

Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



Demand-controlled, energy-efficient balanced ventilation combined with pure ease of installation

Flux+ Flat ERV is part of the energy-efficient D⁺ ventilation concept, with demand-controlled ventilation. Fresh, filtered air is mechanically supplied to dry rooms and polluted air is mechanically extracted from wet rooms.

This compact and flexible ventilation unit is suitable for residential applications and is available in three versions, depending on the nominal ventilation flow rate:

- up to 225 m³/h
- up to 275 m³/h
- up to 370 m³/h



Primary features

Demand-controlled balanced ventilation

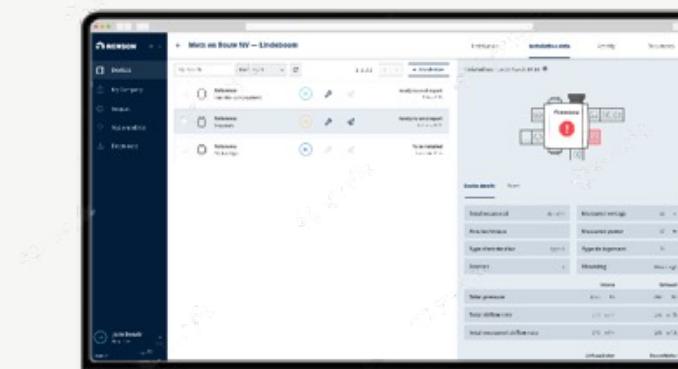
- The integrated sensors (CO₂, RH and VOC) constantly measure **centrally** the indoor air quality in the air extracted from the wet rooms in the home. Based on the indoor air quality, the ventilation flow rate is controlled autonomously. This smart demand-controlled system guarantees an optimal indoor climate at all times using the lowest possible ventilation flow rate, and the lowest possible energy consumption as a result. The balance between supply and extraction is constantly maintained.
- Flux+ Flat ERV can be expanded as an option with **room sensors** (CO₂ detection) for local demand management. This ensures further improvement of the indoor climate and a cost-efficient reduction of the E-level.

Easy installation

- **ONE-MAN-SHOW:** due to its low weight of 25 kg and the **Quick Fix**, the Flux+ Flat ERV can be easily, **quickly and ergonomically** installed without a second person.
- **ALWAYS A SOLUTION:**
 - In small spaces
 - Ceiling or wall mounting (vertically)
 - Can be converted from a left to right version via the installer app
 - Compact connection of the air ducts to the unit with 2 connections per connection point
- **SAVE TIME:** higher efficiency with the digital tools:
 - Installation app: semi-automatic calibration significantly reduces installation time
 - Installer portal: site preparation + installation report after start-up



INSTALLATION APP



MY-LIO WEBPORTAL

Technical data sheet

FLUX+ FLAT ERV

System D⁺ - V2024.05



Service convenience

- The appliance is designed to ensure the components and technologies are easily and quickly accessible. Do you need some maintenance? No problem: the Quick-Fix ceiling bracket ensures the appliance can easily be put into the service position.

Efficient design

- Counterflow heat exchanger for up to **77% heat recovery**
- Low-noise and energy-efficient EC motor

Filters

- Appliance supplied as standard with: 2x Classic Protection ISO Coarse 65% (G4)
- Optionally available: 1x Urban Protection ePM1 55% (F7) + 1x Classic Protection ISO Coarse 65% (G4)

Optimal operation of this D⁺ ventilation system is only guaranteed if the following are present and matched:

- Air is supplied to dry rooms and extracted from wet rooms via the Renson Aero valve
- Supply and extraction of air from and to the outside via Renson roof/wall penetration
- Easyflex air channels
- Renson filters
- Mechanical supply & extraction via **Flux+ Flat ERV**

Referenzen

| | |
|-------|-----------------------------------|
| 34032 | Flux+ 225 Flat ERV |
| 34033 | Flux+ 275 Flat ERV |
| 34034 | Flux+ 370 Flat ERV |
| 17792 | Dry siphon kit for Flux+ Flat ERV |

Technical specifications

| | Flux+ 225 Flat ERV | Flux+ 275 Flat ERV | Flux+ 370 Flat ERV |
|---|--|--|--|
| (Max.) ventilation airflow | 225 m ³ /h (at 200 Pa) | 275 m ³ /h (at 200 Pa) | 370 m ³ /h (at 200 Pa) |
| Thermal efficiency | Belgium - conform to Annex G of Annex V of the Energy Decree (conform to EN13141-7) | | |
| | 77% at 100 m ³ /h 75% at 150 m ³ /h 73% at 200 m ³ /h 72% at 225 m ³ /h | 75% at 150 m ³ /h 73% at 200 m ³ /h 72% at 225 m ³ /h 70% at 275 m ³ /h | 75% at 150 m ³ /h 72% at 225 m ³ /h 70% at 275 m ³ /h 69% at 325 m ³ /h 68% at 370 m ³ /h |
| Sound level In accordance with EcoDesign directive | 43,5 dB(A) | 46,0 dB(A) | 50,5 dB(A) |
| Sound level Lw(A) | At 225 m ³ /h - 100 Pa – Box: 50,5 dB(A) – Supply: 59,5 dB(A) – Extraction: 47,0 dB(A) | At 275 m ³ /h - 100 Pa – Box: 53,0 dB(A) – Supply: 62,5 dB(A) – Extraction: 49,5 dB(A) | At 370 m ³ /h - 100 Pa – Box: 57,5 dB(A) – Supply: 67,5 dB(A) – Extraction: 56,0 dB(A) |
| Maximum power used | 2 × 42 W | 2 × 53 W | 2 × 83 W |
| Connection voltage | 230 Vac -15%/+10% (50 Hz, 60 Hz) Power cord included (2 m length) | | |
| Dimensions | 1188 × 745 × 300 mm (L x W x H) | | |
| Weight | 25 kg | | |
| Ø unit connections | Ø 160 mm 2 connections per connection point | | |
| Bypass | Yes, fully | | |
| Breeze function (= Demand control bypass) | Temporary nominal ventilation (= deactivation of demand-driven control) at times when a certain level of cooling is required (⇒ optimal reduction factors) | | |

Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



| | Flux+ 225 Flat ERV | Flux+ 275 Flat ERV | Flux+ 370 Flat ERV |
|---|--|--------------------|--------------------|
| Automatic control (constant flow) | Yes | | |
| Fan | Extremely quiet & energy-efficient EC motor with forward curved Ø180 fan blade | | |
| Maximum fan operating pressure | 300 Pa – Recommended working pressure at design airflow: ≤ 200 Pa – Guidance value for very good working pressure at design flow (cfr TV n° 258): ≤ 100 Pa | | |
| Reading out the calibration pressure | Via app installer & Renson My-Lio web portal | | |
| External input/output | – 1x Ethernet connection – 2x USB connections <i>(USB dongle for Wi-Fi connection included*)</i> – 3x digital inputs & outputs for ventilation position control or feedback of general error messages and filter messages | | |

* Only compatible with 2.4GHz

Control of demand-controlled ventilation

| | |
|---|--|
| Type of ventilation | Mechanical demand-controlled balance ventilation with heat recovery |
| Air quality detection (humidity, CO₂ and VOC) | Via electronic sensors located centrally in the unit. The sensors measure the indoor air quality in the extracted air flow 24/7. |
| Reduction factors (F_{reduc, vent, heat}) | – Standard: <ul style="list-style-type: none">• Configuration 0.93 = central CO₂ sensor in the unit (extraction)– With optional room sensors:<ul style="list-style-type: none">• Configuration 0.87 = CO₂ room sensors in the living room and master bedroom• Configuration 0.70 = CO₂ room sensors in all bedrooms• Configuration 0.61 = CO₂ room sensors in all dry rooms |
| Control possibilities | – Demand-controlled (standard), optionally via room sensors – According to automatic mode (Weekly schedule – User app) – Manual control (user app and optional switch) – Timers (User app) |

Control

Resident app

- Read the air quality in the home
- Personalisation and (temporary) manual adjustment of the ventilation flow rate possible

Optional

- Potential-free wired 3-position switch for manual adjustment of the ventilation extraction rate
- 4-position switch, integrated in the wireless room sensors

Room sensors

The Renson Sense room sensors can be combined with the Flux+ Flat ERV to regulate the **local air quality** via ventilation flow. These 230 V powered sensors communicate wirelessly with the ventilation unit. This provides a further increase in air quality and a reduction in the E level.

Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



Installation

Installation

| | |
|----------------------|--|
| Room | Indoor installation in an insulated room. Temperature limits from 0 °C to +40 °C. |
| Installation options | <ul style="list-style-type: none">- Left and right position, adjustable via software- Ceiling mounting- Wall mounting in both horizontal or vertical direction- Supplied Quick Fix ceiling bracket makes one-person installation possible |

Renson My-Lio web portal: your digital right hand man at the office

My-Lio supports the installer with the **pre-configuration** and **follow-up of the project**:

- Project creation & pre-configuration
- Send installation report digitally
- Monitor connected devices

This provides **time savings** and **simplifies the administration**. Done with paperwork.

Boot via app installer

The app guides the installer through the start-up to make high-quality & reliable installation possible.

Semi-automatic calibration is done in just 2 steps:

- Step 1: valves open & measure everything once for the 1st time
- Step 2: adjust valves to value specified in app

Products to combine

| | |
|------------------------------------|---|
| Aeroo extraction and supply valve | Design valve |
| Easyflex air ducts | Air transport ducts with best airtightness class D |
| Easyduct air ducts | Air transport ducts with insulating properties |
| Isodec | Air flexible with insulating properties |
| Acoudec | Air flexible duct with high acoustic damping properties |
| Renson roof exhaust / wall exhaust | Design feed with limited pressure loss |

Other features

| | |
|---|---|
| Automatic error message & filter message | <ul style="list-style-type: none">- Via resident app- Via Renson Ventilation Set-up app and Renson My-Lio web portal (installer): fault message related during the start-up phase |
| Automatic software updates | When the device is connected to the internet or locally with the app |
| Installer & consumer app | Can be downloaded free of charge from Play Store (Android) and App Store (Apple) |
| Integration in smart home & home automation | Domotics: switch module (3 contacts) |
| Fire safety (internal) | ✓ |
| EU declaration of conformity | ✓ |
| Energy performance regulation (EPB) | <ul style="list-style-type: none">- Reduction factors conform to Table 1 of the flat-rate table- Included in EPB product database – FAN AND VENTILATION GROUP- Included in EPB product database – DEMAND-CONTROLLED VENTILATION SYSTEMS |
| Energy rating (in accordance with directive 2010/30/EU) | Flux+ 225 Flat ERV:  Flux+ 275 Flat ERV:  Flux+ 370 Flat ERV:  |
| Minimum density for wall/ceiling | Minimum density for wall/ceiling of 100 kg/m ² , because of firmness for fastening & sufficient mass for further vibration damping. |

Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



Technical data

| Flux+ 225 Flat ERV | | | | | | |
|------------------------------|----------------|------------|--------------------------|---------------------|-----------------------|----------------|
| Airflow m ³ /h | Pressure Pa | Power W | SFP Wh/m ³ | Sound level (Lw(A)) | | |
| | | | | Pulse (dB(A)) | Extraction (dB(A)) | Box (dB(A)) |
| 275 | 100 | 83 | 0,33 | 62,5 | 49,5 | 53,0 |
| 250 | 150 | 81 | 0,36 | 63,5 | 50,5 | 53,5 |
| 250 | 100 | 69 | 0,30 | 61,5 | 48,5 | 52,0 |
| 225 | 200 | 84 | 0,41 | 64,5 | 53,0 | 54,0 |
| 225 | 150 | 70 | 0,34 | 61,5 | 50,0 | 52,0 |
| 225 | 100 | 58 | 0,27 | 59,5 | 47,0 | 50,5 |
| 200 | 200 | 74 | 0,41 | 64,0 | 52,5 | 54,0 |
| 200 | 150 | 60 | 0,33 | 61,5 | 50,0 | 51,0 |
| 200 | 100 | 49 | 0,26 | 58,0 | 46,0 | 49,0 |
| 175 | 100 | 41 | 0,25 | 57,5 | 46,0 | 47,5 |
| 158 | 50 | 27 | 0,18 | 52,0 | 39,5 | 43,5 |
| 150 | 150 | 44 | 0,32 | 61,0 | 49,0 | 50,5 |
| 150 | 100 | 34 | 0,25 | 56,5 | 45,5 | 46,5 |
| 125 | 100 | 30 | 0,25 | 56,0 | 45,5 | 46,0 |
| 100 | 100 | 23 | 0,26 | 55,5 | 44,0 | 45,5 |

| Airflow rate (m ³ /h) | Pressure (Pa) |
|----------------------------------|---------------|
| 0 | 0 |
| 100 | 105 |
| 125 | 105 |
| 150 | 155 |
| 175 | 105 |
| 200 | 205 |
| 225 | 205 |
| 250 | 155 |
| 275 | 105 |

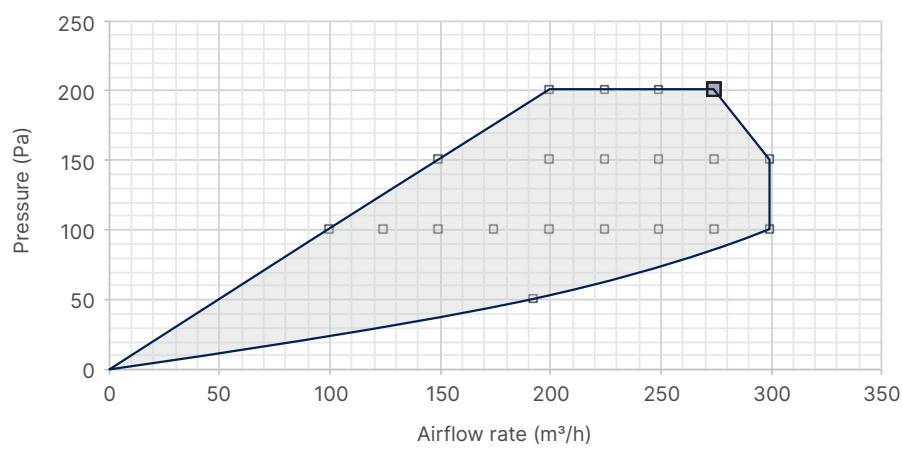
Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



| Flux+ 275 Flat ERV | | | | | | |
|------------------------------|----------------|------------|--------------------------|---------------------|-----------------------|----------------|
| Airflow m ³ /h | Pressure Pa | Power W | SFP Wh/m ³ | Sound level (Lw(A)) | | |
| | | | | Pulse (dB(A)) | Extraction (dB(A)) | Box (dB(A)) |
| 315 | 100 | 106 | 0,34 | 65,5 | 52,0 | 55,5 |
| 300 | 150 | 106 | 0,35 | 65,5 | 52,5 | 55,5 |
| 300 | 100 | 96 | 0,31 | 64,5 | 50,5 | 54,0 |
| 275 | 200 | 106 | 0,39 | 66,5 | 53,5 | 55,5 |
| 275 | 150 | 92 | 0,33 | 64,5 | 51,5 | 54,5 |
| 275 | 100 | 83 | 0,31 | 62,5 | 49,5 | 53,0 |
| 250 | 200 | 95 | 0,38 | 64,5 | 53,5 | 55,0 |
| 250 | 150 | 81 | 0,32 | 63,5 | 50,5 | 53,5 |
| 250 | 100 | 69 | 0,28 | 61,5 | 48,5 | 52,0 |
| 225 | 200 | 84 | 0,37 | 64,5 | 53,0 | 54,0 |
| 225 | 150 | 70 | 0,31 | 61,5 | 50,0 | 52,0 |
| 225 | 100 | 58 | 0,25 | 59,5 | 47,0 | 50,5 |
| 200 | 200 | 74 | 0,37 | 64,0 | 52,5 | 54,0 |
| 200 | 150 | 60 | 0,30 | 61,5 | 50,0 | 51,0 |
| 200 | 100 | 49 | 0,25 | 58,0 | 46,0 | 49,0 |
| 193 | 50 | 34 | 0,18 | 54,5 | 42,0 | 46,0 |
| 175 | 100 | 41 | 0,23 | 57,5 | 46,0 | 47,5 |
| 150 | 150 | 44 | 0,29 | 61,0 | 49,0 | 50,5 |
| 150 | 100 | 34 | 0,23 | 56,5 | 45,5 | 46,5 |
| 125 | 100 | 30 | 0,24 | 56,0 | 45,5 | 46,0 |
| 100 | 100 | 23 | 0,23 | 55,5 | 44,0 | 45,5 |



Technical data sheet

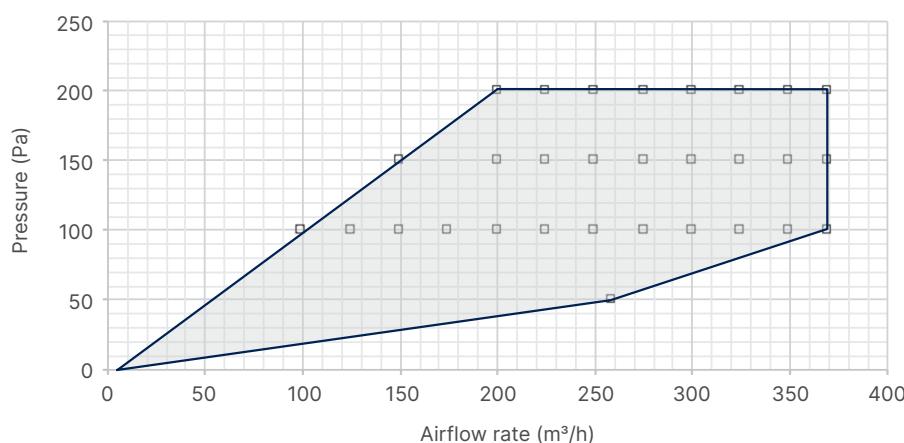
FLUX+ FLAT ERV

System D⁺® - V2024.05



Flux+ 370 Flat ERV

| Airflow m ³ /h | Pressure Pa | Power W | SFP Wh/m ³ | Sound level (Lw(A)) | | |
|------------------------------|----------------|------------|--------------------------|---------------------|-----------------------|----------------|
| | | | | Pulse (dB(A)) | Extraction (dB(A)) | Box (dB(A)) |
| 370 | 200 | 166 | 0,45 | 68,5 | 56,0 | 57,5 |
| 370 | 150 | 142 | 0,38 | 68,5 | 56,0 | 57,5 |
| 370 | 100 | 137 | 0,37 | 67,5 | 56,0 | 57,5 |
| 350 | 200 | 151 | 0,43 | 68,0 | 55,5 | 57,5 |
| 350 | 150 | 130 | 0,37 | 67,5 | 55,0 | 57,5 |
| 350 | 100 | 124 | 0,35 | 65,5 | 53,5 | 56,5 |
| 325 | 200 | 136 | 0,42 | 67,0 | 55,0 | 56,5 |
| 325 | 150 | 117 | 0,36 | 66,0 | 54,0 | 55,5 |
| 325 | 100 | 111 | 0,34 | 64,5 | 52,0 | 55,0 |
| 300 | 200 | 121 | 0,40 | 66,5 | 54,5 | 56,0 |
| 300 | 150 | 106 | 0,35 | 65,5 | 52,5 | 55,5 |
| 300 | 100 | 96 | 0,31 | 64,5 | 50,5 | 54,0 |
| 275 | 200 | 106 | 0,39 | 66,5 | 53,5 | 55,5 |
| 275 | 150 | 92 | 0,33 | 64,5 | 51,5 | 54,5 |
| 275 | 100 | 83 | 0,31 | 62,5 | 49,5 | 53,0 |
| 259 | 50 | 60 | 0,23 | 58,0 | 47,0 | 50,5 |
| 250 | 200 | 95 | 0,38 | 64,5 | 53,5 | 55,0 |
| 250 | 150 | 81 | 0,32 | 63,5 | 50,5 | 53,5 |
| 250 | 100 | 69 | 0,28 | 61,5 | 48,5 | 52,0 |
| 225 | 200 | 84 | 0,37 | 64,5 | 53,0 | 54,0 |
| 225 | 150 | 70 | 0,31 | 61,5 | 50,0 | 52,0 |
| 225 | 100 | 58 | 0,25 | 59,5 | 47,0 | 50,5 |
| 200 | 200 | 74 | 0,37 | 64,0 | 52,5 | 54,0 |
| 200 | 150 | 60 | 0,30 | 61,5 | 50,0 | 51,0 |
| 200 | 100 | 49 | 0,25 | 58,0 | 46,0 | 49,0 |
| 175 | 100 | 41 | 0,23 | 57,5 | 46,0 | 47,5 |
| 150 | 150 | 44 | 0,29 | 61,0 | 49,0 | 50,5 |
| 150 | 100 | 34 | 0,23 | 56,5 | 45,5 | 46,5 |
| 125 | 100 | 30 | 0,24 | 56,0 | 45,5 | 46,0 |
| 100 | 100 | 23 | 0,23 | 55,5 | 44,0 | 45,5 |



Technical data sheet

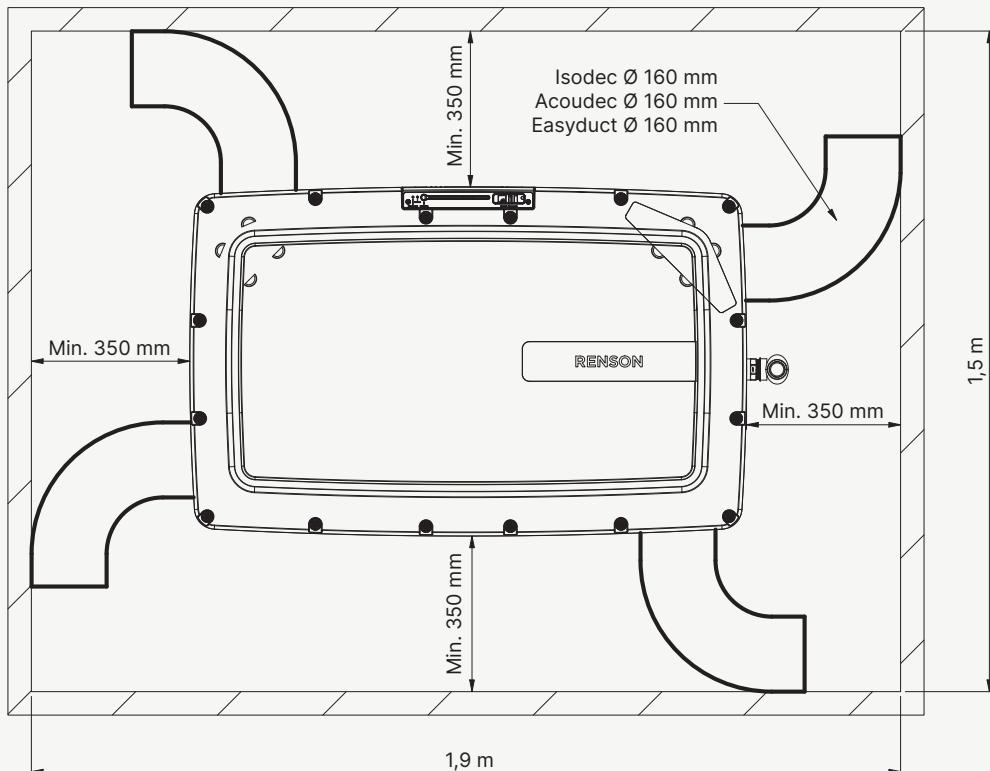
FLUX+ FLAT ERV

System D⁺® - V2024.05



Installation dimensions

In both ceiling and wall mounting, provide **at least 350 mm distance** between the unit and the wall at each side where a **duct connection** is present. If this duct connection consists of a Renson Isodec, Acoudec or Easyduct in Ø 160 mm, respecting this minimum distance ensures a low pressure drop and easy assembly and disassembly for any service.
In addition, **at least 100 mm** should be provided at the height of the **condensate connection**.



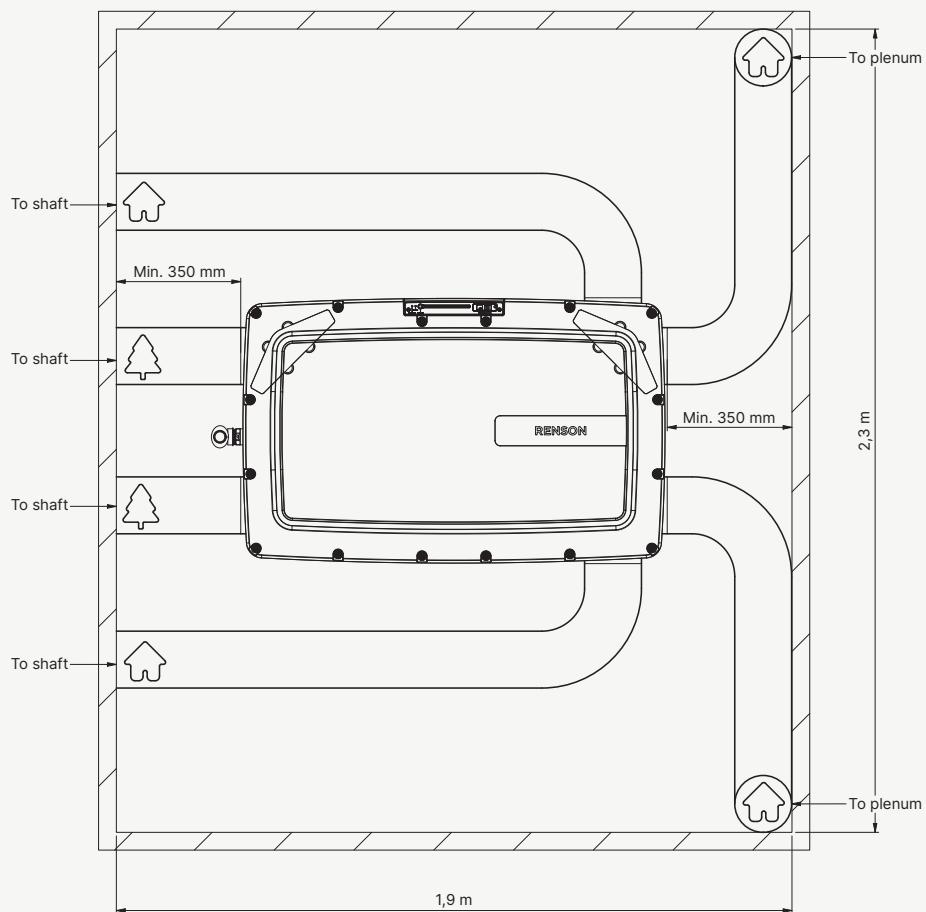
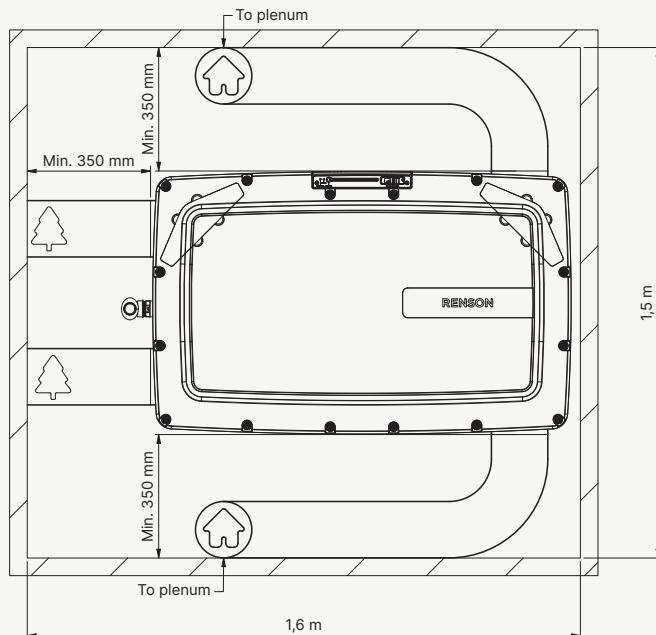
Below you will see some examples of set-ups in practice, taking into account the minimum distances mentioned above and the Renson recommendation to always provide 1 m Acoudec Ø 160 mm at pulse and extraction side.
This will ensure a whisper-quiet installation!

Technical data sheet **FLUX+ FLAT ERV**

System D⁺® - V2024.05



Examples of a ceiling installation:



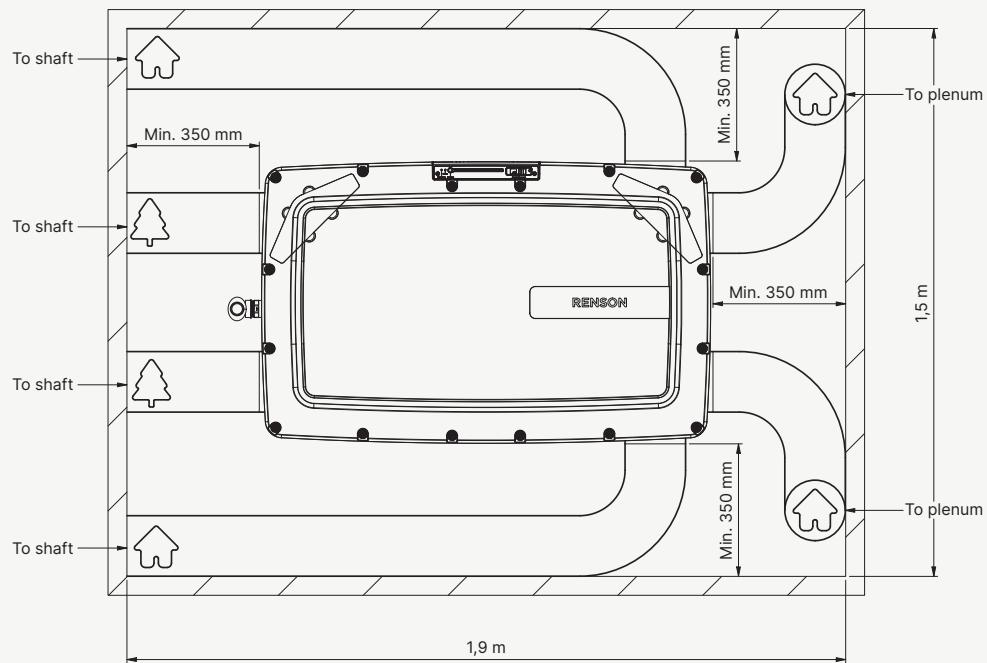
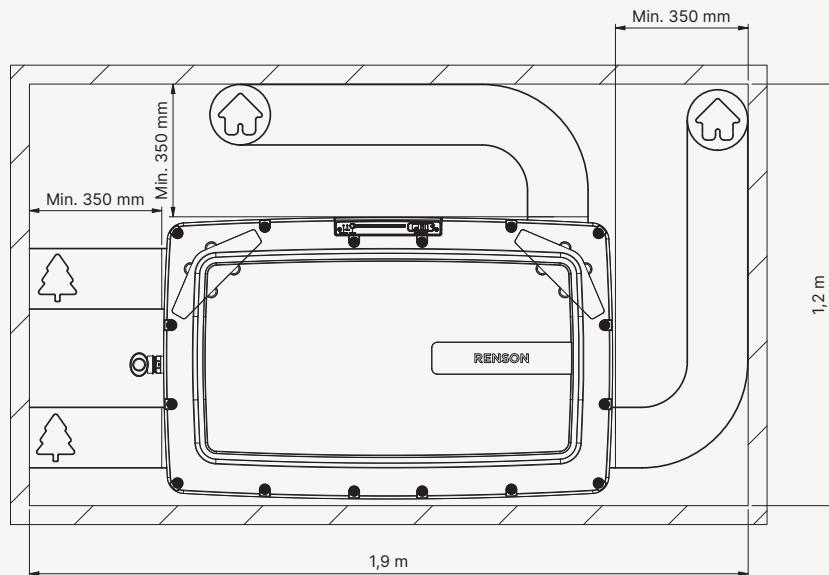
Technical data sheet

FLUX+ FLAT ERV

System D⁺® - V2024.05



Examples of a ceiling installation:



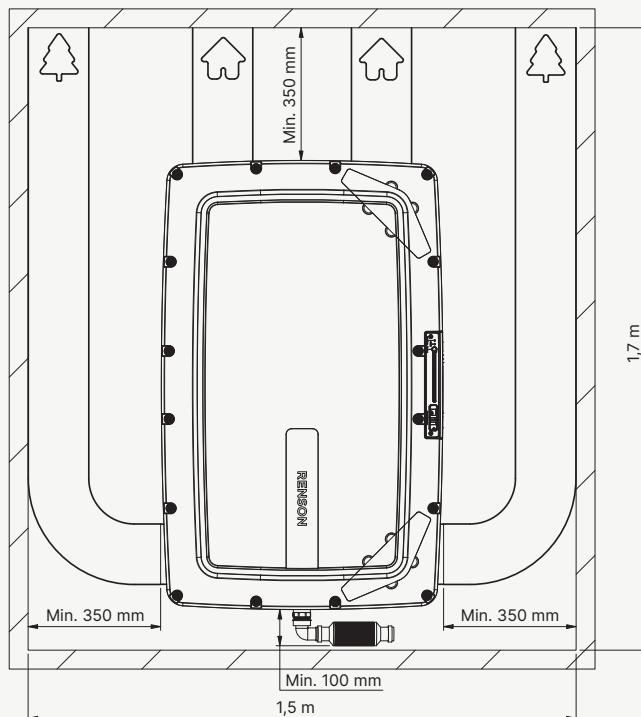
Technical data sheet **FLUX+ FLAT ERV**

System D⁺® - V2024.05



Examples of a wall installation:

- Vertical wall installation



Technical data sheet

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Technical drawings

