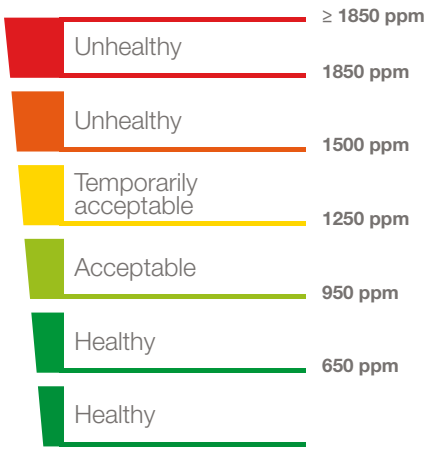
WHY VENTILATE?

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_2 MONITOR

The CO_2 concentration is an important indicator for good indoor air quality and can be measured with the Renson® CO_2-monitor. The air quality becomes expressed in CO_2 particles per million air particles. (ppm = parts per million).

The maximum assumed value is 1200 ppm CO_2. Above this value, people may suffer headache, drowsiness, fatigue or irritation of the mucous membranes at a CO_2 concentrations above 1000 ppm the concentration ability decreases.

SYSTEM ENDURA DELTA

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

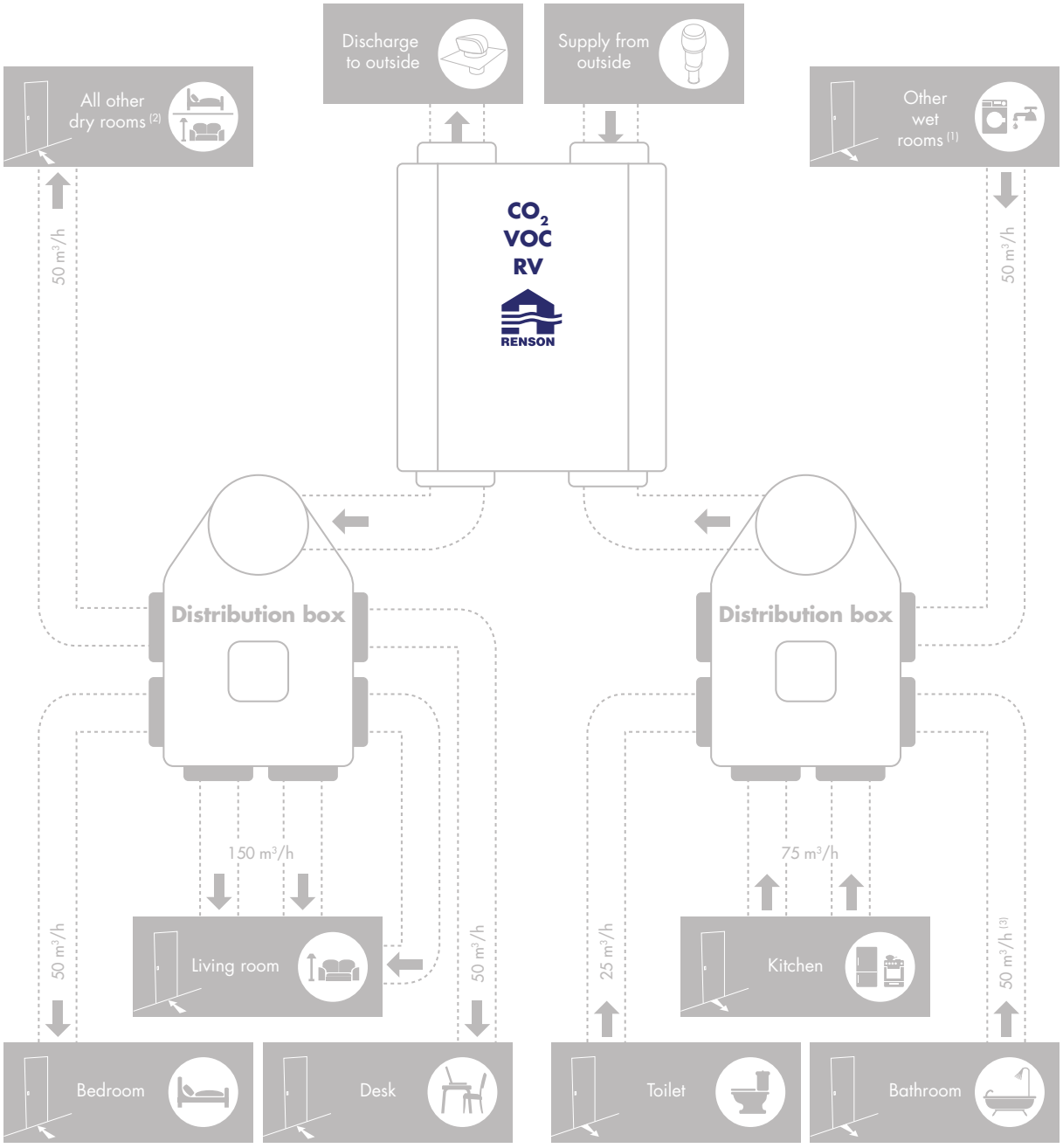
Endura® Delta 330 T2/B2

Endura® Delta 380 / 450 T2/B2

Demand-controlled, central ventilation with heat recovery.

SYSTEM ENDURA DELTA

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



Throughput as Supply

Throughput as Extraction

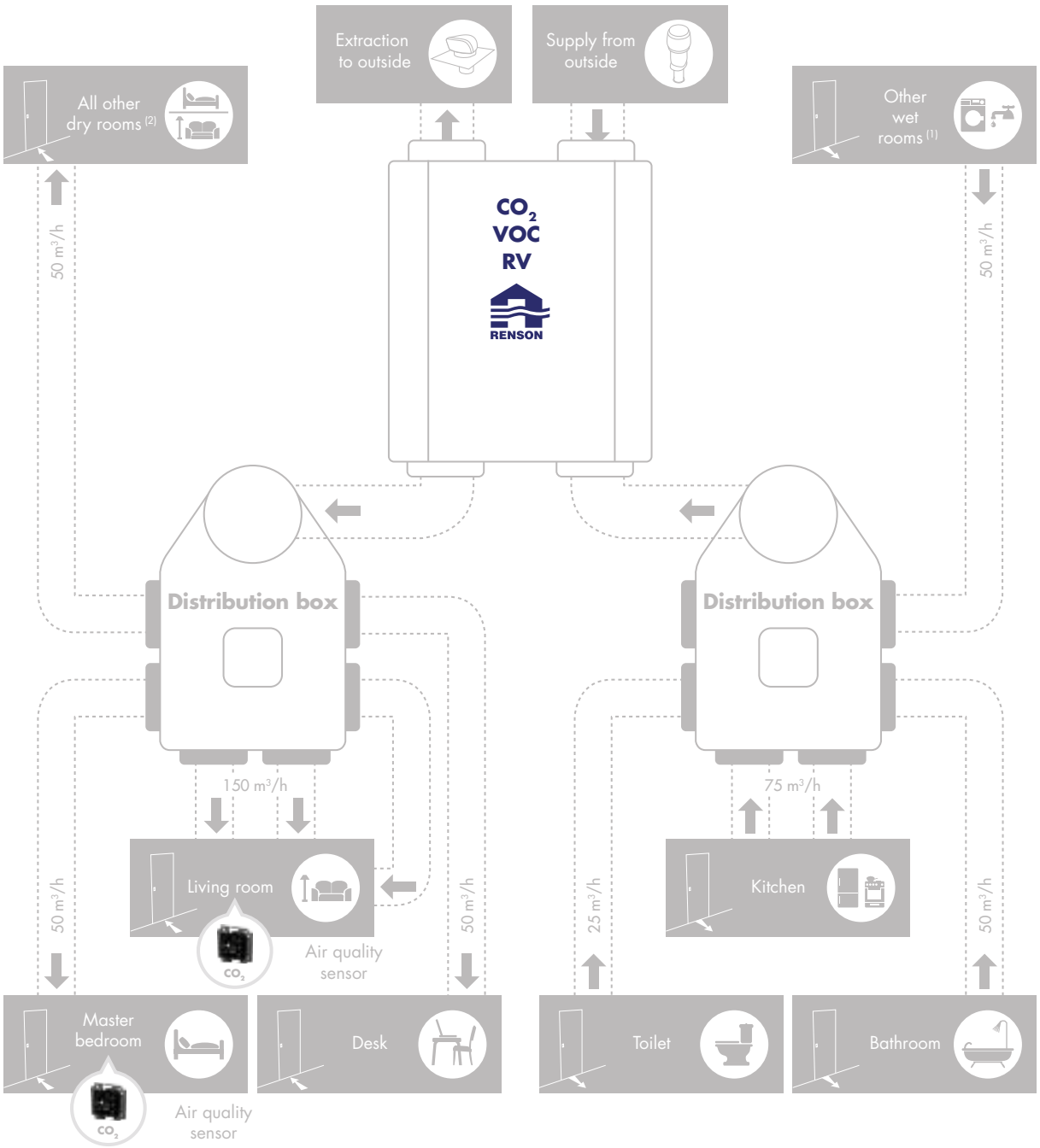
Shading factors	
$f_{reduc,vent,heat}$	= 0,93
$f_{reduc,vent,cool}$	= 1,00
$f_{reduc,vent,overheat}$	= 1,00

Building application from 2015 onwards

RV = Relative humidity detection VOC = Volatile organic components detection CO_2 = Carbon dioxide detection
The displayed air flows 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
Starting at 57 m3/h split it into 2 channels for additional acoustic comfort.

SYSTEM ENDURA DELTA

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



Throughput as Supply

Throughput as Extraction

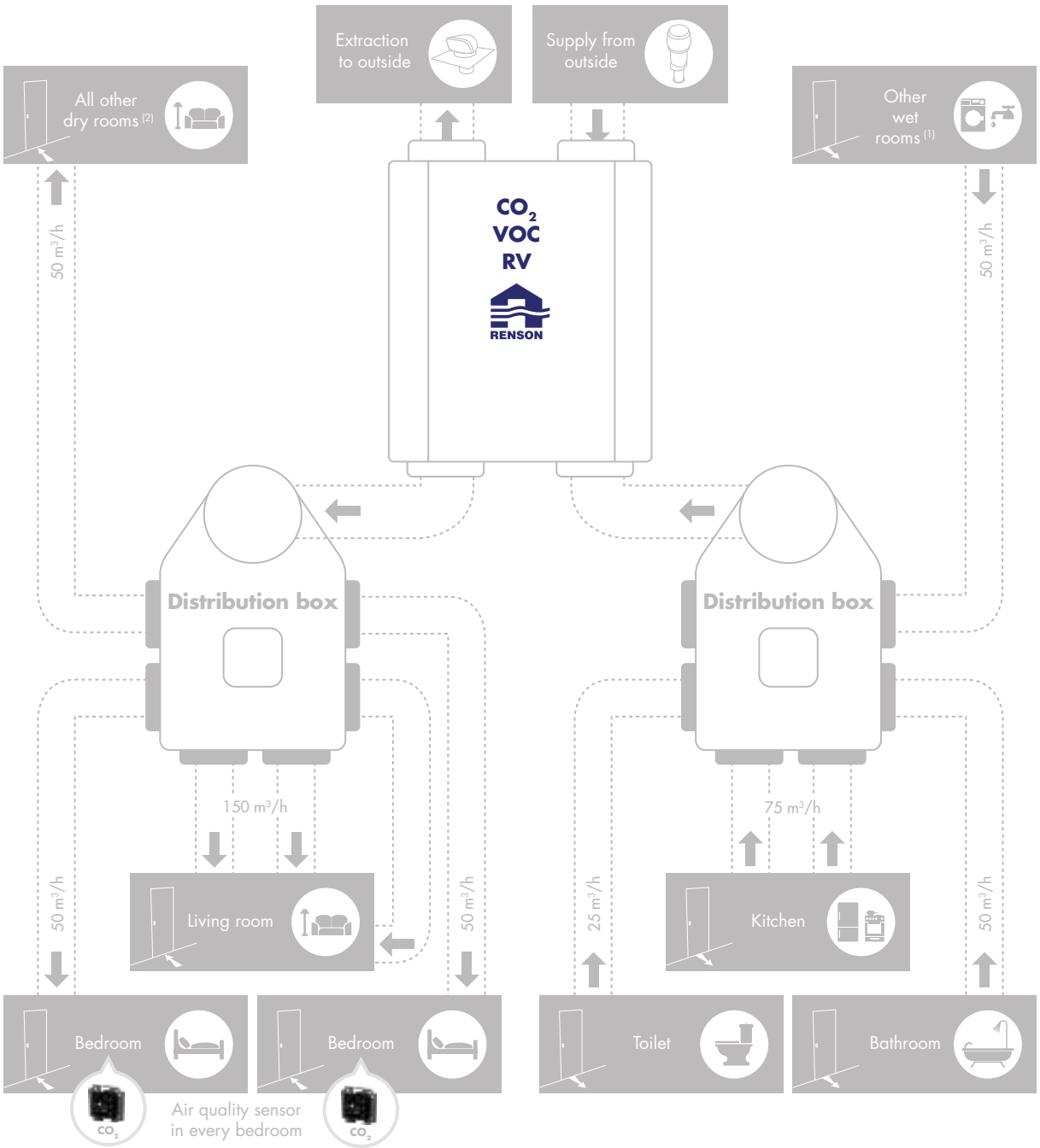
Shading factors	
$f_{reduc,vent,heat}$	= 0,87
$f_{reduc,vent,cool}$	= 1,00
$f_{reduc,vent,overheat}$	= 1,00

Building application from 2015 onwards

RV = Relative humidity detection VOC = Volatile organic components detection CO_2 = Carbon dioxide detection
The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.
(1) Laundry room, drying room or analogue room
(2) Study, playroom or analogue room
Starting at 57 m3/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.

SYSTEM ENDURA DELTA

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



Throughput as Supply

Throughput as Extraction

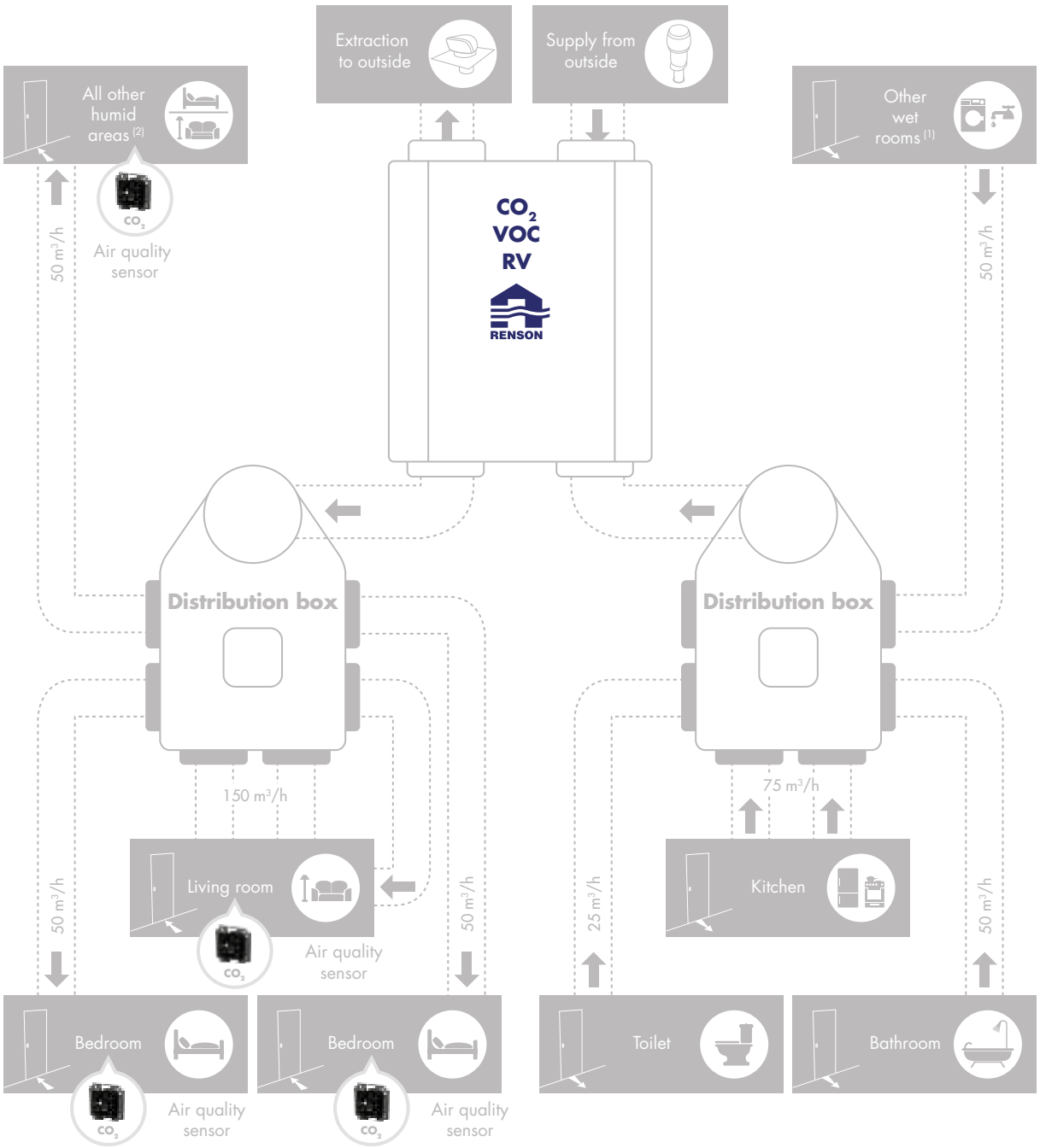
Shading factors	
$f_{reduc,vent,heat}$	= 0,70
$f_{reduc,vent,cool}$	= 1,00
$f_{reduc,vent,overheat}$	= 1,00

Building application from 2015 onwards

RV = Relative humidity detection VOC = Volatile organic components detection CO_2 = Carbon dioxide detection
The displayed air flows are only indicative. . Minimum air flow to be determined in accordance with EPB decision.
(1) Laundry room, drying room or analogue room
(2) 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.

SYSTEM ENDURA DELTA

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



Throughput as Supply

Throughput as Extraction

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

Building application from 2015 onwards

RV = Relative humidity detection VOC = Volatile organic components detection CO_2 = Carbon dioxide detection
The displayed air flows are only indicative. Minimum air flow to be determined in accordance with EPB decision.
(1) Laundry room, drying room or analogue room
(2) Study, playroom or analogue room
Starting at 57 m³/h split it into 2 channels for additional acoustic comfort.
Valid if all dry areas are equipped with an air quality sensor.

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

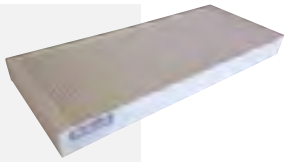
Note: Standard left-version, can be easily converted to right-version
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater.


330 T4


380 / 450
T2/B2

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

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	G0013135
Easyflex® distribution box straight 160 6 fastening brackets included	G0013140
Easyflex® distribution box 8 connections 8 fastening brackets included	G0013136
Easyflex® straight double adaptor ø125	G0013141

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

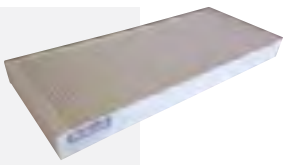
Note: Standard left-version, can be easily converted to right-version
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater


330 T4


380 / 450 T2/B2

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

Design valves

SQair supply valve (Deluxe)	76050400
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Distribution box

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Easyflex® distribution box straight 160 6 fastening brackets included	G0013140
Easyflex® distribution box 8 connections 8 fastening brackets included	G0013136
Easyflex® straight double adaptor ø125	G0013141

Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection (data)	76050330
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76050331

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

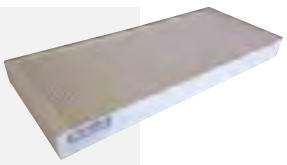
Note: Standard left-version, can be easily converted to right-version
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater


330 T4


380 / 450 T2/B2

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

Design valves

SQair supply valve (Deluxe)	76050400
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Easyflex® distribution box straight 160 6 fastening brackets included	G0013140
Easyflex® distribution box 8 connections 8 fastening brackets included	G0013136
Easyflex® straight double adaptor ø125	G0013141

Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection (data)	76050330
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76050331

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

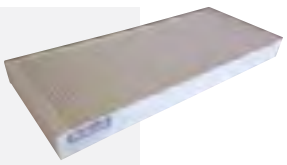
Note: Standard left-version, can be easily converted to right-version
T4 = upper connections - T2/B2 = upper and lower connections - PH = with preheater


330 T4


380 / 450 T2/B2

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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Distribution box

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Easyflex® distribution box 8 connections 8 fastening brackets included	G0013136
Easyflex® straight double adaptor ø125	G0013141

Air quality sensor

Master air quality sensor Wired connection to Endura Delta RS232 connection (data)	76050330
Slave air quality sensor Wireless communication with Master air quality Sensor 230V	76050331

TECHNICAL DATA SHEET:

Endura® Delta 330

AREA OF APPLICATION

- Can be used in new constructions
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for energy saving

Endura Delta 330 T4

A+ 49 dB(A) 330 m³/h

Endura Delta 330 T2/B2

A+ 47 dB(A) 330 m³/h

PRODUCT CHARACTERISTICS

EPB product data

- Max. capacity: 330 m³/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 200 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*

TECHNICAL DATA SHEET:

Endura® Delta 330

FUNCTIONS

- Operation
  - According to automatic mode (program)
  - Manual control
  - Timers
  - Via integrated air quality sensors (RH, CO_2 & VOC)
  - Via optional, external air quality sensors
- **Demand-driven ventilation** thanks to integrated air quality sensors
  - Relative humidity
  - VOC (volatile organic compounds)
  - CO_2
  - 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, Windows) on smartphone and tablet

Options

- **Master air quality sensor (76050330)**
  - 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 (76050331)**
  - 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

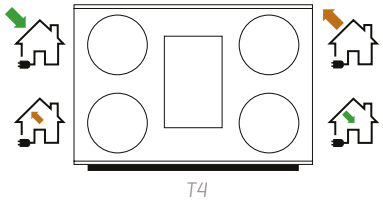
TECHNICAL DATA SHEET:

Endura® Delta 330

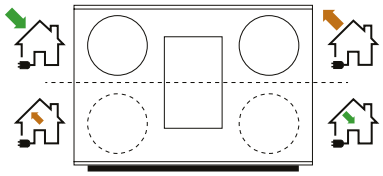
MODELS

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

Endura Delta 330 Left [standard]

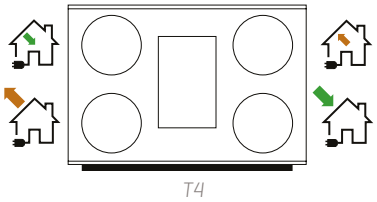


T4

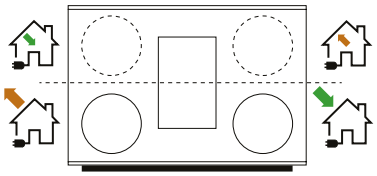


T2/B2

Endura Delta 330 Right [only possible after conversion]

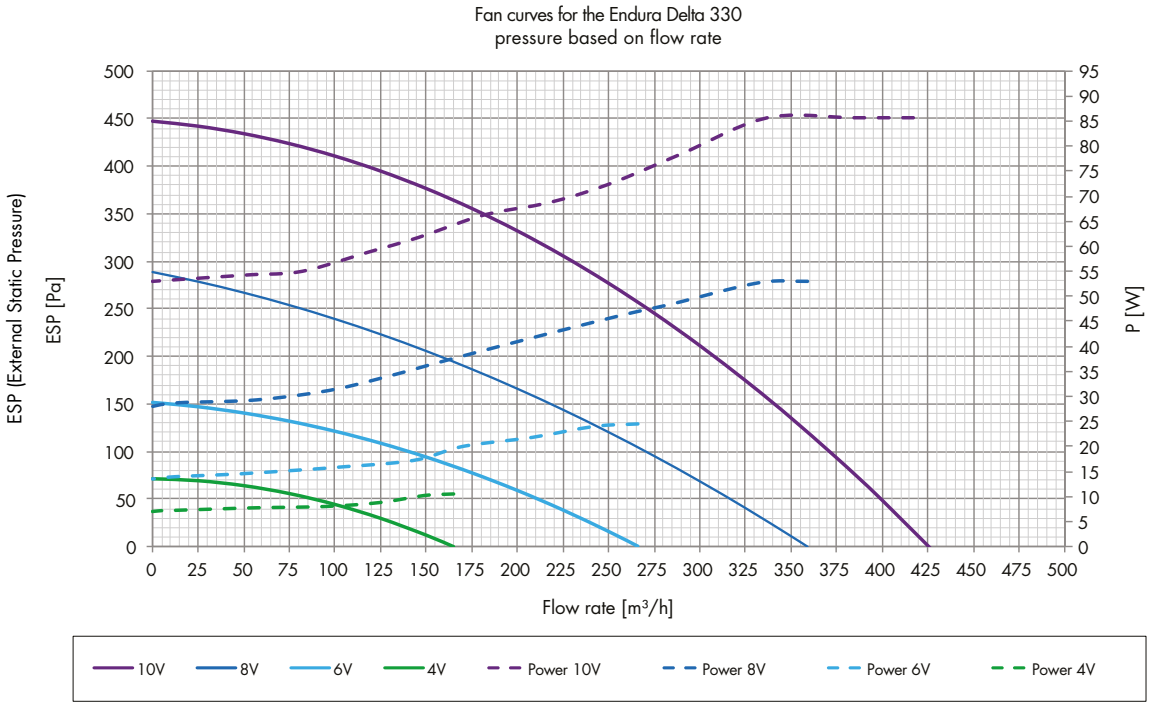


T4



T2/B2

PRESSURE CURVES

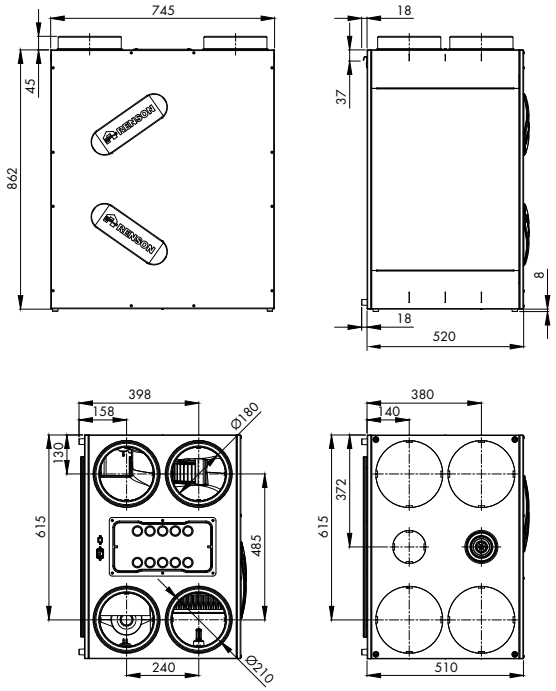


TECHNICAL DATA SHEET:

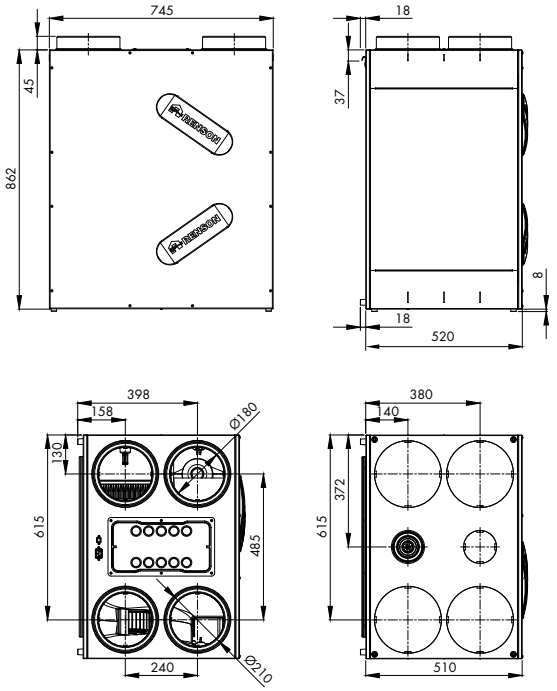
Endura® Delta 330

TECHNICAL DRAWINGS

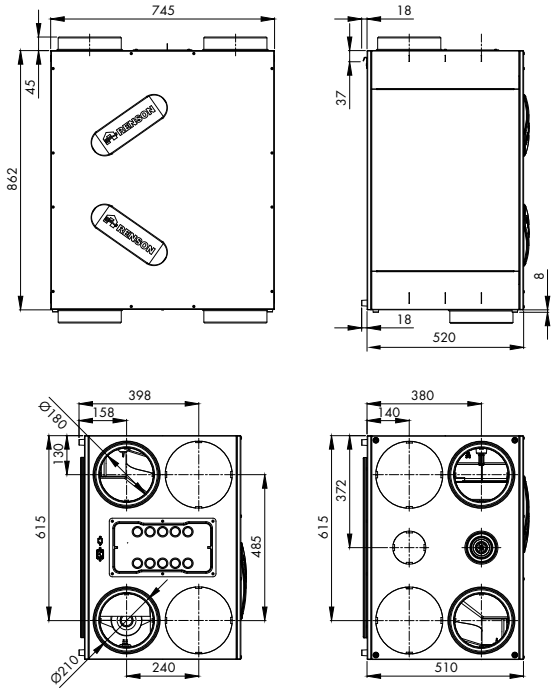
330 T4 Left (standard)



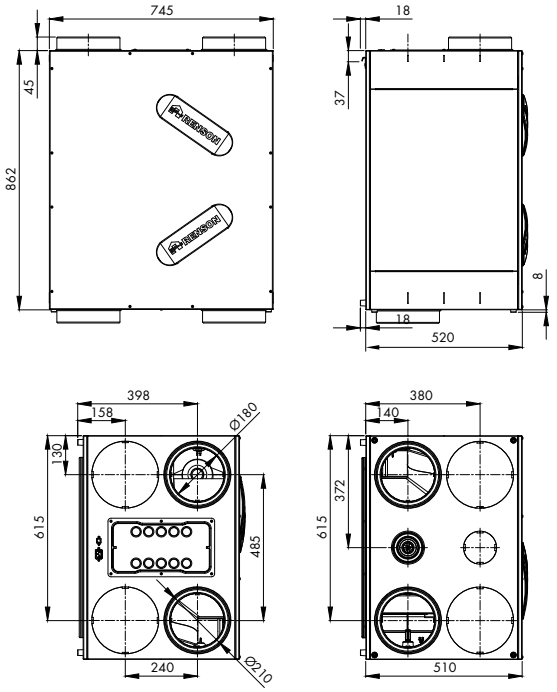
330 T4 Right*



330 T2/B2 Left (standard)



330 T2/B2 Right*



** Only possible after conversion.*

TECHNICAL DATA SHEET:

Endura® Delta 380

AREA OF APPLICATION

- Can be used in new constructions
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for energy saving

Endura Delta 380 T4

A+ 52 dB(A) 380 m³/h

Endura Delta 380 T2/B2

A+ 49 dB(A) 380 m³/h

PRODUCT CHARACTERISTICS

EPB product data

- Max. capacity: 380 m³/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 200 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*

TECHNICAL DATA SHEET:

Endura® Delta 380

FUNCTIONS

- Operation
  - According to automatic mode (program)
  - Manual control
  - Timers
  - Via integrated air quality sensors (RH, CO_2 & VOC)
  - Via optional, external air quality sensors
- **Demand-driven ventilation** thanks to integrated air quality sensors
  - Relative humidity
  - VOC (volatile organic compounds)
  - CO_2
  - 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

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

Options

- **Master air quality sensor (76050330)**
  - 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 (76050331)**
  - 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

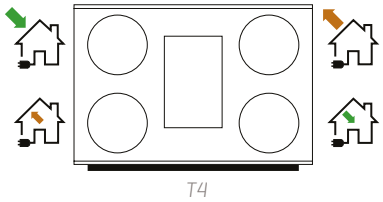
TECHNICAL DATA SHEET:

Endura® Delta 380

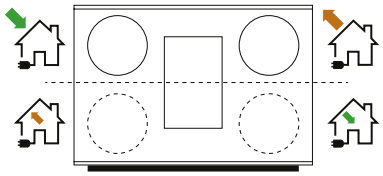
MODELS

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]

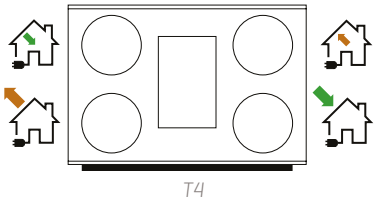


T4

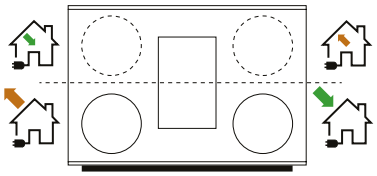


T2/B2

Endura Delta 380 Right [only possible after conversion]

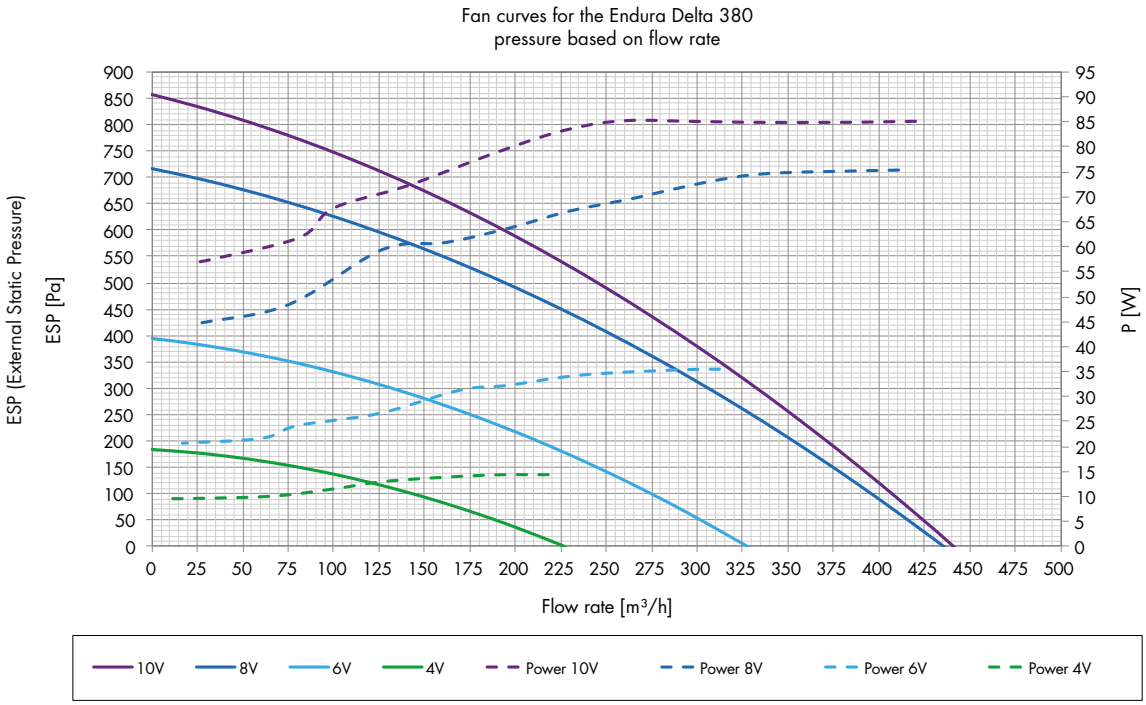


T4



T2/B2

PRESSURE CURVES

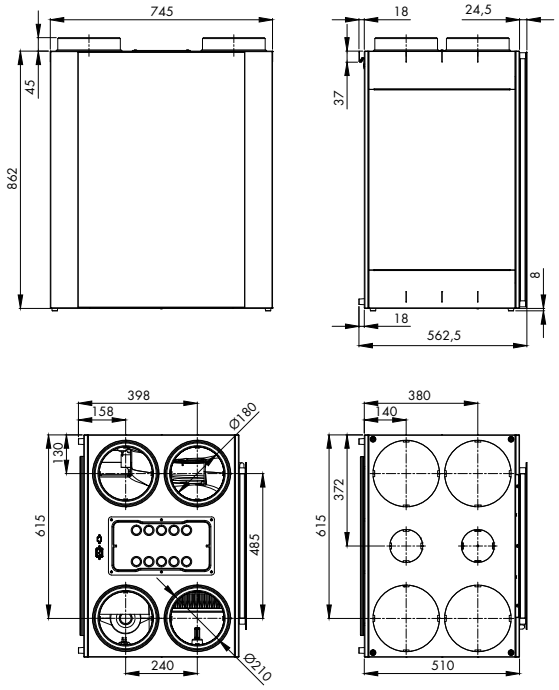


TECHNICAL DATA SHEET:

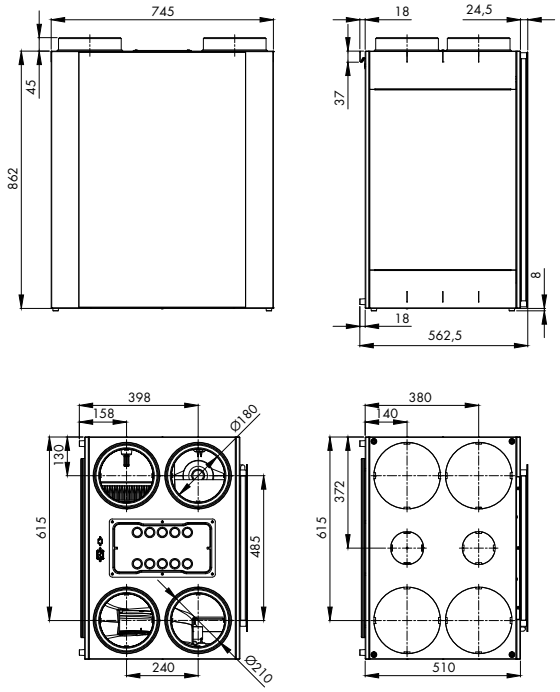
Endura® Delta 380

TECHNICAL DRAWINGS

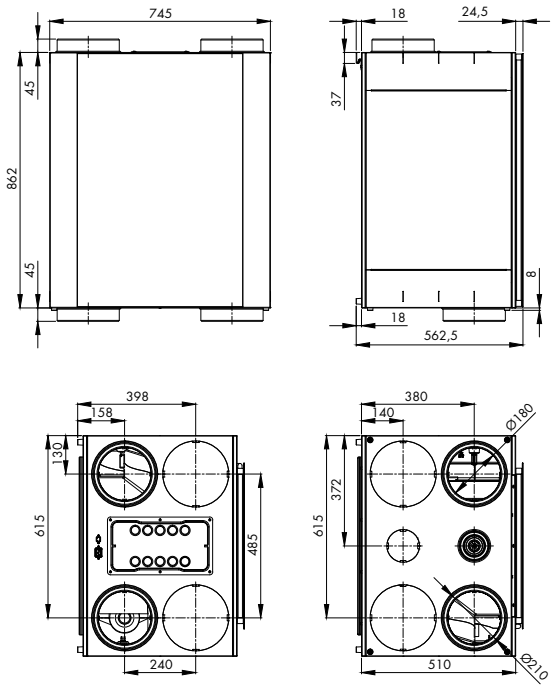
380 T4 Left (standard)



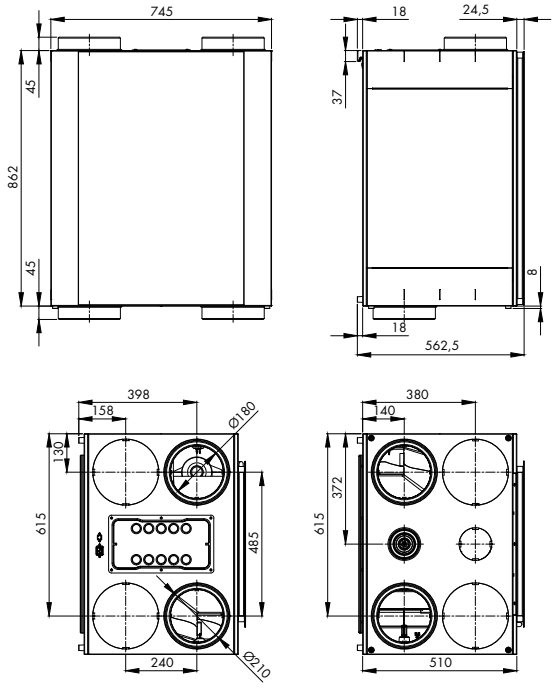
380 T4 Right*



380 T2/B2 Left (standard)



380 T2/B2 Right*



** Only possible after conversion.*

TECHNICAL DATA SHEET:

Endura® Delta 450

AREA OF APPLICATION

- Can be used in new constructions
- Mechanically supplied fresh air
- Mechanically drainage of used air
- Demand-driven ventilation thanks to integrated air quality sensors
- High-efficiency heat exchanger for energy saving

Endura Delta 450 T4

A | 53 dB[A] | 450 m³/h

Endura Delta 450 T2/B2

A | 50 dB[A] | 450 m³/h

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 200 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*

TECHNICAL DATA SHEET:

Endura® Delta 450

FUNCTIONS

- Operation
  - According to automatic mode (program)
  - Manual control
  - Timers
  - Via integrated air quality sensors (RH, CO_2 & VOC)
  - Via optional, external air quality sensors
- **Demand-driven ventilation** thanks to integrated air quality sensors
  - Relative humidity
  - VOC (volatile organic compounds)
  - CO_2
  - 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

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

Options

- **Master air quality sensor (76050330)**
  - 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 (76050331)**
  - 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

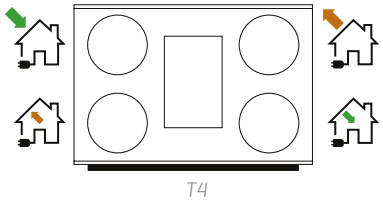
TECHNICAL DATA SHEET:

Endura® Delta 450

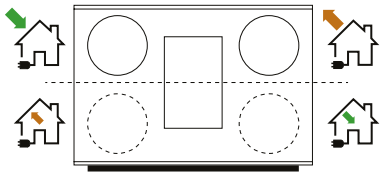
MODELS

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

Endura Delta 450 Left [standard]

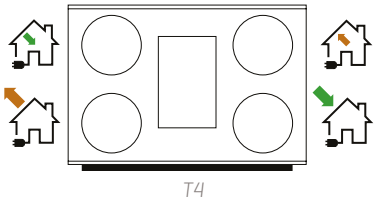


T4

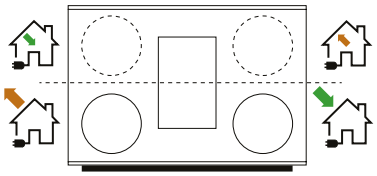


T2/B2

Endura Delta 450 Right [only possible after conversion]

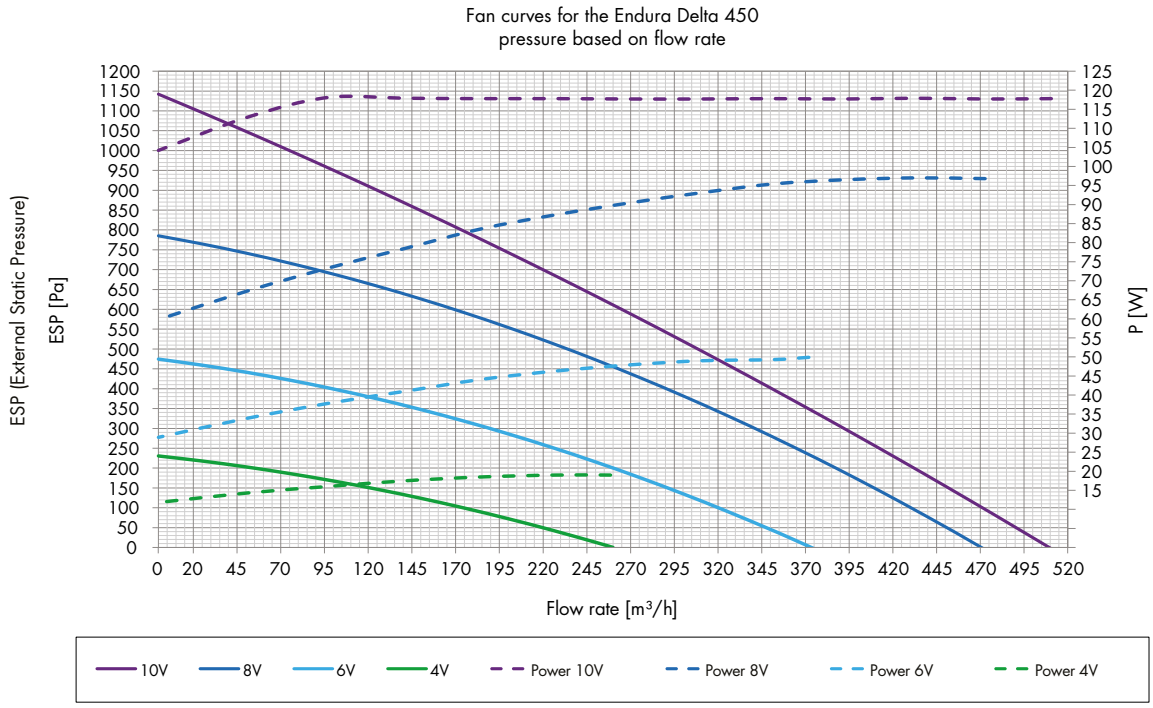


T4



T2/B2

PRESSURE CURVES

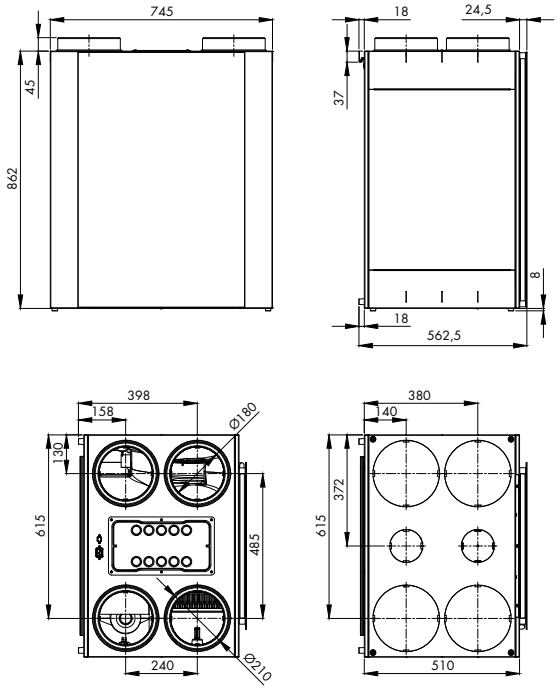


TECHNICAL DATA SHEET:

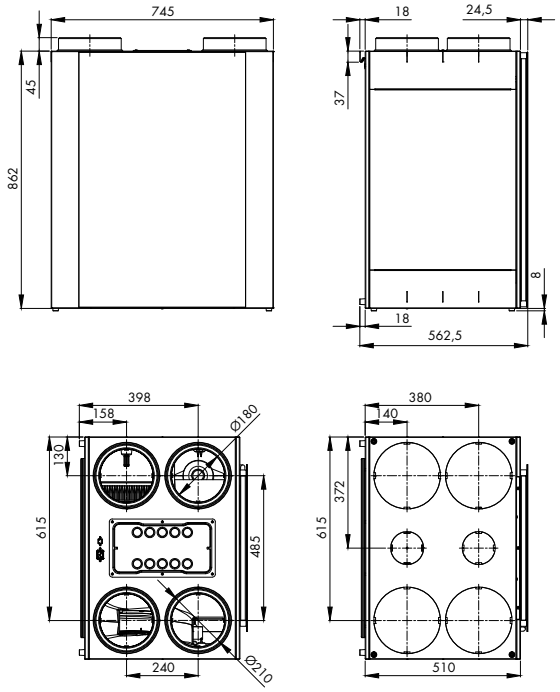
Endura® Delta 450

TECHNICAL DRAWINGS

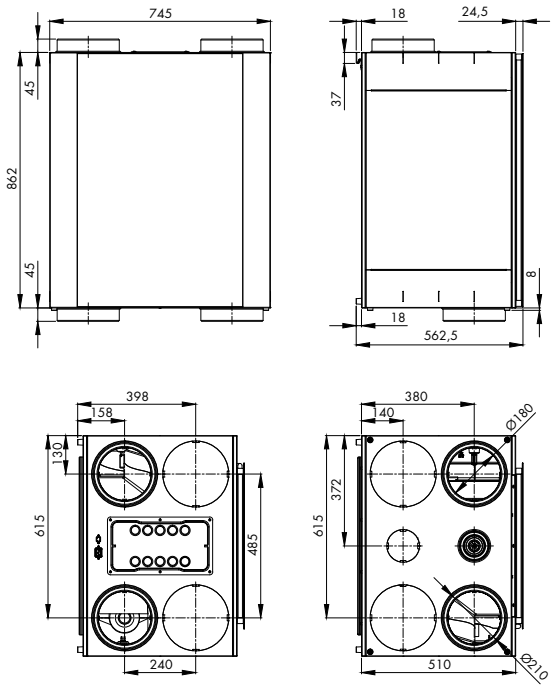
450 T4 Left (standard)



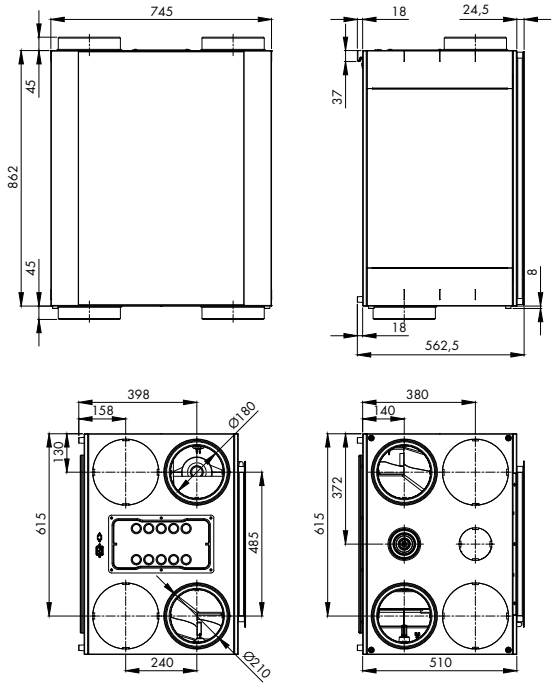
450 T4 Right*



450 T2/B2 Left (standard)



450 T2/B2 Right*

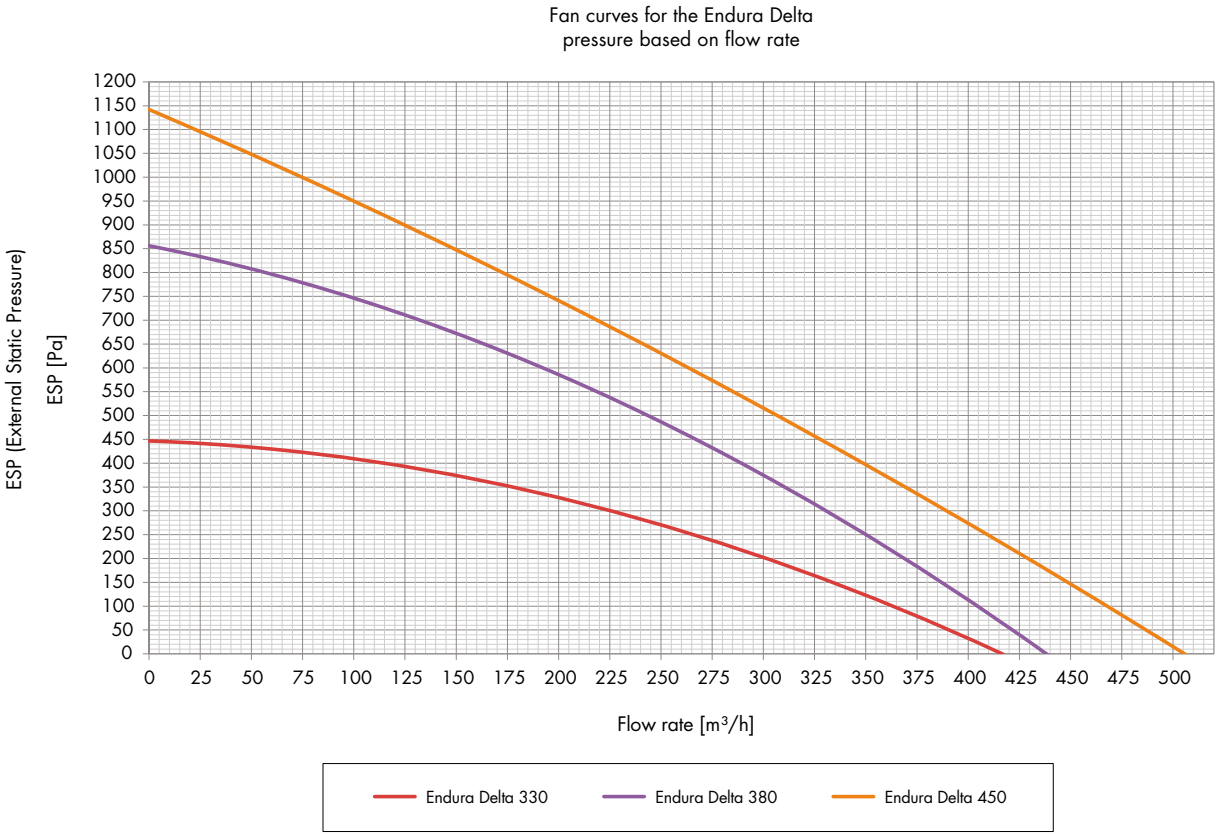


** Only possible after conversion.*

TECHNICAL DATA SHEET:

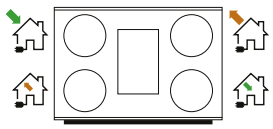
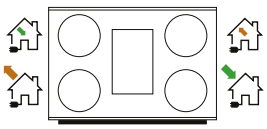
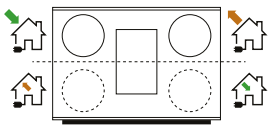
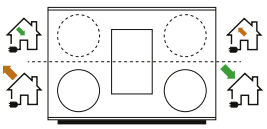
Overview Endura® Delta

COMPARISON ENDURA DELTA 330-380-450



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

T4 (standard)	T4 *	T2/B2 (standard)	T2/B2 *
			

** Only possible after conversion.*

TECHNICAL DATA SHEET:

Overview 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_2 sensor	Integrated temperature sensors Integrated humidity sensor Integrated VOC sensor Integrated CO_2 sensor	Integrated temperature sensors Integrated humidity sensor Integrated VOC sensor Integrated CO_2 sensor

Endura Delta 330 T4
A+ 49 dB[A] 330 m³/h

Endura Delta 380 T4
A+ 52 dB[A] 380 m³/h

Endura Delta 450 T4
A 53 dB[A] 450 m³/h

Endura Delta 330 T2/B2
A+ 47 dB[A] 330 m³/h

Endura Delta 380 T2/B2
A+ 49 dB[A] 380 m³/h

Endura Delta 450 T2/B2
A 50 dB[A] 450 m³/h