# RENEO-FIT D

## Heat and energy recovery air handling units

### Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- Heat recovery minimizes ventilation heat losses during the cold season and reduces air conditioner load during the hot season.
- Controllable air exchange for creating the best suitable indoor microclimate.
- Compaitable with round 160 and 125 mm air ducts.

**Air flow:**
up to 279 m³/h
77.5 l/s

**Heat recovery efficiency:**
up to 89 %

### Design

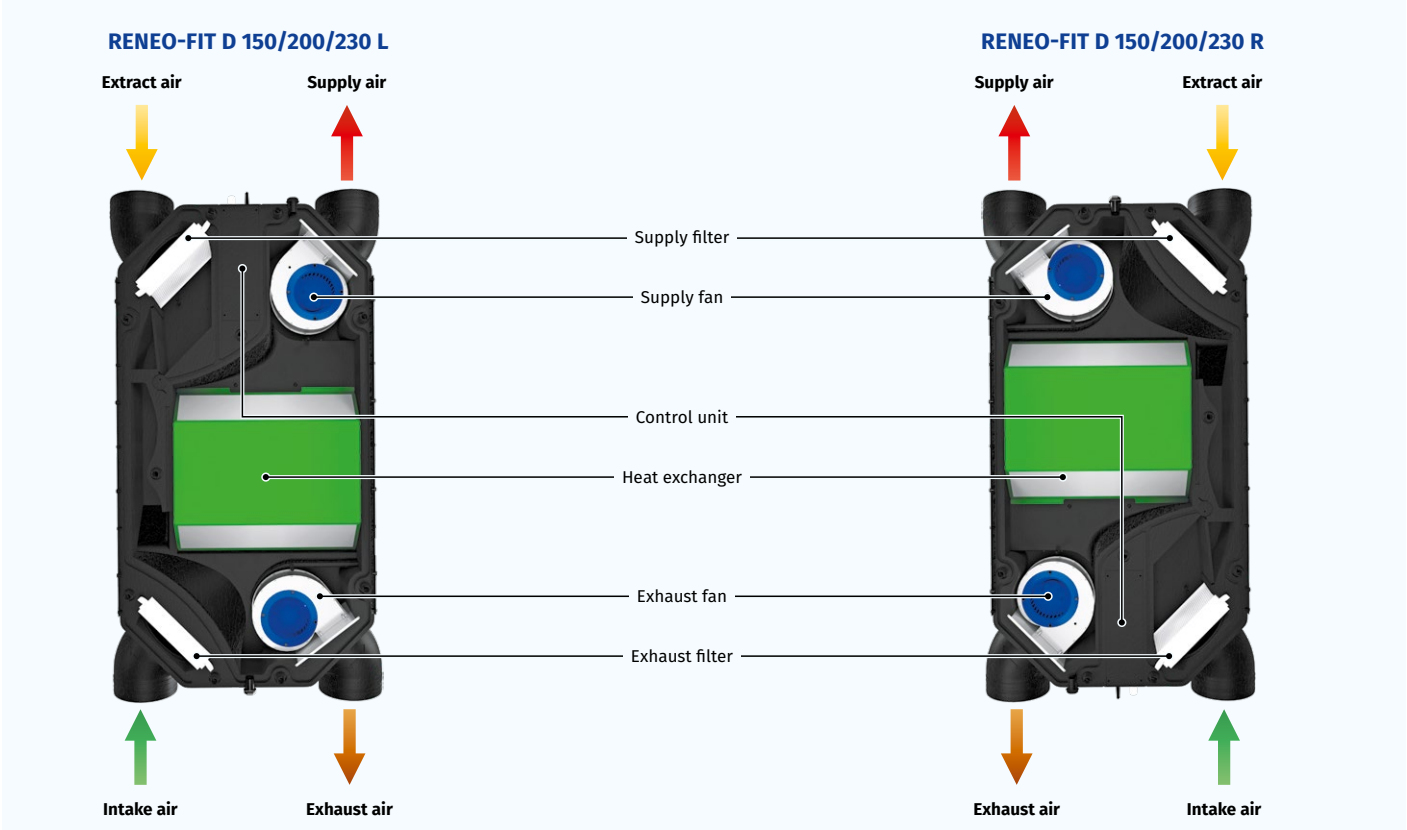
- The casing is made of expanded polypropylene (**EPP**) with high heat- and sound-insulating properties.
- **Reneo-Fit D 150/200/230 L** – left-handed unit.
- **Reneo-Fit D 150/200/230 R** – right-handed unit.
- The **Reneo-Fit D** units have adjustable oriental connection options of the flanges to provide more flexible mounting solutions.

### Fans

- The unit is equipped with high-efficiency **EC** external rotor motors and centrifugal impellers with forward-curved blades.
- **Reneo-Fit D 230(-E) S21 CF** units are availiable with **Constant flow** function – the fans automatically maintain a constant air volume regardless of pressure changes in the duct system. Stable airflow is ensured up to 300 Pa external static pressure.

### Air filtration

- Two built-in **Coarse 90% (G4)** filters provide efficient supply air filtration.
- Supply **ePM1 60% (F7)** filter is available as an option.



## Heat recovery

- The **Reneo-Fit D** unit is equipped with a counter-flow polysterene heat exchanger for heat recovery. The condensate is collected and drained to the drain pan under the heat exchanger.

- The **Reneo-Fit D...-E** unit is equipped with an enthalpy counter-flow heat exchanger for heat and humidity recovery.

## Bypass

- The **Reneo-Fit D** units are equipped with a bypass, which can be opened if there is a need to cool down the ventilated area with cool intake air.

## Mounting

- The units are designed for suspended ceilling mounting, vertical or horizontal wall mounting

## Control and automation

- **Reneo-Fit D S21** units are equipped with an integrated automation system. The remote control panel is not included in the delivery set.
- The S21 controller allows to integrate the unit into the **Smart Home** system or **BMS** (**Building Management System**).
- Unit control is done via Wi-Fi using the mobile application **Blauberg Home**.

Download the **Blauberg Home** app for Android

Download the **Blauberg Home** app for iOS

- The **Reneo-Fit D S14** units are equipped with an integrated automation system and an S14 wall-mounted sensor control panel.

## Automation functions

| Functions | Reneo-Fit D S21 | Reneo-Fit D S14 |
|---|---|---|
| Unit control via Wi-Fi using a mobile application | + | – |
| Unit control via a wired remote control panel | S22 control panel (option) | S14 control panel |
| Unit control via a wireless remote control panel | S22 Wi-Fi control panel (option) | – |
| Unit control via a wired remote LCD control panel | S25 control panel (option) | – |
| BMS (Building Management System) | RS-485 | – |
| | Wi-Fi | – |
| | Ethernet | – |
| | MODBUS (RTU, TCP) | – |
| Blauberg Cloud Server service | + | – |
| Speed selection | + | + |
| Filter replacement indication | by filter timer | by filter timer |
| | by filter clogging differential pressure switch | – |
| Alarm indication | full alarm description in the mobile application | LED alarm indication |
| Week-scheduled operation | + | – |
| Bypass | automatic | – |
| | manual | manual |
| Timer | + | – |
| Boost mode | + | – |
| Fireplace mode | + | – |
| Freeze protection | through cyclic stops of the supply fan | through cyclic stops of the supply fan |
| | through preheating (option) | – |
| Preheater connection | option | – |
| Reheater connection | option | – |
| Minimum supply air temperature control | + | – |
| Humidity control | option | option |
| $CO_2$ control | option | option |
| VOC control | option | – |
| PM2.5 control | option | – |
| Fire alarm sensor connection | option | option |

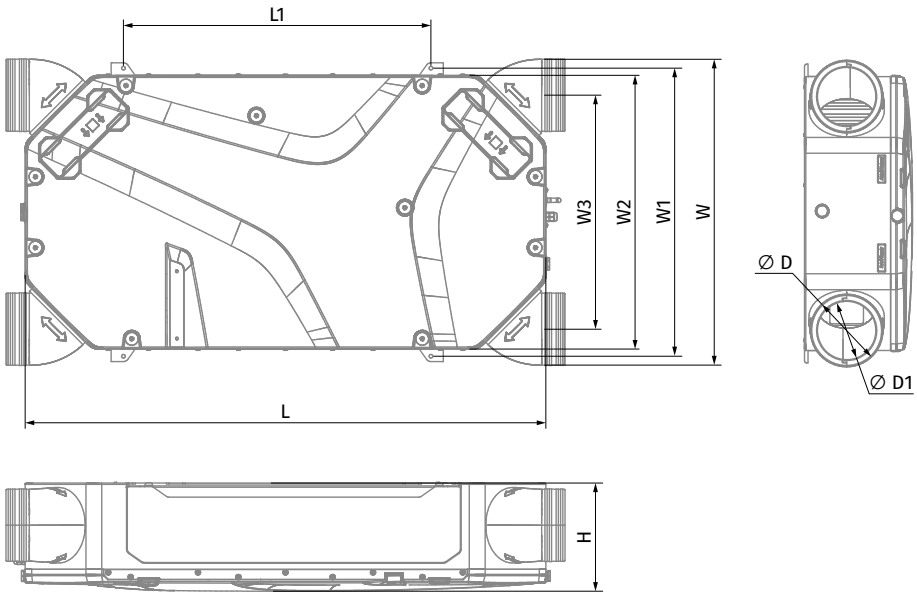
Option: the function is available when purchasing the appropriate accessory (see the "Accessories" section).

## Designation key

| Series | | Casing modifications | Casing | Size | Modification | | Exchanger type | Unit version | Control system | Airflow control |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reneo** | – | **_:** standard<br>**Fit:** compact casing | **D:** suspended | **15:** Nominal airflow | **0:** standard | - | **_:** heat recovery<br>**E:** energy recovery | **L:** left-handed<br>**R:** right-handed | **S21**<br>**S14** | **_:** standard<br>**CF:** constant flow |

## Dimensions [mm]

| Model | ∅ D | ∅ D1 | H | L | L1 | W | W1 | W2 | W3 |
|---|---|---|---|---|---|---|---|---|---|
| **Reneo-Fit D** | 160 | 125 | 242 | 1160 | 685 | 683 | 642 | 610 | 521 |

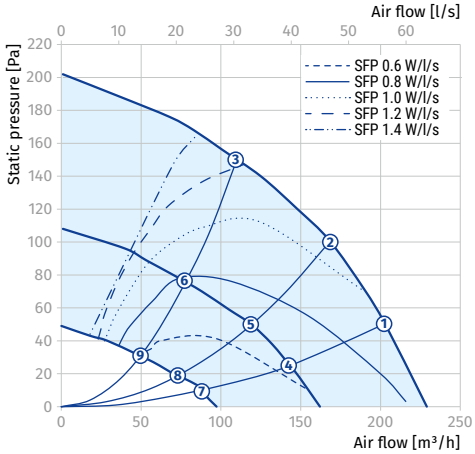


## Technical data

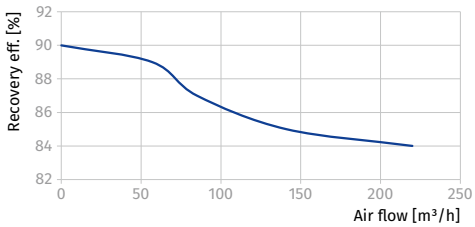
| Parameters | Reneo-Fit D 150 | Reneo-Fit D 150-E |
|---|---|---|
| Voltage [V / 50-60 Hz] | 230 | 230 |
| Max. unit power [W] | 72 | 72 |
| Max. unit current [A] | 0,63 | 0,63 |
| Max air flow [m³/h] | 229 | 229 |
| Sound pressure level at 3 m distance* [dBA] | 27 | 27 |
| Transported air temperature [°C] | −25...+40 | −25...+40 |
| Case material | EPP | EPP |
| Insulation | 25 mm | 25 mm |
| Extract filter | Coarse >60 % | Coarse >60 % |
| Supply filters | Coarse >60 % (option: ePM1 60 %) | Coarse >60 % (option: ePM1 60 %) |
| Connected air duct diameter [mm] | 125 / 160 | 125 / 160 |
| Weight [kg] | 18 | 19,5 |
| Heat recovery efficiency [%] | 89 | 85 |
| Heat exchanger type | Counter-flow | Counter-flow |
| Heat exchanger material | Polysterene | Enthalpy membrane |
| SEC class | A+ | A |

* Sound pressure level [dBA] at 3 m distance is specified at point 4 in average spherical free-field, for comparitive use only

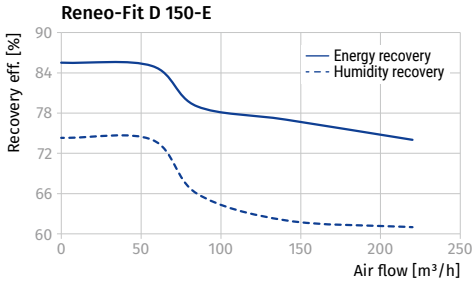
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Point 1** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **59** | 38 | 41 | 45 | 48 | 55 | 34 | 33 | 37 | **40** | **48** |
| $L_{WA}$ to supply outlet [dBA] | **62** | 40 | 43 | 47 | 50 | 58 | 36 | 35 | 39 | **42** | **51** |
| $L_{WA}$ to exhaust inlet [dBA] | **46** | 23 | 26 | 30 | 34 | 40 | 26 | 25 | 24 | **26** | **35** |
| $L_{WA}$ to exhaust outlet [dBA] | **48** | 24 | 27 | 32 | 36 | 42 | 27 | 26 | 25 | **27** | **37** |
| $L_{WA}$ to environment [dBA] | **56** | 37 | 45 | 44 | 47 | 49 | 39 | 36 | 31 | **36** | **45** |
| **Point 4** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **51** | 30 | 33 | 37 | 41 | 46 | 24 | 23 | 25 | **31** | **40** |
| $L_{WA}$ to supply outlet [dBA] | **53** | 32 | 35 | 39 | 43 | 48 | 25 | 24 | 26 | **33** | **42** |
| $L_{WA}$ to exhaust inlet [dBA] | **38** | 15 | 18 | 22 | 25 | 32 | 18 | 19 | 23 | **18** | **27** |
| $L_{WA}$ to exhaust outlet [dBA] | **40** | 16 | 19 | 23 | 26 | 34 | 19 | 20 | 24 | **19** | **28** |
| $L_{WA}$ to environment [dBA] | **48** | 28 | 36 | 35 | 37 | 41 | 29 | 24 | 24 | **27** | **37** |




Reneo-Fit D 150




Reneo-Fit D 150-E

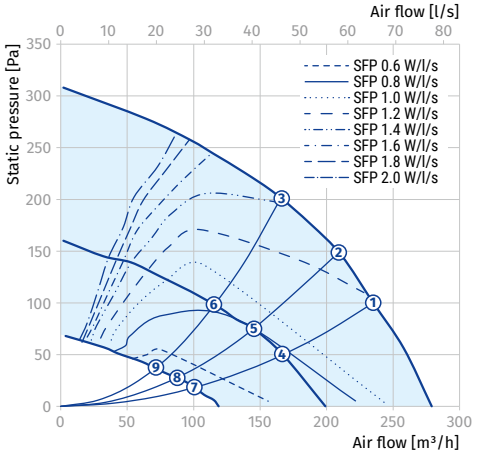



COUNTERFLOW RESIDENTIAL AHU IN EPP CASING

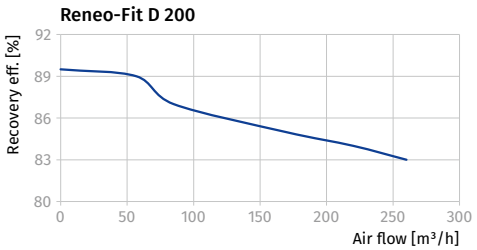
| Parameters | Reneo-Fit D 200 | Reneo-Fit D 200-E |
|---|---|---|
| Voltage [V / 50-60 Hz] | 230 | 230 |
| Max. unit power [W] | 111 | 111 |
| Max. unit current [A] | 0,9 | 0,9 |
| Max air flow [m³/h] | 279 | 279 |
| Sound pressure level at 3 m distance* [dBA] | 33 | 33 |
| Transported air temperature [°C] | −25...+40 | −25...+40 |
| Case material | EPP | EPP |
| Insulation | 25 mm | 25 mm |
| Extract filter | Coarse >60 % | Coarse >60 % |
| Supply filters | Coarse >60 % (option: ePM1 60 %) | Coarse >60 % (option: ePM1 60 %) |
| Connected air duct diameter [mm] | 125 / 160 | 125 / 160 |
| Weight [kg] | 18 | 19,5 |
| Heat recovery efficiency [%] | 89 | 85 |
| Heat exchanger type | Counter-flow | Counter-flow |
| Heat exchanger material | Polysterene | Enthalpy membrane |
| SEC class | A+ | A |

* Sound pressure level [dBA] at 3 m distance is specified at point 4 in average spherical free-field, for comparitive use only

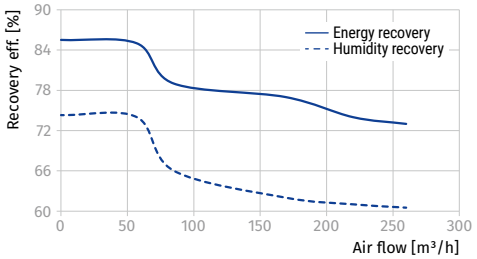
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Point 1** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **64** | 40 | 43 | 47 | 54 | 57 | 46 | 46 | 46 | **44** | **53** |
| $L_{WA}$ to supply outlet [dBA] | **67** | 42 | 45 | 49 | 57 | 60 | 48 | 48 | 48 | **46** | **56** |
| $L_{WA}$ to exhaust inlet [dBA] | **50** | 27 | 30 | 34 | 39 | 43 | 32 | 32 | 29 | **30** | **39** |
| $L_{WA}$ to exhaust outlet [dBA] | **53** | 28 | 32 | 36 | 41 | 45 | 34 | 34 | 30 | **32** | **41** |
| $L_{WA}$ to environment [dBA] | **60** | 39 | 47 | 46 | 52 | 51 | 44 | 42 | 39 | **40** | **49** |
| **Point 4** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **58** | 35 | 38 | 42 | 45 | 53 | 39 | 37 | 34 | **37** | **47** |
| $L_{WA}$ to supply outlet [dBA] | **60** | 37 | 40 | 44 | 47 | 56 | 41 | 39 | 36 | **39** | **49** |
| $L_{WA}$ to exhaust inlet [dBA] | **44** | 21 | 24 | 28 | 31 | 38 | 23 | 23 | 24 | **24** | **33** |
| $L_{WA}$ to exhaust outlet [dBA] | **46** | 22 | 25 | 29 | 33 | 40 | 24 | 24 | 25 | **25** | **35** |
| $L_{WA}$ to environment [dBA] | **54** | 35 | 43 | 42 | 43 | 47 | 36 | 33 | 28 | **33** | **43** |




**Reneo-Fit D 200**




**Reneo-Fit D 200-E**

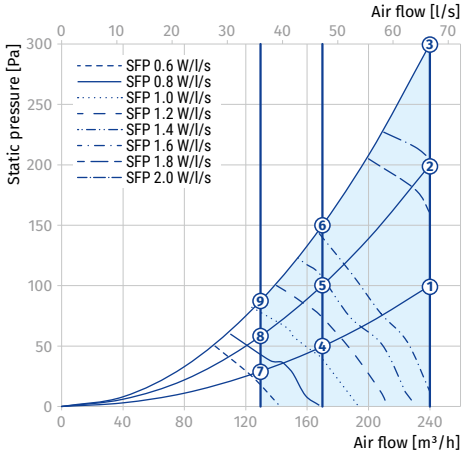



COUNTERFLOW RESIDENTIAL AHU IN EPP CASING

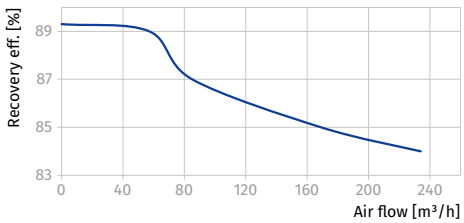
| Parameters | Reneo-Fit D 230 CF | Reneo-Fit D 230-E CF |
|---|---|---|
| Voltage [V / 50-60 Hz] | 230 | 230 |
| Max. unit power [W] | 180 | 180 |
| Max. unit current [A] | 1.4 | 1.4 |
| Max air flow [m³/h] | 240 | 240 |
| Sound pressure level at 3 m distance* [dBA] | 34 | 34 |
| Transported air temperature [°C] | −25...+40 | −25...+40 |
| Case material | EPP | EPP |
| Insulation | 25 mm | 25 mm |
| Extract filter | Coarse >60 % | Coarse >60 % |
| Supply filters | Coarse >60 % (option: ePM1 60 %) | Coarse >60 % (option: ePM1 60 %) |
| Connected air duct diameter [mm] | 125 / 160 | 125 / 160 |
| Weight [kg] | 18 | 19,5 |
| Heat recovery efficiency [%] | 89 | 85 |
| Heat exchanger type | Counter-flow | Counter-flow |
| Heat exchanger material | Polysterene | Enthalpy membrane |
| SEC class | A | A |

* Sound pressure level [dBA] at 3 m distance is specified at point 4 in average spherical free-field, for comparitive use only

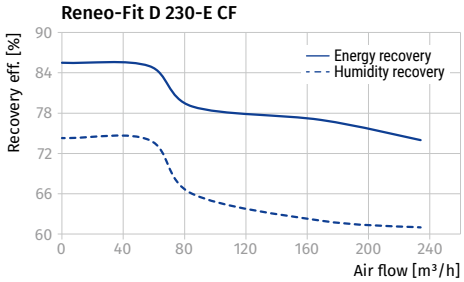
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Point 1** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **66** | 39 | 42 | 46 | 51 | 58 | 49 | 48 | 48 | **46** | **55** |
| $L_{WA}$ to supply outlet [dBA] | **69** | 41 | 44 | 48 | 54 | 61 | 52 | 50 | 50 | **48** | **58** |
| $L_{WA}$ to exhaust inlet [dBA] | **46** | 27 | 30 | 34 | 35 | 34 | 26 | 24 | 25 | **25** | **35** |
| $L_{WA}$ to exhaust outlet [dBA] | **48** | 28 | 32 | 36 | 37 | 36 | 27 | 25 | 26 | **26** | **37** |
| $L_{WA}$ to environment [dBA] | **61** | 38 | 46 | 45 | 53 | 51 | 45 | 42 | 40 | **41** | **50** |
| **Point 4** | | | | | | | | | | | |
| $L_{WA}$ to supply inlet [dBA] | **59** | 33 | 36 | 40 | 45 | 53 | 40 | 38 | 34 | **39** | **48** |
| $L_{WA}$ to supply outlet [dBA] | **61** | 35 | 38 | 42 | 47 | 56 | 42 | 40 | 36 | **41** | **50** |
| $L_{WA}$ to exhaust inlet [dBA] | **39** | 20 | 23 | 27 | 28 | 29 | 20 | 20 | 24 | **19** | **28** |
| $L_{WA}$ to exhaust outlet [dBA] | **41** | 21 | 24 | 28 | 29 | 30 | 21 | 21 | 25 | **20** | **29** |
| $L_{WA}$ to environment [dBA] | **55** | 32 | 40 | 39 | 47 | 47 | 37 | 34 | 29 | **34** | **44** |




**Reneo-Fit D 230 CF**




**Reneo-Fit D 230-E CF**



## Accessories

| | | Reneo-Fit D 150(-E) S21 | Reneo-Fit D 150(-E) S14 |
|---|---|---|---|
| **G4 panel filter** | | FP 200x165x48 Coarse 90% G4 | FP 200x165x48 Coarse 90% G4 |
| **F7 panel filter** | | FP 200x165x48 ePM1 60% F7 | FP 200x165x48 ePM1 60% F7 |
| **LCD control panel** | | S25 | - |
| **Control panel** | | S22 | - |
| **Wireless control panel** | | S22 Wi-Fi | - |
| **Internal humidity sensor** | | FS2 | FS2 |
| **Internal $CO_2$ sensor** | | CD-3 | – |
| **$CO_2$ sensor with indication** | | CD-1 | CD-1 |
| **$CO_2$ sensor** | | CD-2 | CD-2 |
| **Humidity sensor** | | HR-S | HR-S |
| **Electric preheater** | | EVH 160 S21 V.2 | - |
| **Electric reheater** | | ENH 160 S21 V.2 | - |
| **Syphon kit** (for the units without an enthalpy heat exchanger) | | SFK 20x32 | SFK 20x32 |
| **Silencer** | | SD 160 | SD 160 |
| **Air damper** | | VKA 160 | VKA 160 |
| **Electric actuator** | | TF230 | TF230 |

| | | Reneo-Fit D 200(-E) S21 | Reneo-Fit D 200(-E) S14 | Reneo-Fit D 230(-E) S21 CF |
|---|---|---|---|---|
| **G4 panel filter** | | FP 200x165x48 Coarse 90% G4 | FP 200x165x48 Coarse 90% G4 | FP 200x165x48 Coarse 90% G4 |
| **F7 panel filter** | | FP 200x165x48 ePM1 60% F7 | FP 200x165x48 ePM1 60% F7 | FP 200x165x48 ePM1 60% F7 |
| **LCD control panel** | | S25 | - | S25 |
| **Control panel** | | S22 | - | S22 |
| **Wireless control panel** | | S22 Wi-Fi | - | S22 Wi-Fi |
| **Internal humidity sensor** | | FS2 | FS2 | FS2 |
| **Internal $CO_2$ sensor** | | CD-3 | – | CD-3 |
| **$CO_2$ sensor with indication** | | CD-1 | CD-1 | CD-1 |
| **$CO_2$ sensor** | | CD-2 | CD-2 | CD-2 |
| **Humidity sensor** | | HR-S | HR-S | HR-S |
| **Electric preheater** | | EVH 160 S21 V.2 | - | EVH 160 S21 V.2 |
| **Electric reheater** | | ENH 160 S21 V.2 | - | ENH 160 S21 V.2 |
| **Syphon kit**<br>(for the units without an enthalpy heat exchanger) | | SFK 20x32 | SFK 20x32 | SFK 20x32 |
| **Silencer** | | SD 160 | SD 160 | SD 160 |
| **Air damper** | | VKA 160 | VKA 160 | VKA 160 |
| **Electric actuator** | | TF230 | TF230 | TF230 |