

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

Flux+ Flat 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 (humidity, CO₂ 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.
- Standard reduction factor Rf 0.93 yields an interesting E-level gain compared to Rf 1.0 to bring the house to the legally required E-level (or better).
- Flux+ Flat 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 can be easily, **quickly and ergonomically** installed without a second person.
- **ALWAYS A SOLUTION:**
 - In small spaces
 - Ceiling or wall mounting (vertically or horizontally)
 - 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
 - My-Lio web portal: site preparation + installation report after start-up



INSTALLATION APP



MY-LIO WEBPORTAL

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 **91% 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 Aeroo 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**

References

17791	Flux+ 225 Flat
11018	Flux+ 275 Flat
29911	Flux+ 370 Flat
17792	Dry siphon kit for Flux+ Flat

Technical specifications

	Flux+ 225 Flat	Flux+ 275 Flat	Flux+ 370 Flat
(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)		
	91% at 75 m ³ /h 89% at 124 m ³ /h 87% at 175 m ³ /h 85% at 225 m ³ /h	91% at 75 m ³ /h 87% at 175 m ³ /h 85% at 225 m ³ /h 83% at 275 m ³ /h	83% at 290 m ³ /h 82% at 322 m ³ /h 81% at 352 m ³ /h 80% at 370 m ³ /h
	Netherlands - conform to Section 11 of NTA 8800 in the context of the Building Regulations (conform to EN13141-7)		
	91% at 157 m ³ /h	89% at 191 m ³ /h	88% at 259 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		

	Flux+ 225 Flat	Flux+ 275 Flat	Flux+ 370 Flat
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)		
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, CO ₂ 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 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.

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

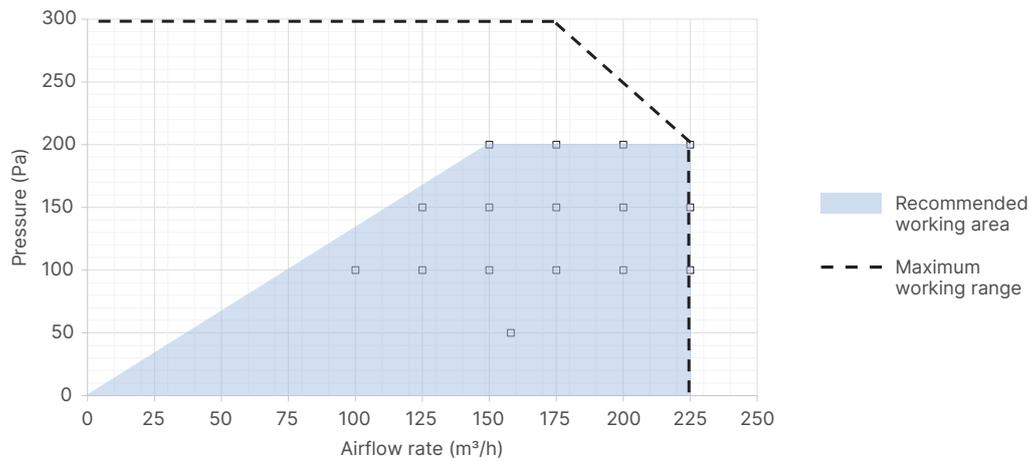
Aeroo extraction and supply valve	Design valve
Easyflex air ducts	Air transport ducts with best airtightness class D
Easyduct air ducts	Air transport ducts with insulating properties
Isodec	Air flexible with insulating properties
Acoudec	Air flexible duct with high acoustic damping properties
Renson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

Other features

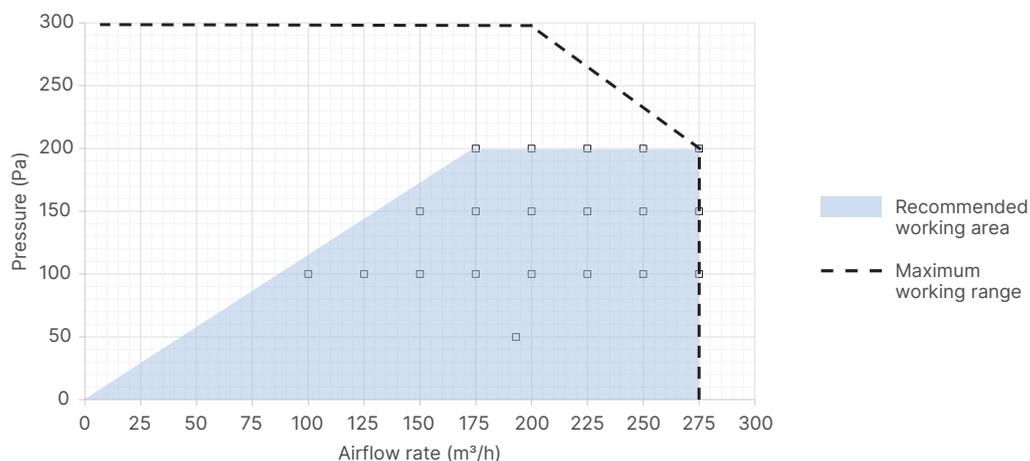
Automatic error message & filter message	<ul style="list-style-type: none"> - Via resident app - Via Renson Ventilation Set-up app and Renson My-Lio web portal (installer): fault message related during the start-up phase 		
Automatic software updates	When the device is connected to the internet or locally 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: A+	Flux+ 275 Flat: A+	Flux+ 370 Flat: A+
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

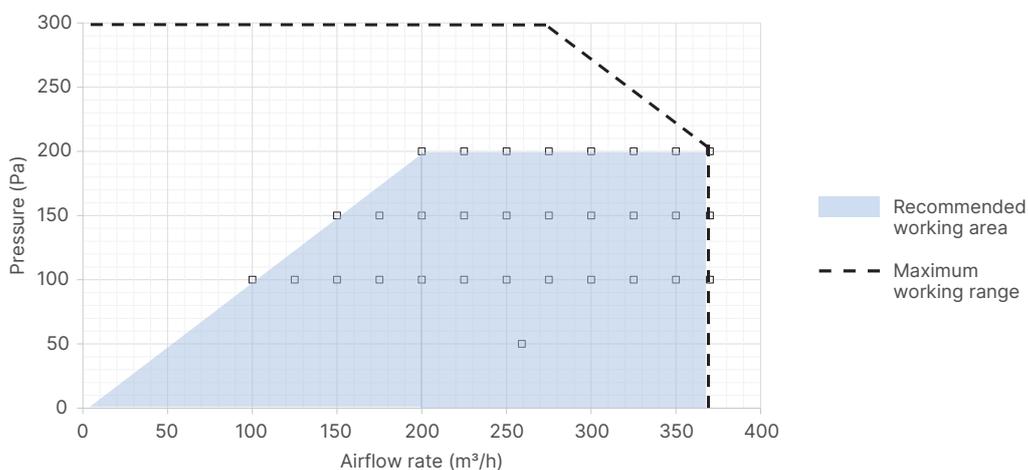
Flux+ 225 Flat						
Airflow m ³ /h	Pressure Pa	Power W	SFP Wh/m ³	Sound level (Lw(A))		
				Pulse (dB(A))	Extraction (dB(A))	Box (dB(A))
225	200	84	0,41	64,5	53,0	54,0
225	150	70	0,34	61,5	50,0	52,0
225	100	58	0,27	59,5	47,0	50,5
200	200	74	0,41	64,0	52,5	54,0
200	150	60	0,33	61,5	50,0	51,0
200	100	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



Flux+ 275 Flat						
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	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

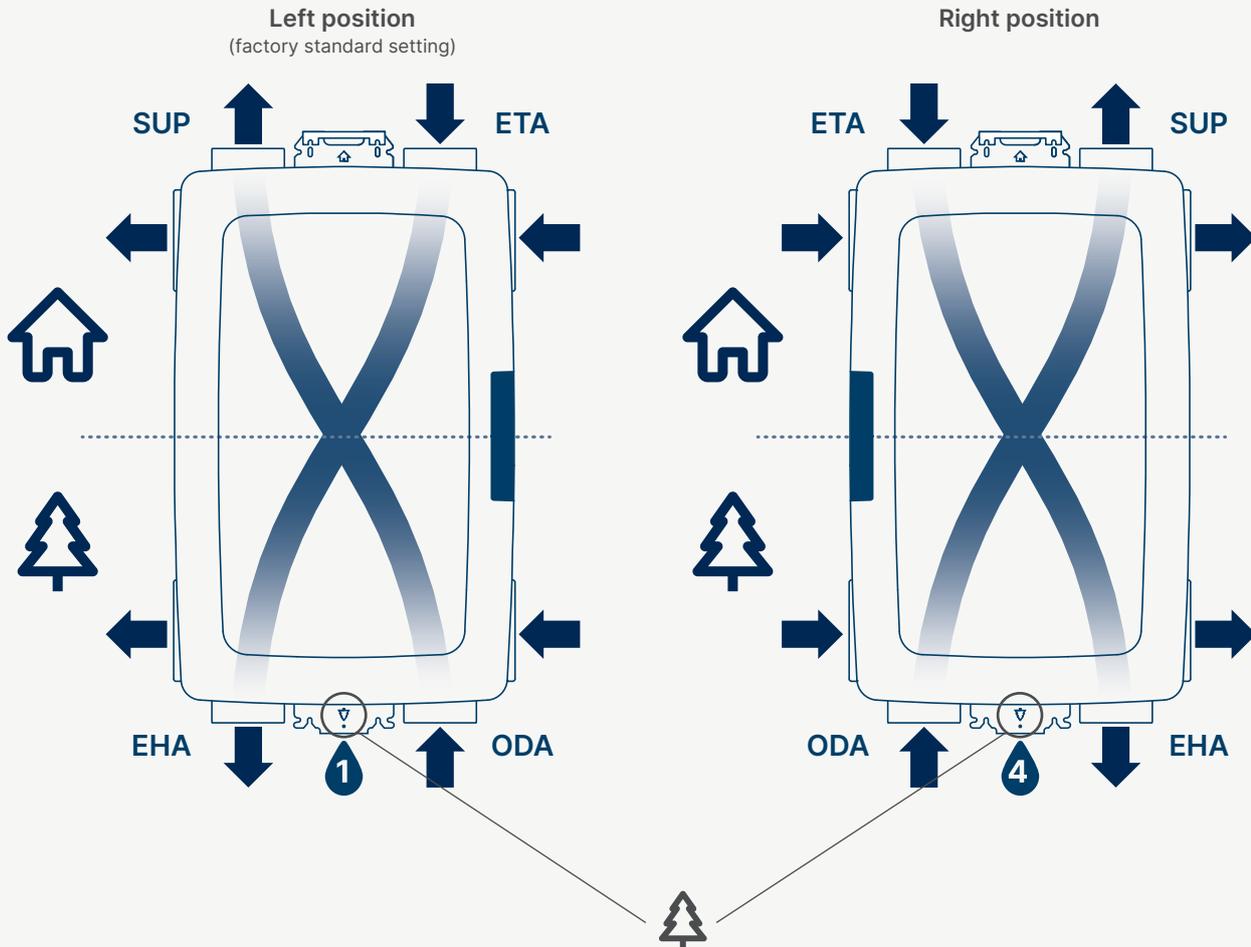


Flux+ 370 Flat						
Airflow m ³ /h	Pressure Pa	Power W	SFP Wh/m ³	Sound level (Lw(A))		
				Pulse (dB(A))	Extraction (dB(A))	Box (dB(A))
370	200	166	0,45	68,5	56,0	57,5
370	150	142	0,38	68,5	56,0	57,5
370	100	137	0,37	67,5	56,0	57,5
350	200	151	0,43	68,0	55,5	57,5
350	150	130	0,37	67,5	55,0	57,5
350	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

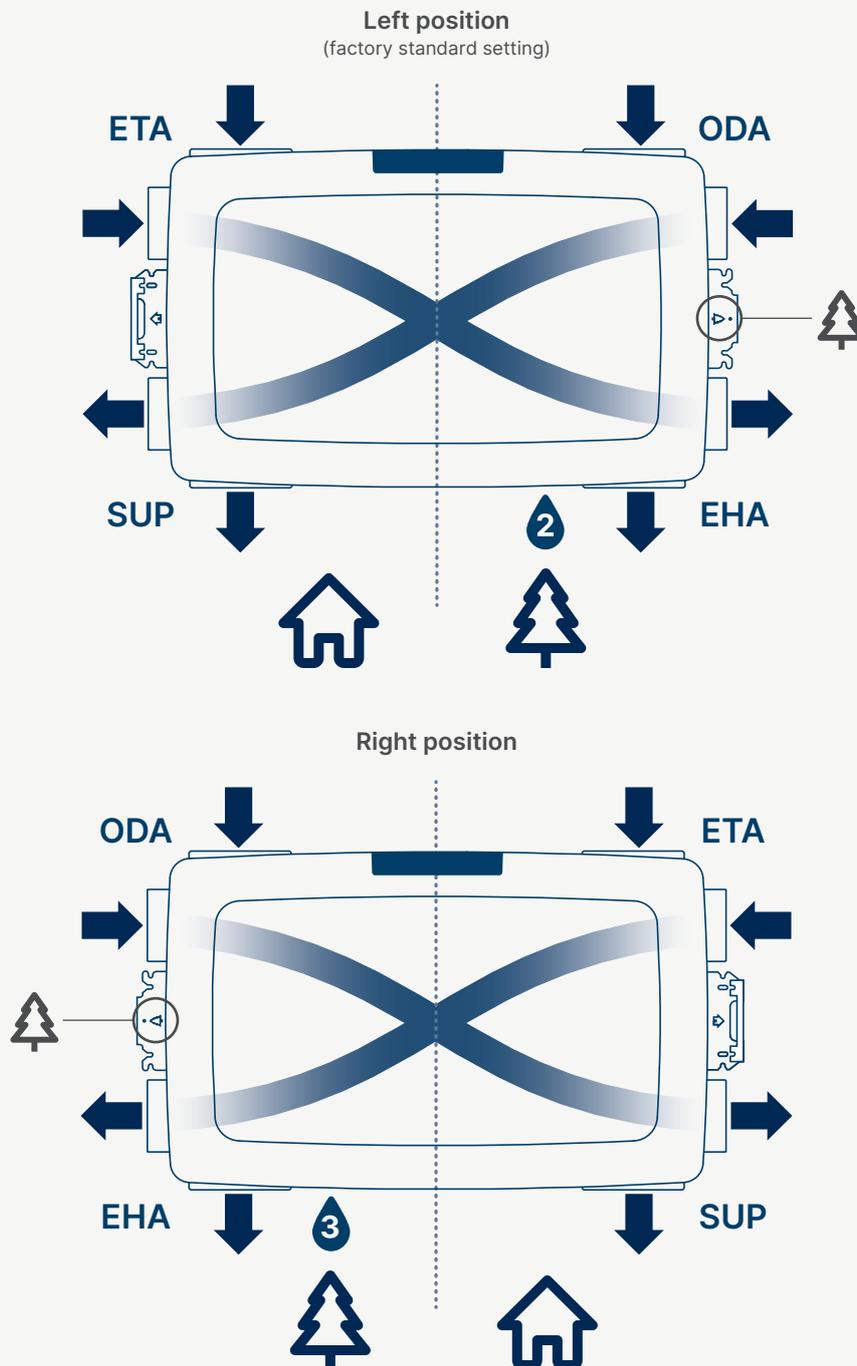


Installation

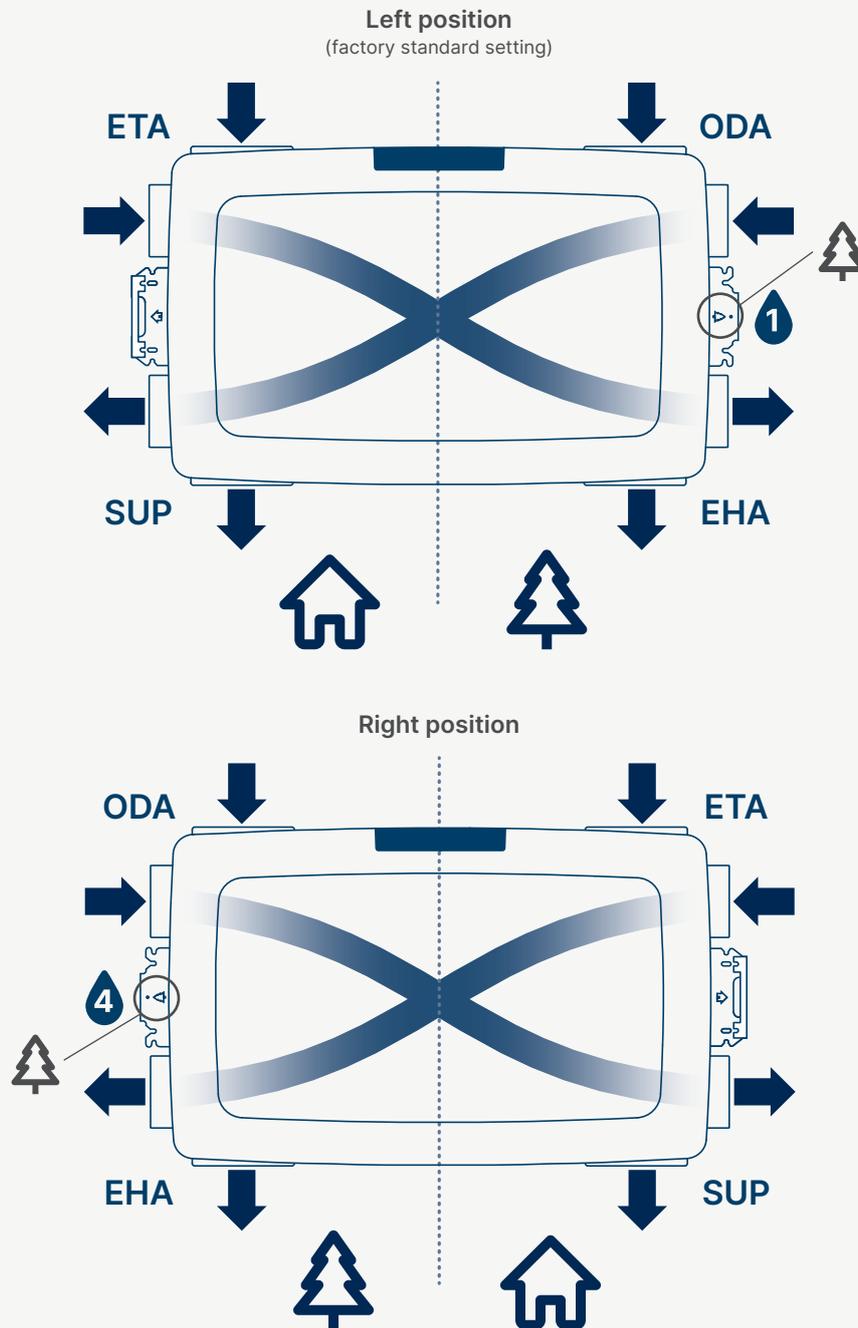
Vertical wall installation



Horizontal wall installation

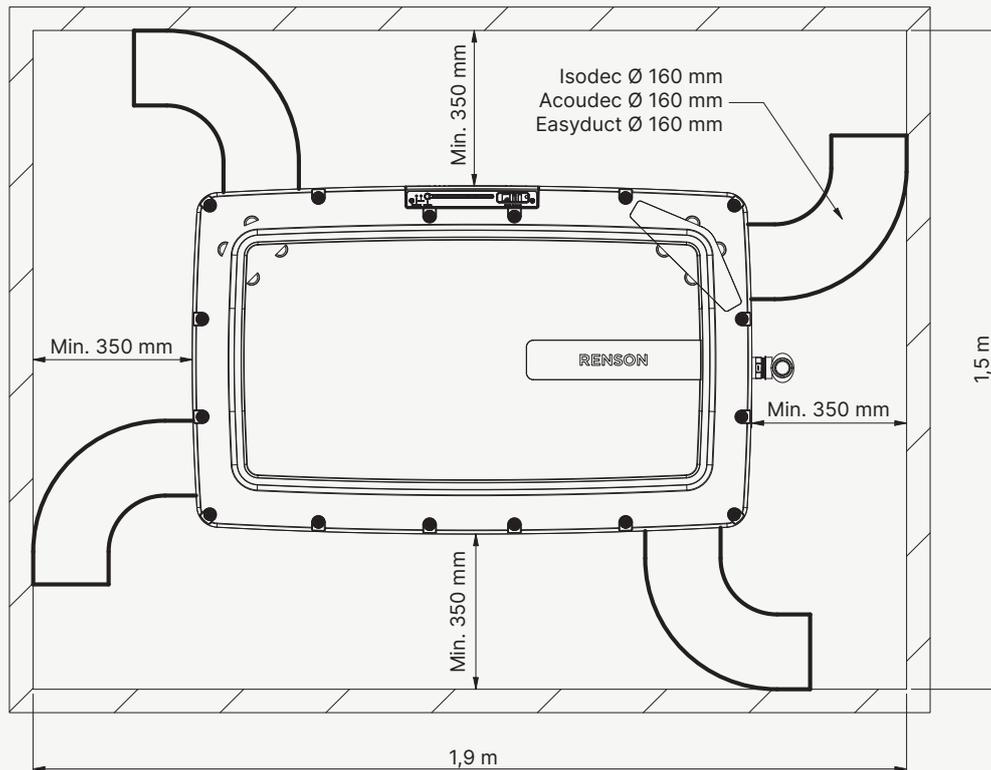


Ceiling installation



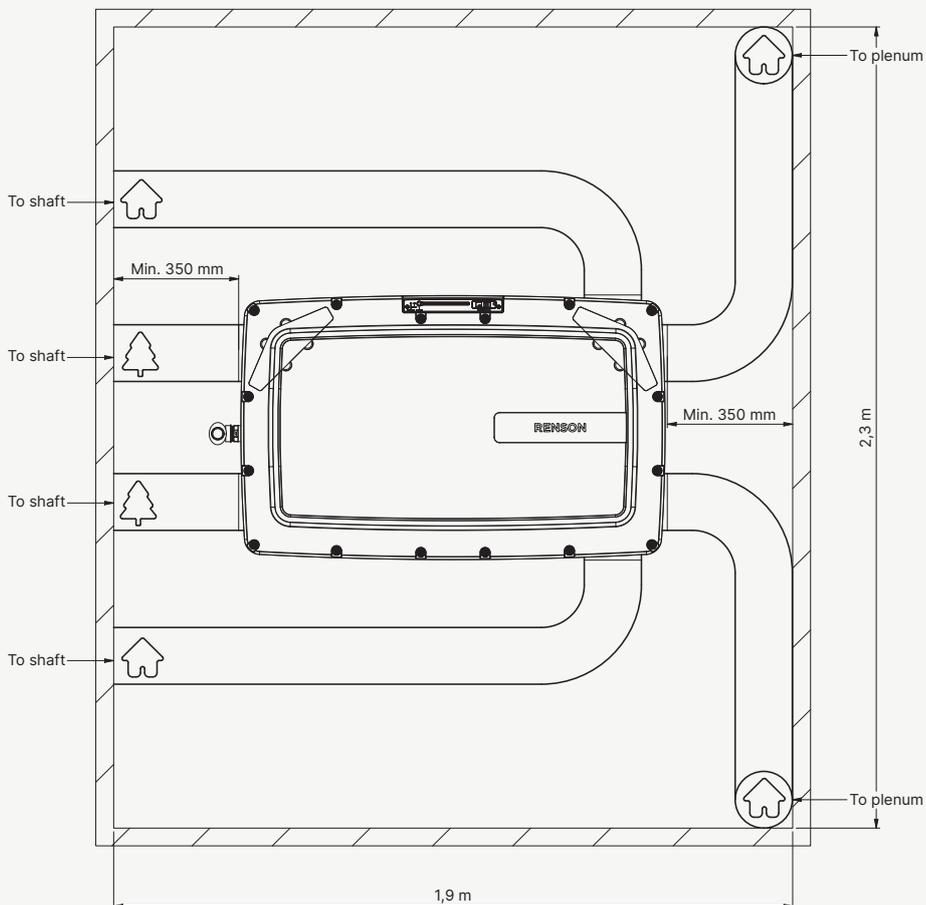
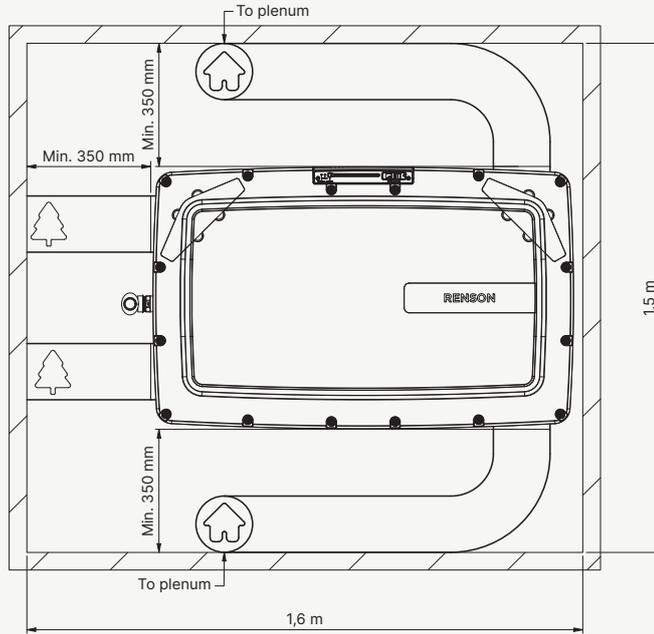
Installation dimensions

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 \varnothing 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**.

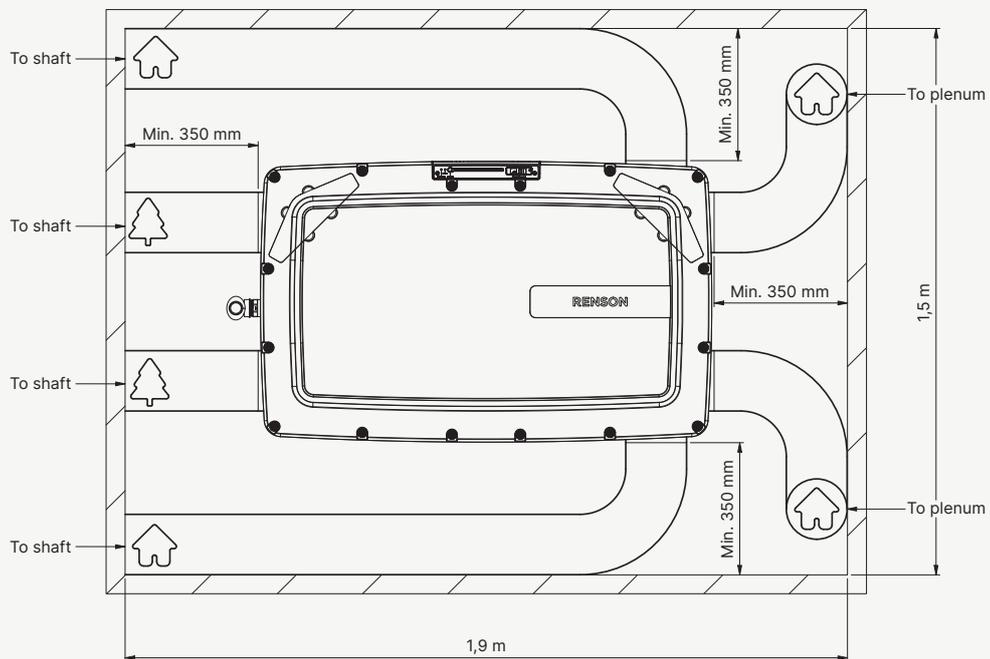
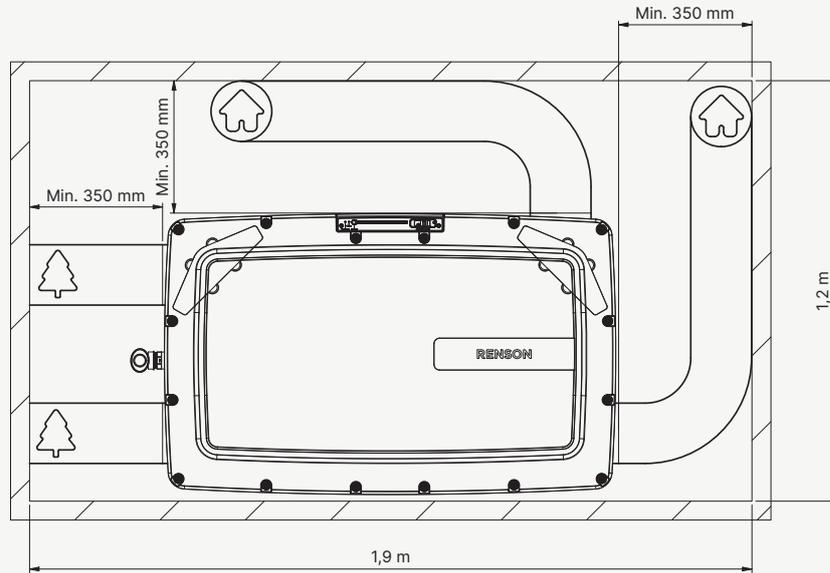


Below you will see some examples of set-ups in practice, taking into account the minimum distances mentioned above and the Renson recommendation to always provide 1 m Acoudec \varnothing 160 mm at pulse and extraction side. This will ensure a whisper-quiet installation!

Examples of a ceiling installation:

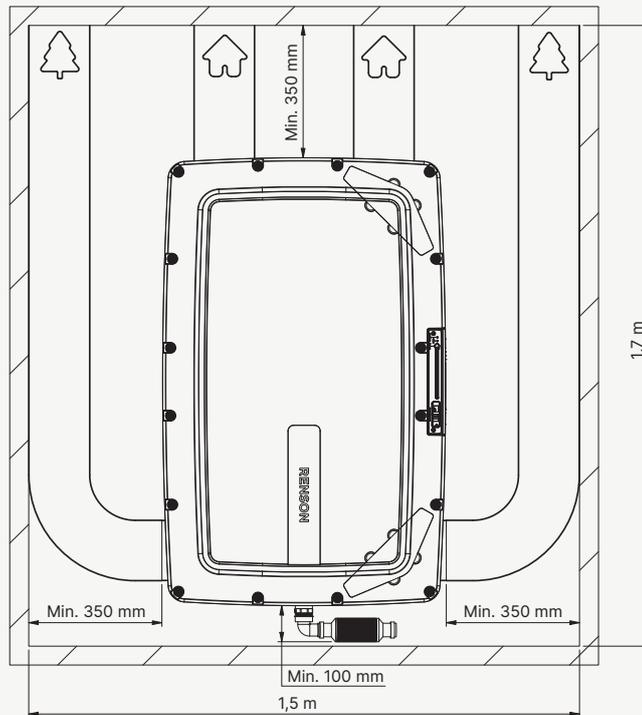


Examples of a ceiling installation:

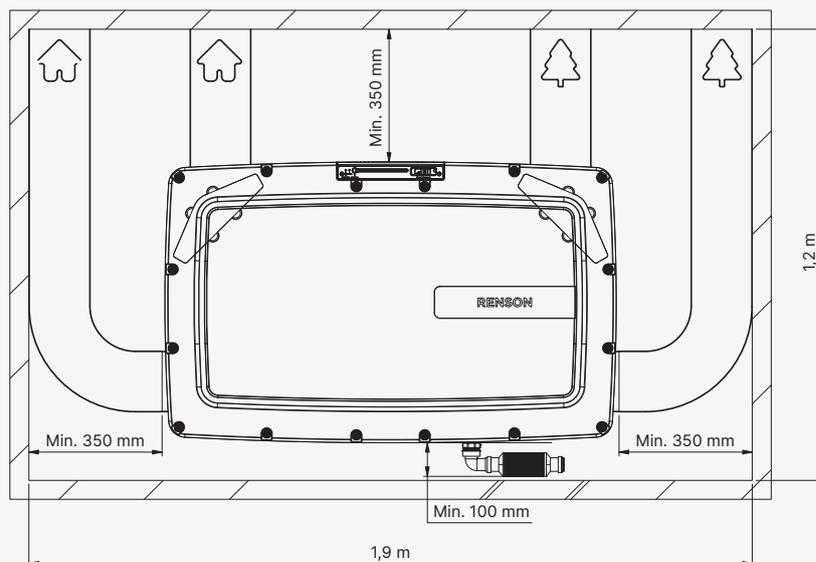


Examples of a wall installation:

- Vertical wall installation



- Horizontal wall installation



Technical drawings

