

# QR120P-W



## SLIM-LINE CENTRALISED HEAT RECOVERY UNIT

### APPLICATION

Whole-house heat recovery unit, suitable for wall vertical installation, in 1 or 2 bedroom apartments, hotel rooms, student accommodations.

### SPECIFICATION

**Outer panels** manufactured from powder coated galvanised sheet steel. The unit is finished in white RAL 9010.

**Main structure** manufactured from EPP (expanded polypropylene) providing reduced sound emissions and maximised air tightness and thermal insulation.

**EC external rotor motors** fitted as standard for energy saving. Provided with integral thermal protection, mounted on sealed for life ball bearings.

**Backward** curved centrifugal impeller dynamically balanced and directly driven by the motor to provide a smooth airflow through the unit.

Highly efficient **counterflow heat exchanger** to maximise thermal recovery.

### FEATURES & BENEFITS

**Compact size:** 171mm height (190mm max., including fixing brackets) to overcome shallow voids.

**Ease of installation and maintenance.**

**Simplified electric wiring:** the unit is supplied pre-cabled.

**ISO Coarse 60% (G4) filters** easy removable for cleaning; no need to remove the access panel.

**ISO ePM1 60% filter (F7)** on request.

**Integrated condensation drainage.**

**Automatic anti-frost protection** to prevent frost building up on the intake side of the heat exchanger.

**Tested to the latest standards:** units are tested in the TÜV Rheinland accredited internal laboratory at Aerauliqa according to the operating document IEC OD 2048 (level CTF1) for the IEC 60335-1 and IEC 60335-2-80 Standards, meaning accurate, up to date information on electrical safety, performance and noise level that can be relied upon. Designed and manufactured in accordance with EN60335-2-80 (Low Voltage Directive) and the EMC Directive (Electromagnetic Compatibility).

### OPERATION

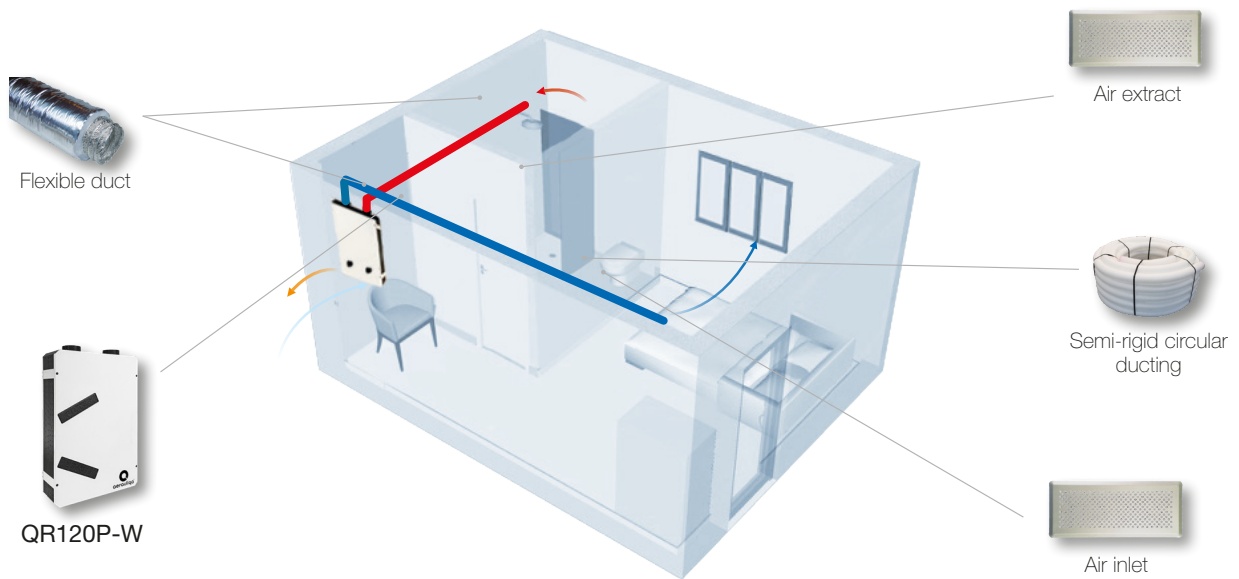
The unit is supplied with a multi-function control panel (CTRL-V1) for control and convenience, providing:

- 3 speed settings (to be set during installation)
- BOOST option
- Filter reset
- On/off
- Keypad lock
- Anti-frost indicator
- Failure indicator
- Filter replacement indicator
- Suitable for remote ambient sensors (SEN-HY, SEN-PIR).
- Modbus interface.



**CTRL-V1**  
(supplied as standard)

## Example of a complete ventilation system



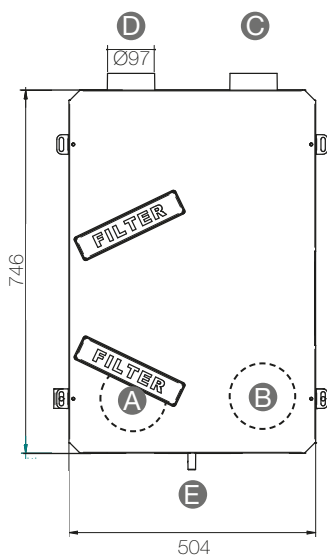
**How it works:** a continuous running centralised heat recovery unit (QR120P) transfers thermal energy and humidity from extracted humid air to warm incoming fresh air, with top acoustic comfort.

It is necessary to provide an adequate air distribution system so that each individual indoor environment is suitably ventilated.

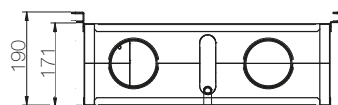
**Energy saving:** the preheated/precooled fresh air and continuous air changes reduce the demand for additional heating/airconditioning. The EC brushless motors significantly reduce the electricity consumption.

**Indoor Air Quality:** a correctly specified mechanical ventilation system can ensure the quality of the indoor air is constantly maintained for the health and well-being of the occupants as well as of the building. Duly maintained filters ensure that incoming air is suitably filtered of dust and pollen before it enters the home.

## Dimensions (mm) and Weight (kg)



Front view



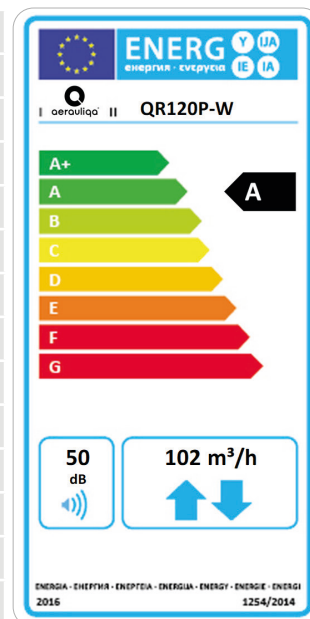
Side view

| Model  | QR120P-W                |
|--------|-------------------------|
| Weight | 11,5                    |
| A      | Intake air from outside |
| B      | Exhaust air to outside  |
| C      | Supply air to inside    |
| D      | Extract air from inside |
| E      | Condensation drainage   |

# QR120P-W

## Product fiche - ErP Directive, Regulations 1253/2014 - 1254/2014

|     |   |                       |                             |                        |                         |
|-----|---|-----------------------|-----------------------------|------------------------|-------------------------|
| a)  | Mark  | -                     | AERAULIQA                   |                        |                         |
| b)  | Model   | -                     | QR120P-W                    |                        |                         |
| c)  | SEC class   | -                     | A                           | A                      | B                       |
| c1) | SEC warm climates                                       | kWh/m <sup>2</sup> .a | -14,7                       | -11,3                  | -8,5                    |
| c2) | SEC average climates                                    | kWh/m <sup>2</sup> .a | -39,5                       | -35,5                  | -31,8                   |
| c3) | SEC cold climates                                       | kWh/m <sup>2</sup> .a | -82,8                       | -77,7                  | -67,8                   |
|     | Energy label  | -                     | Yes                         |                        |                         |
| d)  | Unit typology   | -                     | Residential - bidirectional |                        |                         |
| e)  | Type of drive   | -                     | Multiple speed drive        |                        |                         |
| f)  | Type of Heat Recovery System                            | -                     | Heat recovery               |                        |                         |
| g)  | Thermal efficiency of heat recovery                     | %                     | 82                          |                        |                         |
| h)  | Maximum flow rate @ 100 Pa                              | m <sup>3</sup> /h     | 102                         |                        |                         |
| i)  | Electric power input (maximum flow rate)                | W                     | 58                          |                        |                         |
| j)  | Sound power level (L <sub>WA</sub> )                    | dBA                   | 50                          |                        |                         |
| k)  | Reference flow rate                                     | m <sup>3</sup> /h     | 71                          |                        |                         |
| l)  | Reference pressure difference                           | Pa                    | 50                          |                        |                         |
| m)  | Specific power input (SPI)                              | W/m <sup>3</sup> /h   | 0,352                       |                        |                         |
| n1) | Control factor  | -                     | 0,65                        | 0,85                   | 1                       |
| n2) | Control typology  | -                     | Local demand control        | Central demand control | Manual control (no DCV) |
| o1) | Maximum internal leakage rate                           | %                     | 2                           |                        |                         |
| o2) | Maximum external leakage rate                           | %                     | 1                           |                        |                         |
| p1) | Internal mixing rate                                    | %                     | N/A                         |                        |                         |
| p2) | External mixing rate                                    | %                     | N/A                         |                        |                         |
| q)  | Visual filter warning                                   | -                     | Visual warning              |                        |                         |
| r)  | Instructions to install regulated grilles               | -                     | N/A                         |                        |                         |
| s)  | Internet address for pre/disassembly instructions       | -                     | www.aerauliqa.com           |                        |                         |
| t)  | Airflow sensitivity to pressure variations              | %                     | N/A                         |                        |                         |
| u)  | Indoor/outdoor air tightness                            | m <sup>3</sup> /h     | N/A                         |                        |                         |
| v1) | AEC - Annual electricity consumption - warm climates    | kWh                   | 2,3                         | 3,5                    | 4,4                     |
| v2) | AEC - Annual electricity consumption - average climates | kWh                   | 2,3                         | 3,5                    | 4,9                     |
| v3) | AEC - Annual electricity consumption - cold climates    | kWh                   | 2,3                         | 3,5                    | 10,2                    |
| w1) | AHS - Annual heating saved - warm climates              | kWh                   | 20,5                        | 20,0                   | 19,6                    |
| w2) | AHS - Annual heating saved - average climates           | kWh                   | 45,3                        | 44,1                   | 43,3                    |
| w3) | AHS - Annual heating saved - cold climates              | kWh                   | 88,6                        | 86,3                   | 84,6                    |
|     | Sound pressure @ 3m <sup>(1)</sup>                      | dB(A)                 | 18                          |                        |                         |
|     | Ambient temperature max                                 | °C                    | +40                         |                        |                         |
|     | Degree of protection IP                                 | -                     | X4                          |                        |                         |
|     | Marking   | -                     | CE                          |                        |                         |



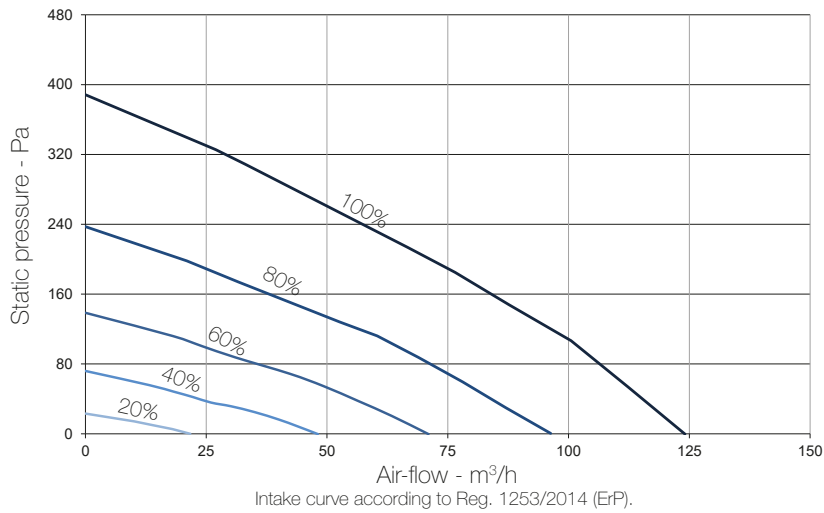
- 220-240V ~ 50/60Hz.

- air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2Kg/m<sup>3</sup>.

- data measured in the TÜV Rheinland accredited internal laboratory at Aerauliqa according to the operating document IEC OD 2048 (level CTF1) for the IEC 60335-1 and IEC 60335-2-80 Standards.

(1) sound pressure level @ 3m in free field, breakout, speed 40%, for comparative purposes only.

## Performance curve



| Speed % | W max | m³/h max |
|---------|-------|----------|
| 20      | 9     | 22       |
| 40      | 13    | 48       |
| 60      | 20    | 71       |
| 80      | 32    | 96       |
| 100     | 58    | 124      |

## Sound level

| Speed 100% | Lw dB - SOUND POWER OCTAVE BAND |     |     |     |     |     |    |     | Lp dB(A) |
|------------|---------------------------------|-----|-----|-----|-----|-----|----|-----|----------|
|            | 125                             | 250 | 500 | 1 K | 2 K | 4 K | 8K | Tot | @3m      |
|            | 48                              | 52  | 58  | 54  | 47  | 43  | 36 | 61  | 38       |
| Speed 80%  | Lw dB - SOUND POWER OCTAVE BAND |     |     |     |     |     |    |     | Lp dB(A) |
|            | 125                             | 250 | 500 | 1 K | 2 K | 4 K | 8K | Tot | @3m      |
|            | 43                              | 52  | 53  | 49  | 42  | 37  | 28 | 57  | 33       |
| Speed 60%  | Lw dB - SOUND POWER OCTAVE BAND |     |     |     |     |     |    |     | Lp dB(A) |
|            | 125                             | 250 | 500 | 1 K | 2 K | 4 K | 8K | Tot | @3m      |
|            | 38                              | 46  | 45  | 43  | 36  | 29  | 18 | 50  | 26       |
| Speed 40%  | Lw dB - SOUND POWER OCTAVE BAND |     |     |     |     |     |    |     | Lp dB(A) |
|            | 125                             | 250 | 500 | 1 K | 2 K | 4 K | 8K | Tot | @3m      |
|            | 34                              | 40  | 37  | 35  | 26  | 18  | 14 | 43  | 18       |
| Speed 20%* | Lw dB - SOUND POWER OCTAVE BAND |     |     |     |     |     |    |     | Lp dB(A) |
|            | 125                             | 250 | 500 | 1 K | 2 K | 4 K | 8K | Tot | @3m      |
|            | -                               | -   | -   | -   | -   | -   | -  | -   | <9       |

Lp dB(A) @3m, breakout, for comparative purposes only.  
 \* measurements comparable with test chamber background noise.