

Single room  
heating/cooling  
and ventilation  
unit with heat and  
moisture recovery

[www.xvent.cz](http://www.xvent.cz)

# 3in1

**XROOM**

Beauty in simplicity

# Unique solution - ventilation/heating/cooling electric or water exchanger recovery exchanger of heat and moisture easy installation design fits in to each interior available in two sizes

...is unique product containing **ventilation unit and heating/cooling unit in one**. Both systems work independently.

**Xroom** is manufactured in two sizes **Xroom 100** and **Xroom 250**. These units have wide range of usage in commercial and residential sector f.a. : in hotels, offices, schools, hospitals, apartments, family houses, ...

**Xroom is very silent.**

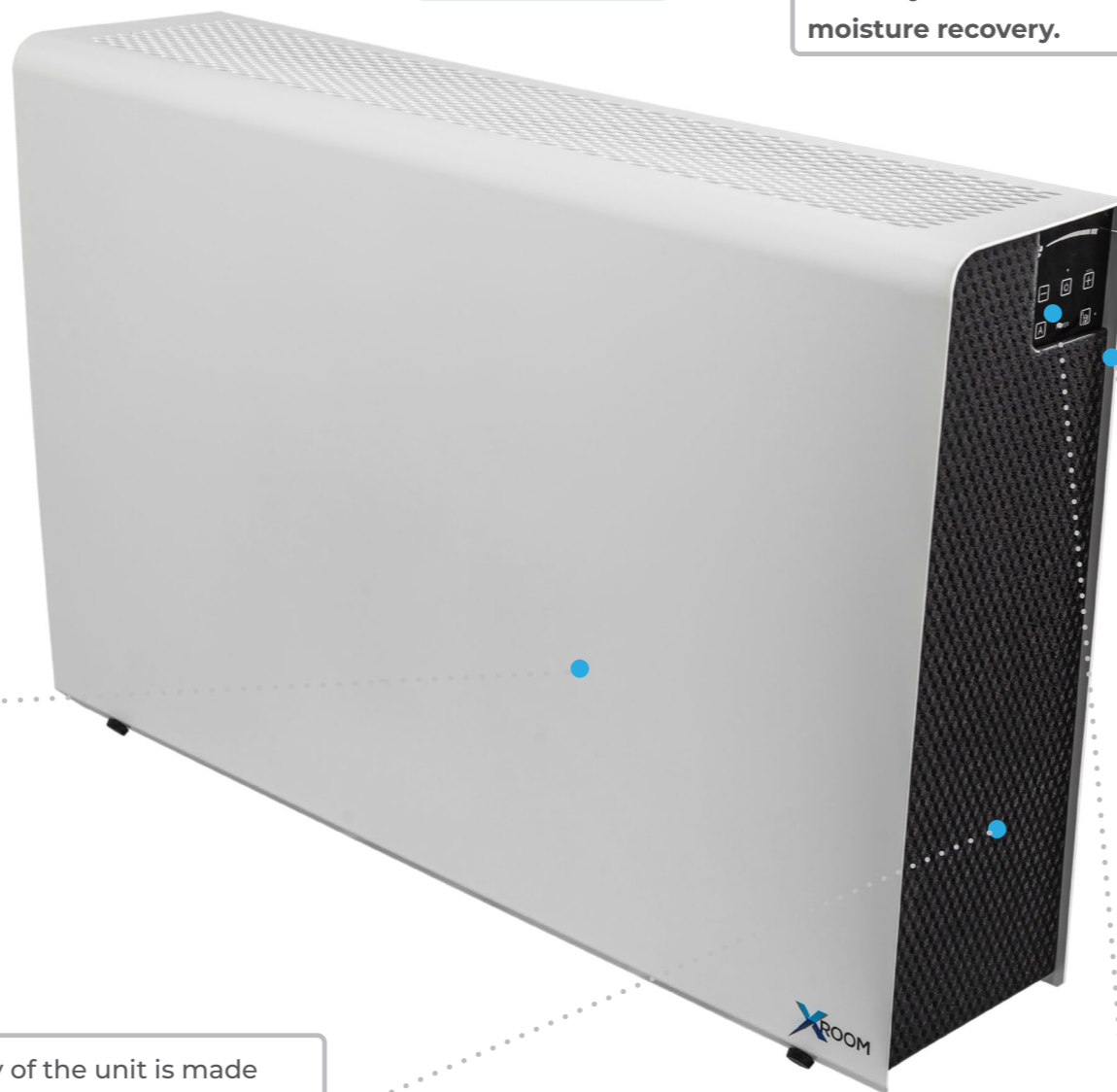
The unit matches **Energy class A+**

The unit comes with **CO<sub>2</sub>** sensor as standard and enables also **RH** and **Radon** sensors.

Removable **front cover** secured by screws. Available in flat white or anthracite color.



Body of the unit is made from black **EPP**. (expanded polypropylene).



**Water exchanger** is controlled by thermostatic water valve. **Electric exchanger** is controlled by controls of the unit.

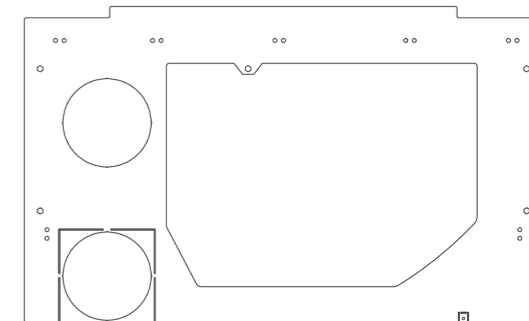
**EPP filter covers**

Two types of recovery exchangers. **Heat recovery** or **heat and moisture recovery**.

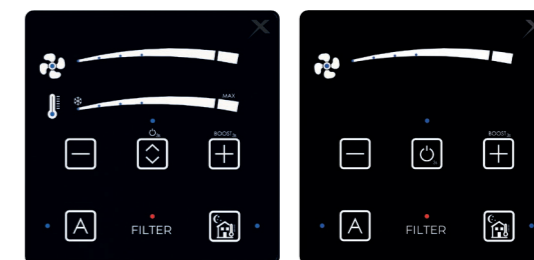
**Pleated filters** are easy accessible. Unit comes with filters class **M5**. Filters class **F7** are available as accessories.

**Filter reset button**

**Metal template** enables easy installation. It ensures correct position for drilling of the holes for intake and exhaust and it is also used for hanging of the unit to the wall.



**Integrated controls** is used for airflow management, heating/cooling performance and switching of the operation modes.

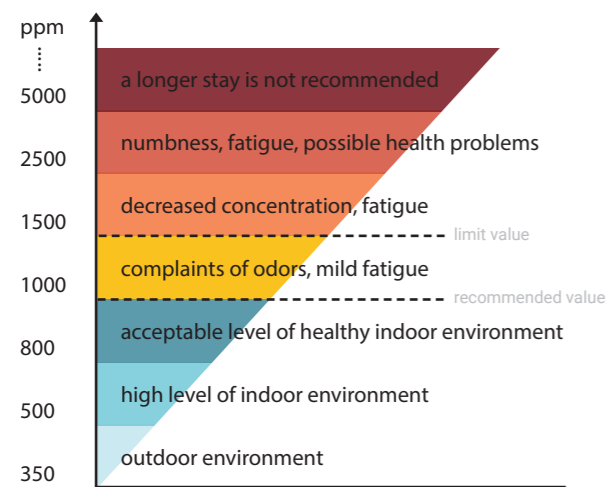


# 3in1 Xroom - ventilation/heating/cooling



**Xroom** is designed to be ventilation unit and the heating/cooling unit as well. The **ventilation operation** and the **heating/cooling operation** works independently one on each other. This means, that during ventilation request the heating does not have to work and oppositely. Both systems can operate at same time as well. The water and electric heater do not operate as the post heaters only, they operate as solid-regular air heaters.

**...Xroom unit 3in1 can replace the radiator (or electric convector) and save the space...**

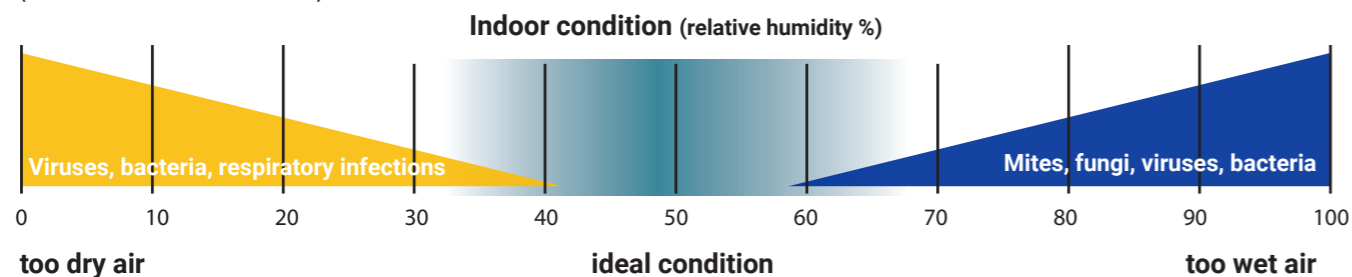


## Effect CO<sub>2</sub> on human - CO<sub>2</sub> sensor in standard - simple solution

Sensors enable **automatic operation** of the unit. The unit operates only, when the inside quality of the air is worse than requested. When fulfilling the air quality request, such a solution generate only minimum ventilation **costs in the real operations!** This also means lower operation costs and faster paid back of the investment to ventilation unit purchase...

## Effect of relative moisture of air on human - enthalpy regeneration

**Enthalpic regeneration (ERV)** means backwards gaining of the moisture from the extract air. The supplied air is so dry in the winter, that it can reduce the indoor relative humidity in the air below 20%. Such a low relative humidity cause drying-off the skin, mucous membrane and wood-made furniture and floors. Dry mucous membrane makes breathing less comfortable and cause respiratory diseases. Dehydration of the skin makes wrinkles and the drying-off the wood can damage furniture or floors. Ideal relative humidity inside should be around 50%. The solution is usage of **Enthalpic Recovery Exchanger** (Xvent recommends)



## Technical parameters

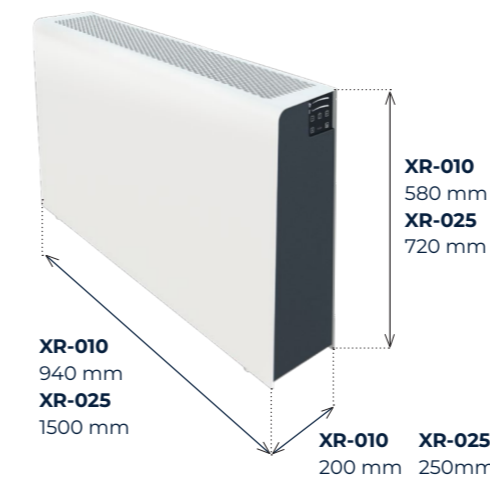
| XROOM-100                               |                 | XR1-010-ECS0..X...                    |     | XR1-010-ECVx..X... |     | XR1-010-ECE1..X... |     | XR1-010-ECS0..P... |     | XR1-010-ECVx..P... |     | XR1-010-ECE1..P... |     |
|---|-----------------|---------------------------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|
| <b>Type of recovery exchanger</b>       |                 | HRV                                   | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV |
| <b>Unit equipment</b>                   | preheater       | -                                     |     | -                  |     | -                  |     | electric ( 0,27kW) |     |                    |     |                    |     |
|   | heating/cooling | -                                     |     | water heat         |     | electric           |     | -                  |     | water heat         |     | electric           |     |
| <b>Nominal airflow / boost*</b>         |                 | m3/h 100 / 215 (HRV) , 90 / 205 (ERV) |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Heating output range**</b>           |                 | kW -                                  |     | 0,33 - 1,38        |     | 0,5                |     | --                 |     | 0,33 - 1,38        |     | 0,5                |     |
| <b>Cooling output range*****</b>        |                 | kW -                                  |     | 0,18- 1,4          |     | -                  |     | --                 |     | 0,18-1,4           |     | -                  |     |
| <b>Noise level***</b>                   |                 | dB (A) 32,1                           |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Weight****</b>                       |                 | kg 16,3                               |     | 18,3               |     | 19,3               |     | 16,8               |     | 18,8               |     | 19,8               |     |
| <b>Volume of water in the exchanger</b> |                 | l -                                   |     | 0,51               |     | -                  |     | -                  |     | 0,51               |     | -                  |     |
| <b>Power supply</b>                     |                 | V/Hz 1 ~ 230 / 50-60                  |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Nominal power input / boost*</b>     |                 | W 30 / 167                            |     | 30 / 165           |     | 530 / 667          |     | 300 / 437          |     | 300 / 437          |     | 800 / 937          |     |
| <b>Nominal current / boost*</b>         |                 | A 0,3 / 1,32                          |     | 0,3 / 1,32         |     | 2,5 / 3,5          |     | 1,5 / 2,5          |     | 1,5 / 2,5          |     | 3,7 / 4,7          |     |
| <b>Recovery efficiency EN308</b>        | heat            | %                                     |     | 87 / 90            |     | 87 / 90            |     | 87 / 90            |     | 87 / 90            |     | 87 / 90            |     |
|   | moisture        | %                                     |     | - / 85             |     | - / 85             |     | - / 85             |     | - / 85             |     | - / 85             |     |
| <b>Protection</b>                       |                 | IP 20                                 |     |                    |     |                    |     |                    |     |                    |     |                    |     |

| XROOM-250                               |                 | XR1-025-ECS0..X...                    |     | XR1-025-ECVx..X... |     | XR1-025-ECE1..X... |     | XR1-025-ECS0..P... |     | XR1-025-ECVx..P... |     | XR1-025-ECE1..P... |     |
|---|-----------------|---------------------------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|
| <b>Type of recovery exchanger</b>       |                 | HRV                                   | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV | HRV                | ERV |
| <b>Unit equipment</b>                   | preheater       | -                                     |     | -                  |     | -                  |     | electric ( 0,54kW) |     |                    |     |                    |     |
|   | heating/cooling | -                                     |     | water              |     | electric           |     | -                  |     | water              |     | electric           |     |
| <b>Nominal airflow / boost*</b>         |                 | m3/h 250/ 350 (HRV) , 240 / 335 (ERV) |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Heating output range**</b>           |                 | kW -                                  |     | 1,34 - 3,49        |     | 1                  |     | --                 |     | 1,34 - 3,49        |     | 1                  |     |
| <b>Cooling output range*****</b>        |                 | kW -                                  |     | 0,3-3              |     | -                  |     | --                 |     | 0,3-3              |     | -                  |     |
| <b>Noise level***</b>                   |                 | dB (A) 32,6                           |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Weight****</b>                       |                 | kg 36                                 |     | 39,4               |     | 41,2               |     | 37                 |     | 40,4               |     | 42,2               |     |
| <b>Volume of water in the exchanger</b> |                 | l -                                   |     | 1,17               |     | -                  |     | -                  |     | 1,17               |     | -                  |     |
| <b>Power supply</b>                     |                 | V/Hz 1 ~ 230 / 50-60                  |     |                    |     |                    |     |                    |     |                    |     |                    |     |
| <b>Nominal power input / boost*</b>     |                 | W 0,59 / 169                          |     | 0,59 / 169         |     | 1061 / 1169        |     | 479 / 709          |     | 480 / 709          |     | 1480 / 1709        |     |
| <b>Nominal current / boost*</b>         |                 | A 0,61 / 1,42                         |     | 0,61 / 1,42        |     | 5 / 5,8            |     | 3 / 3,8            |     | 3 / 3,8            |     | 7,3 / 8,2          |     |
| <b>Recovery efficiency EN308</b>        | heat            | %                                     |     | 87 / 86            |     | 87 / 86            |     | 87 / 86            |     | 87 / 86            |     | 87 / 86            |     |
|   | moisture        | %                                     |     | - / 75             |     | - / 75             |     | - / 75             |     | - / 75             |     | - / 75             |     |

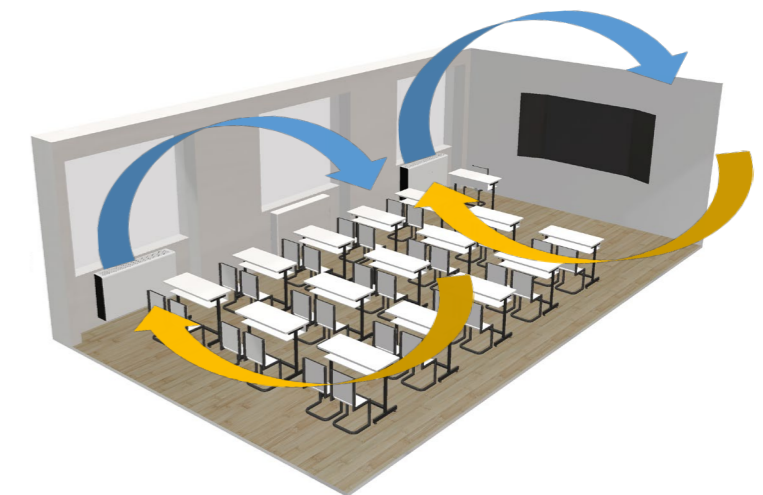
\* BOOST(intensive ventilation - 10min),  
 \*\* water temperature 75/60°C, inlet air temperature 20°C  
 \*\*\* sound pressure level in 3m (free space),  
 \*\*\*\* unit weight (without water and packaging)  
 \*\*\*\*\* water temperature 7/12°C, inlet air temperature 24°C (indoor condition 23°C extract / 30°C supply) - be careful for fluid pressure drop



## Basic dimensions



## Room ventilation scheme



**In offices...**  
...for higher productivity...



**In living rooms...**  
...for better air quality...



**In schools...**  
...for better concentration...



**In hospitals...**  
...fresh air without opening windows...



**In hotels...**  
...for healthier sleep...



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