium, where large groups of more than 300 people can participate in presentations. In case of smaller groups, this auditorium can also be divided into 3 separate rooms.

The highlight of the project is the new showroom of 1250 m<sup>2</sup>, where professional customers as well as private individuals can be accommodated. Apart from a showroom for Renson®'s various innovative solutions and concepts, it is planned to make this room a knowledge centre, where customers can walk in and ask questions about ventilation, heating, sun protection, ventilative cooling, acoustics, interior, etc., .... In short: everything to provide the home with all the necessary comfort. There is also the possibility to view the solutions in practice in show houses located nearby.

*For more information about the network of Renson® ambassadors, please visit our website at: [www.renson.eu](http://www.renson.eu)*

# RENSON®: YOUR PARTNER IN VENTILATION, SUN PROTECTION, AND OUTDOOR CONCEPTS

- **Creating healthy spaces**

With experience dating back to 1909, we develop energy-efficient total solutions that provide healthy and table indoor environments. Our remarkable head office, built according to the Healthy Building Concept, perfectly reflects our corporate mission.

- **No speed limit on innovation**

A multidisciplinary team of more than 90 R&D employees continuously optimises our products and develops innovative total concepts.

- **Strong in communication**

Contact with the customer is of the utmost importance. Our own exterior sales team, with more than 100 members of staff worldwide and a strong international distribution network, is available to advise you on-site. EXIT 5 in Waregem also gives you the opportunity of personally experiencing our products and provides continuous training to our installers.

- **A reliable partner in business**

Thanks to our environmentally friendly and modern production facilities (including automatic powder-coating installation, anodisation unit, PVC injection moulding, mould-making), with a total surface area of 95,000 m<sup>2</sup>, we can always guarantee optimal quality and service to our customers.





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