



Ventilation unit with heat and moisture recovery



www.xvent.cz

suitable for apartments and houses
heat and moisture recovery exchanger
easy installation
intergrated pre-preheater
EC fans

...we focused on maximum utility value during the development of the Xhouse heat recovery unit. It is suitable for apartments and family houses. The unit adapts to your needs, if you solve controlled replacement of the air, or too high inside humidity. Thus you will feel better in your home.

The unit excels in low weight (only 16kg)

The energy class of the unit is A. The unit thus complies with most subsidy programs.

Possibility of **CO2 and RH sensor** connection.

The controls offers the possibility of extension to remote control and connection to your smart home platform.

Possibility of electronic bypass or mechanical bypass.

Possibility of connecting external heating (up to 1 kW). The unit supplies power to the heater only when it is running. Post-cooling function after switching off the unit (3min)



Insulated sockets for easy and safe connection of air ducts.

Integrated preheater consisting of safe PTC elements and automatic performance control.

Filters with high-capacity filtration class M5 (alternatively F7)

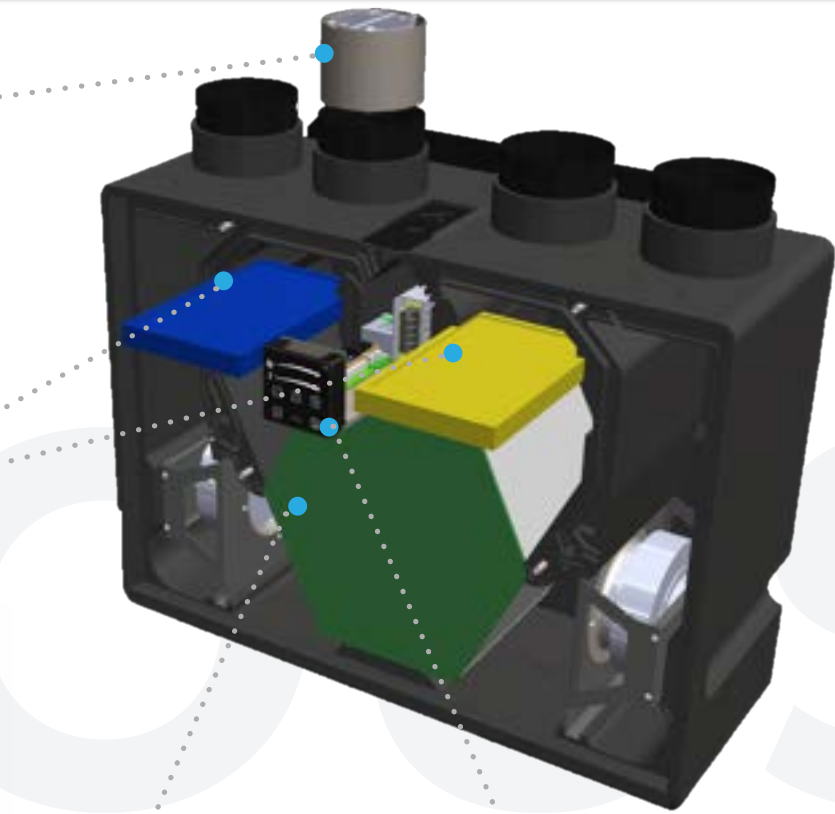
Two types of recovery exchangers. **Recovery of the heat or recovery of the heat and moisture (enthalpic).**

Accessible control board - simple connection of necessary accessories.

The built-in control is used to control the air output and other functions of unit.

The front cover is removable and secured with screws at the bottom of the unit. It is available in white colour.

The body of the unit is made of black EPP (expanded polypropylene).



Frequently asked questions / Answers

Decentral vs. central ventilation...

Decentral ventilation is mechanical ventilation for one room only. **Central ventilation** is mechanical ventilation of more rooms by once device.

Central ventilation is provided by units with bigger dimensions than units for decentral ventilation, since these has to supply higher air volume. Units for central ventilations are usually located in the technical room where they are not annoying the users by high noise level and they are not blocking any space. Central ventilation systems require ducting for supply and extract air, which are often difficult to place in the way to do not disturb. Central ducting systems require cleaning every year, which is complicated. Cost investment of the installation of ducting and theirs covers are usually in the same level as the purchase price of the ventilation unit. Another aspect is regulation and controlling of these systems in order to achieve minimum operation costs and distribution of the air to there where is needed. The advantage is, that suction and exhaust does not have to be located on the outside wall and if so, there are always only two openings.

Decentral units are used for ventilation of one room only. Theirs dimensions vary from very small ones located in to the wall, to bigger ones with dimensions similar to smaller radiator. These units ventilate only selected rooms and when needed. Theirs advantage is, that these units can be operated according to sensors of quality of the air (Air Quality sensors -AQS), typically by CO2 sensor or relative humidity sensor. Thanks to the sensors the unit ventilates only when the concentration of pollution in the air is above set level – this means "ON DEMAND". This ensure, that the energy consumption during ventilation is at minimum level, about 35% lower than ventilation without sensors. More powerful units can supply in to the room bigger air volume of the air in case of need than central units and thus can ventilate the room faster and better.

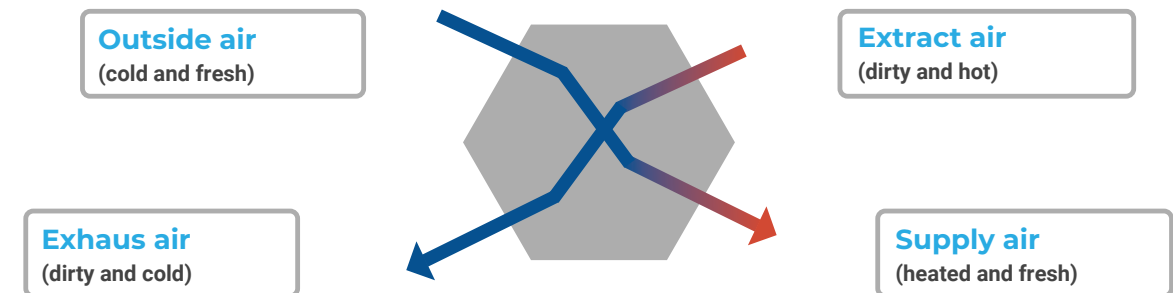
It is necessary to consider more suitable solution for each specific project.



What is heat recovery...

Heat recovery generally means backwards usage of the energy. In the case ventilation we talk about heat recovery or eventually about moisture regeneration. Quantity of energy to be saved is expressed by efficiency shown in percentage points and such a value represent quantity of the heat/moisture, what is the unit able to gain from the extracted(exhausted) air and transfer it to supplied (fresh) air. Higher efficiency value means better. This is valid for heat recovery with efficiency up to 85%, because the heat recovery with higher efficiency has trouble with freezing condensate in the exchanger. This fact seriously limits the heat recovery during winter time.

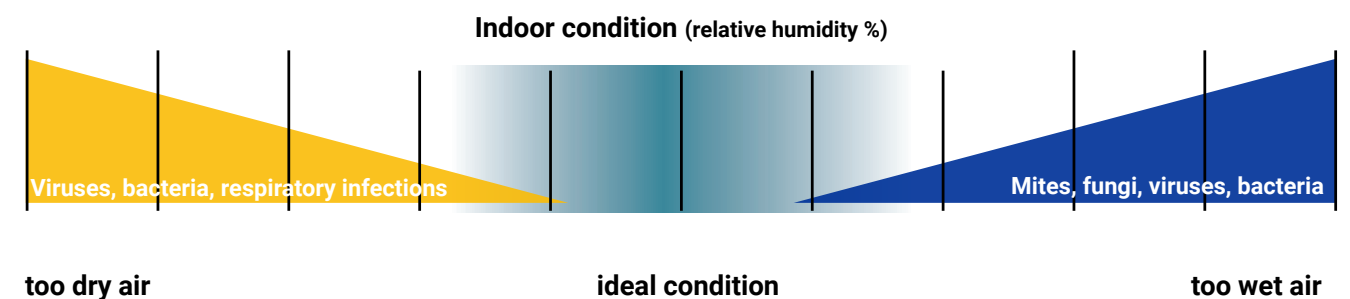
Important fact is, that ventilation with heat recovery saves up to 85% of the heating costs in comparison with ventilation by windows.



What means enthalpic 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).

It is important to know that enthalpy heat exchangers always also recover heat.



How to choose right size of the unit...

One of the mains parameters of the unit is the air volume which is the unit able to supply in to the room. Value which is usually used for choice, is quantity of the air at one square meter of the floor space. **Manufactures usually used 25m³/h at 20m²**. This is half quantity which ensure healthy climate. For the most cases are better to use quantity of the air need at quantity of the people inside the room. Typical value is **25m³/h/person**.

It is important to choose higher value of both methods in specific case anyway.

Why is mechanical ventilation needed...

Ventilation by windows is in many cases enough (residential areas, alone houses close to the forest), but does not ensure the energy savings (heat in the winter, cold during summer). But if there is noise outside, pollen, annoying smell or freezing conditions, the ventilation by window is not the best solution. Even thought in the summer, if the room is equipped by air conditioner, is the opening the windows not suitable. In all cases mentioned above is the mechanical ventilation senseful solution. If the unit is equipped by heat recovery and/or moisture regeneration, the energy savings reach 85%, which will have to be supplied by heating or by cooling device otherwise.

It is important to consider if the priority is price or health.

Size matters...

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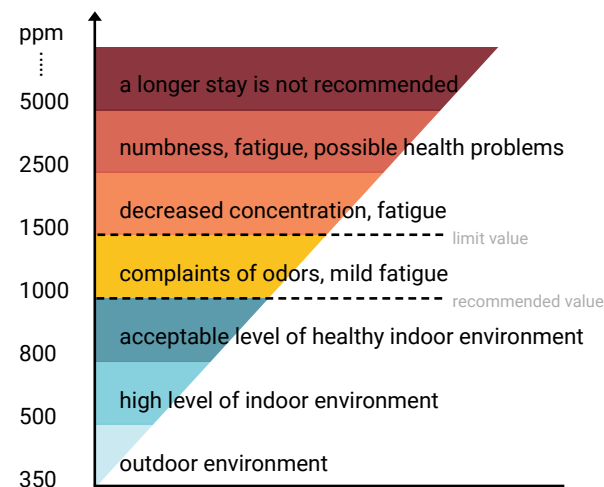
Size matters...

Size matters...

Size matters ... the biggest advantage of the **Xhouse heat recovery unit** is undoubtedly its size and low weight. The problem with space and more weight is always a problem during installation. Xhouse combines maximum performance with minimum development. it will thus fit into every project.

Why sensors (air quality sensors)...

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. Xflat enables connection of **CO2 sensor, RH sensor and radon sensor**. **It is important to consider, if the more important are operation costs, or purchase investment.**



What are the operation costs...

Operation costs are generated by heating costs, costs to operate the fans and by maintenance and service costs. Heating costs are lower about 85% in comparison with ventilation by windows for the same time period. Operation costs of the fans are thanks to the EC fans 1 EUR/month when considering average usage four hours a day every day. Costs of filter replacement are around 10 EUR/month when replaced twice a year.

How complicated is the installation...

Installation of the unit is simplified, that handyman can install it by him self. Installation does not require any specialist. Because the unit is very light, installation is possible in one. The mains connection cable is already removed from the unit. Retrofitting and connection of accessories is carried out in the control box.

How difficult is the maintenance...

The Xhouse is designed to be maintenance free. Only thing needs to be under the control is filter clogging. Good condition of the filters ensures smooth operation and stable high level heat recovery and moisture regeneration. Clogged filter is signal by flashing diode "filter" on the control panel. In such case is necessary to follow the operation manual. The front cover comes to remove and by opening two plugins with inscription "FILTER" is possible to access and replace these filters by new clean ones. The replacement of the filters to be confirmed by pushing the RESET button and that's it.

It can not be easier.

What is the difference between electronic and mechanical bypass...

Summer bypass - During the colder nights of the summer, in addition to the normal ventilation of the windows, it is also possible to use forced ventilation with the bypass function. Otherwise, it pays to use a ventilation system with heat recovery. This bypass directs the exhaust air around the heat exchanger (see figure), thus preventing the „cooler“ supply air from being heated by the warm exhaust air.

Elektronic bypass - Electronic bypass - there is no physical bypass of the recuperator, but only the exhaust fan is switched off. The supply fan pushes the air through the recuperator, but it is not heated by the exhaust air.

+ Better price, greater thermal efficiency, fewer mechanical parts

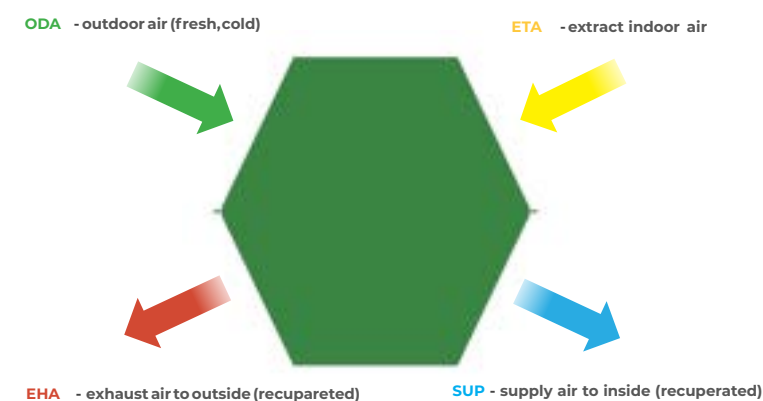
■ No air is discharged during bypass switching (the object is slightly overpressured)

Mechanical bapys - there is a physical bypass channel with a flap that opens the bypass channel and closes the recuperation section at the same time.

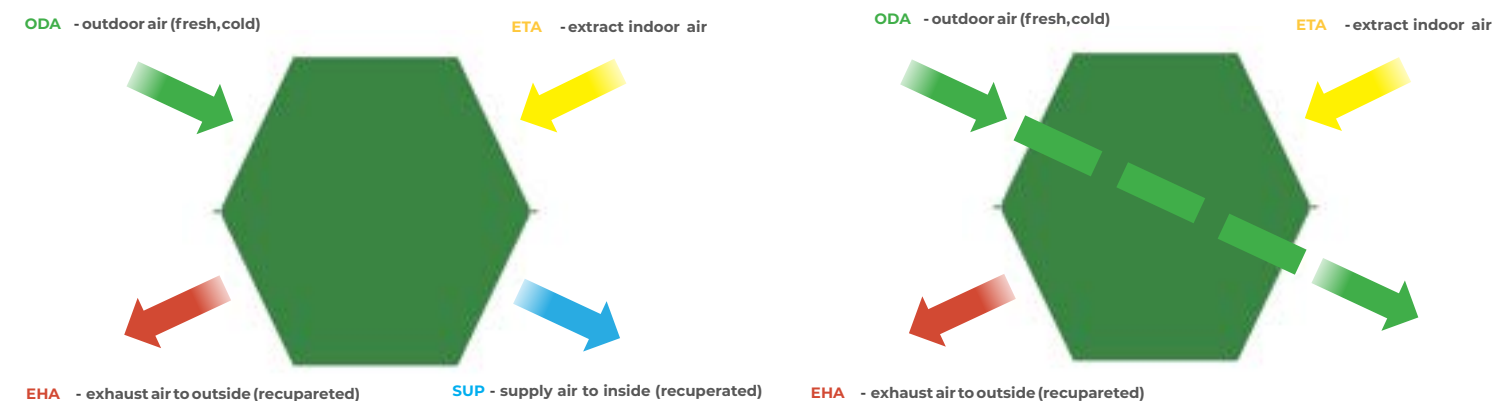
+ Equal pressure ventilation

■ Lower thermal efficiency, higher price, more mechanical parts

Recovery logic



Bypass logic (fresh air bypasses the recuperation part)



Control description Xhouse

FILTERS CLOGGING

Indication of clogged filter is activated by timer, roughly after 6 month operations (only if the units ventilate). Indication is signaled by red diode flashing.

CHILDREN'S LOCK

Activated by pressing the summer mode button for 6 seconds.

NIGHT COOLING (bypass)

Activate the night cooling function by pressing the button. The night cooling is used for cooling down the room in the summer by cold night air. This function is active for 8h from activation. Intensity of the supplied air is possible to change during function run. Once the function is over the values comes back to the previous setting.

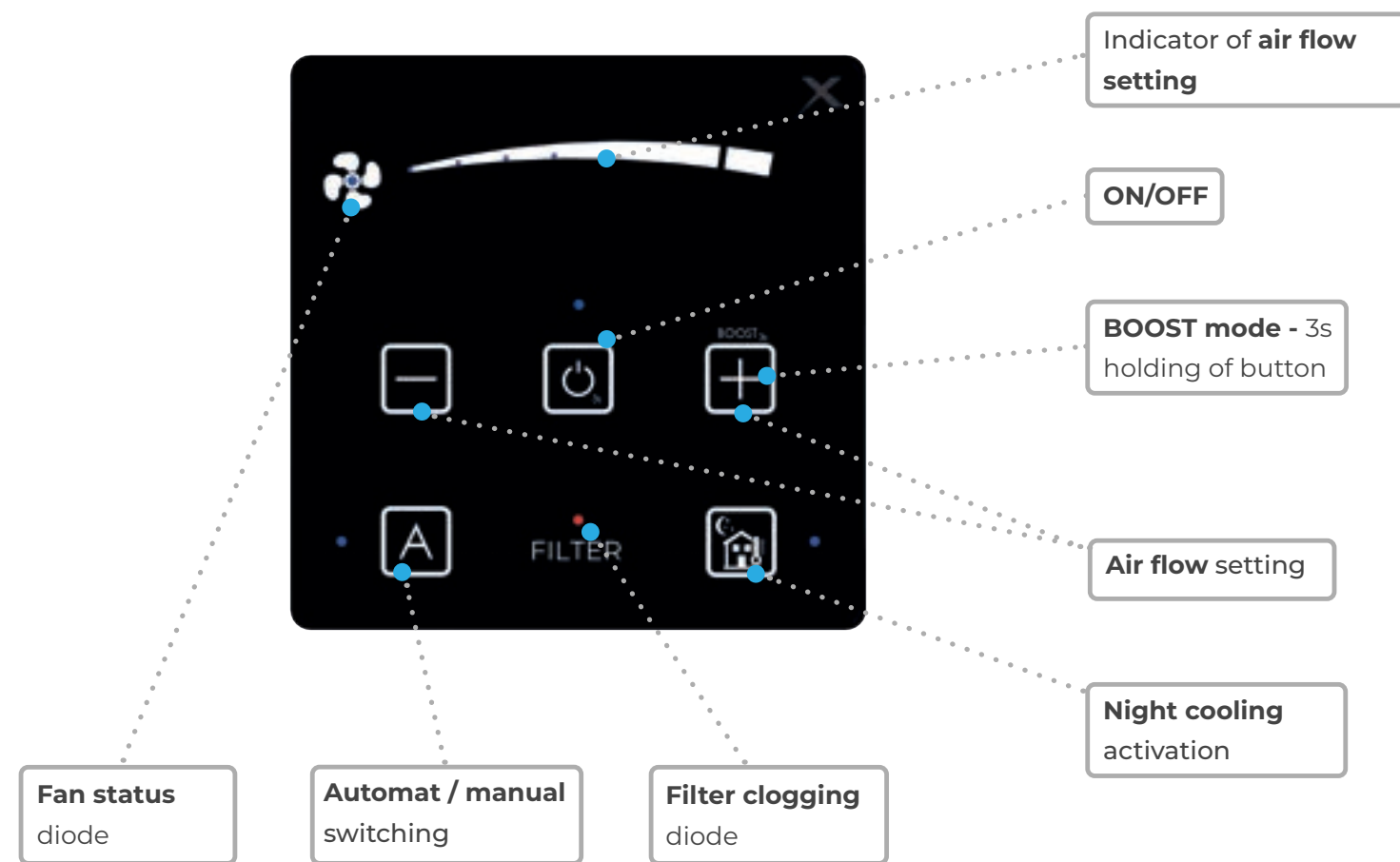
AUTOMAT/MANUAL

By pressing the button, you come to the manual mode – ventilation is manually controlled by user, out-puts from the AQS sensors are ignored. By pushing the button once again you can active automatic mode – ventilation on demand based on AQS sensors (if connected)

BOOST MODE

By pressing the button for 3sec the intensive ventilation will start for 30sec period. Shall you wish to turn off this regime within 10 minutes, press the button for 3 sec once again and the unit comes to the setting used before. Boost time running you are able to set in customer menu (30sec - 20min)

Control panel description



ANTIFREEZE PROTECTION

The unit is equipped with an anti-freeze sensor located in the recuperator. If the temperature drops below the set limit, the unit starts the antifreeze protection - fan balancing. If the unit is equipped with preheater, which is connected to the unit control, the preheating is started first and if it is insufficient, the fan balancing is started.

UNBALANCING FLOW

In customer menu its possible to unbalanced flow of fans (0-35%). The exhaust fan will have less power than the supply fan.



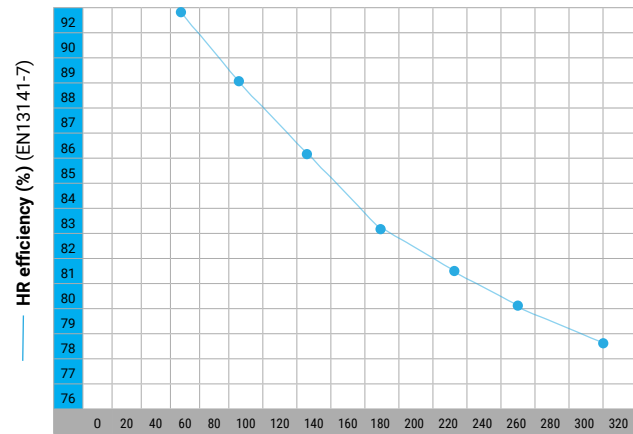
Technical data Xhouse

VENTILATION UNIT WITH HEAT AND HUMIDITY RECOVERY

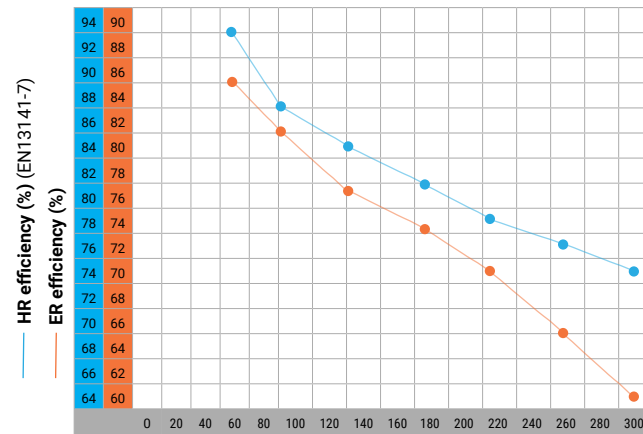
Type		Xhouse-300-heat and moisture recovery efficiency									
		XH1-30-ECS0HRxAS-0A0 (electronic bypass)					XH1-30-ECS0ERxAS-0A0 (electronic bypass)				
		HRV (heat recovery)					ERV (enthalpy recovery)				
Type of recovery exchanger		Flow (m3/h)	HR efficiency (%)	Current(A)	Power input (W)	Flow (m3/h)	HR efficiency (%)	ER efficiency (%)	Current(A)	Power input (W)	
AirFlow - setting	1.	45	92	0,16 (*2,76)	9 (*609)	45	92	88	0,14 (*2,74)	8 (*608)	
	2.	85	88,3	0,19 (*2,79)	15 (*615)	80	86,2	83,9	0,18 (*2,78)	14 (*614)	
	3.	125	85,1	0,26 (*2,86)	26 (*626)	120	83	79,2	0,26 (*2,86)	26 (*626)	
	4.	170	82,1	0,4 (*3)	47 (*647)	165	80,2	72,1	0,41 (*3,01)	48 (*648)	
	5.	210	80,7	0,64 (*3,24)	79 (*679)	205	77,1	69,8	0,63 (*3,23)	77 (*677)	
	6.	250	79,3	0,94 (*3,54)	122 (*722)	245	75	64	0,94 (*3,54)	122 (*722)	
	7. - nominal	300	77,8	1,44 (*4,04)	184 (*784)	290	73,2	59,1	1,42 (*4,02)	182 (*782)	
	8. - boost	310	77,5	1,52 (*4,12)	195 (*795)	300	72,1	57	1,5 (*4,1)	192 (*792)	

* version with preheater

EFFICIENCY GRAPH XHOUSE-300 - HRV

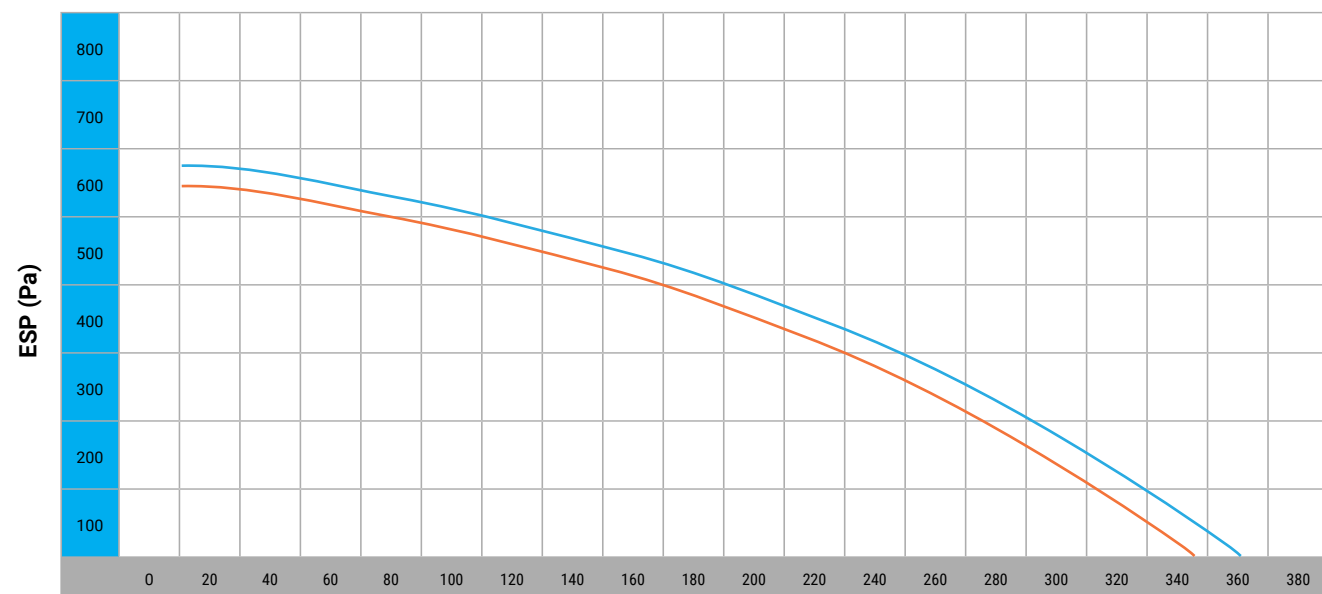


EFFICIENCY GRAPH XHOUSE-300 - ERV



PERFORMANCE CHARACTERISTIC XHOUSE-300 HRV, ERV

HRV ERV

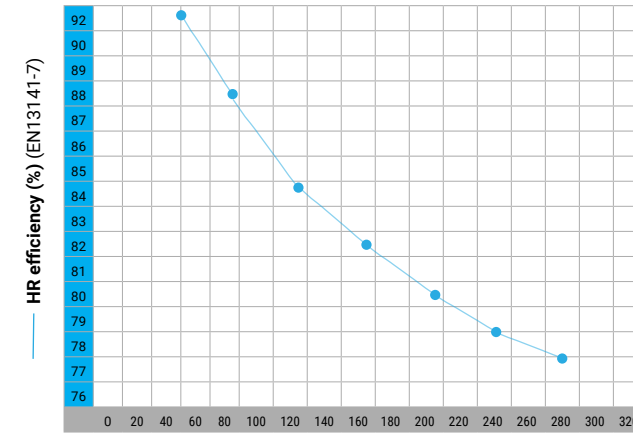


Airflow (m3/h)

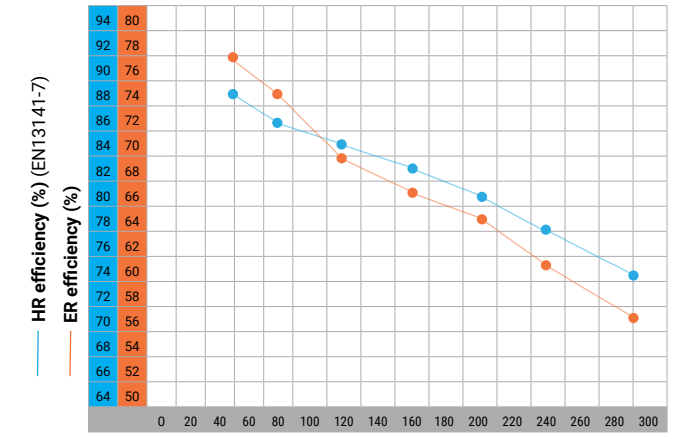
Type		Xhouse-300-heat and moisture recovery efficiency									
		XH1-30-ECS0HRxAS-1A0 (mechanical bypass)					XH1-30-ECS0ERxAS-1A0 (mechanical bypass)				
		HRV (heat recovery)					ERV (enthalpy recovery)				
Type of recovery exchanger		Flow (m3/h)	HR efficiency (%)	Current(A)	Power input (W)	Flow (m3/h)	HR efficiency (%)	ER efficiency (%)	Current(A)	Power input (W)	
AirFlow - setting	1.	40	91	0,2 (*2,8)	9 (*609)	40	83	76,1	0,2 (*2,8)	9 (*609)	
	2.	75	87,5	0,2 (*2,8)	14 (*614)	70	81,1	73,1	0,2 (*2,8)	14 (*614)	
	3.	115	83,9	0,3 (*2,9)	25 (*625)	110	79,3	68,2	0,3 (*2,9)	25 (*625)	
	4.	155	81,4	0,4 (*3)	46 (*646)	150	77	65,4	0,4 (*3)	46 (*646)	
	5.	195	79,5	0,6 (*3,2)	77 (*677)	190	75,1	63,1	0,6 (*3,2)	77 (*677)	
	6.	230	78,1	0,9 (*3,5)	117 (*717)	225	72	59,2	0,9 (*3,5)	117 (*717)	
	7. - nominal	270	77	1,4 (*4)	180 (*780)	260	70,5	55,2	1,4 (*4)	180 (*780)	
	8. - boost	290	76,4	1,4 (*4)	182 (*782)	280	68,1	53	1,4 (*4)	182 (*782)	

* version with preheater

EFFICIENCY GRAPH XHOUSE-300 - HRV

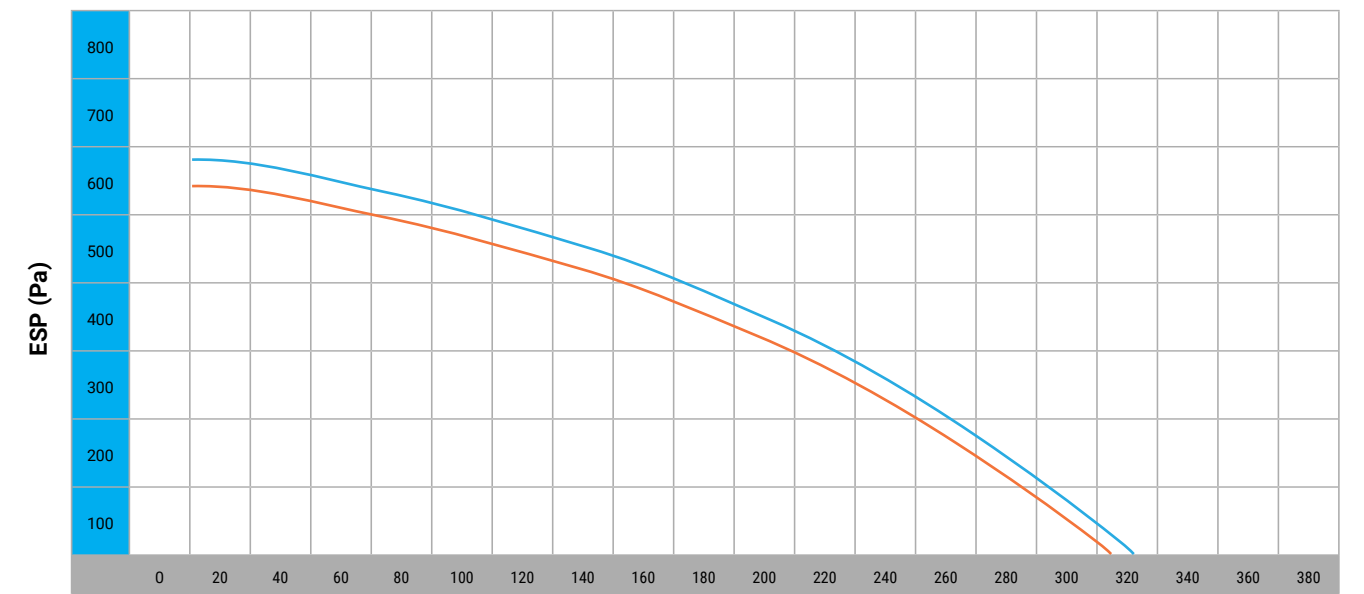


EFFICIENCY GRAPH XHOUSE-300 - ERV



PERFORMANCE CHARACTERISTIC XHOUSE-300- HRV, ERV

HRV ERV



Airflow (m3/h)

Technical parameters

type XHOUSE		XH1-30-ECS0HRxAS-0A0	XH1-30-ECS0ERxAS-0A0	XH1-30-ECS0HRPAS-0A0	XH1-30-ECS0ERPAS-0A0	XH1-30-ECS0HRxAS-1A0	XH1-30-ECS0HRxAS-1A0	XH1-30-ECS0HRPAS-1A0	XH1-30-ECS0ERPAS-1A0	
		version with mechanical bypass								
Type of recovery exchanger		HRV	ERV	HRV	ERV	HRV	ERV	HRV	ERV	
Unit equipment	preheater	-	-	electric (0,6kW)	electric (0,6kW)	-	-	electric (0,6kW)	electric (0,6kW)	
Nominal airflow (external static pressure 200Pa)	m ³ /h	300	290	300	290	270	260	270	260	
Noise level*	dB (A)	43,3	42,9	43,3	42,9	42	41,5	42	41,5	
Weight**	kg	16,1	16,6	17,2	17,7	16	16,5	17	17,5	
Power supply	V/Hz	1 ~ 230 / 50-60								
Nominal power input	w	184	182	784	782	180	178	780	778	
Recovery efficiency EN308	heat / humidity	%	81 / -	75 / 66	81 / -	75 / 66	80,5 / -	74 / 64	80,5 / -	74 / 64
Protection	IP	20								
Energy efficiency class (SEC)	-	cold climate A+ ; medium climate A ; warm climate E								

* sound pressure level in (L_{wa}) 3m (Q2) - 250m³/h - 120Pa

** unit weight (without packaging)



Data - ACOUSTICS

XHOUSE - 300 (ELECTRONIC BYPASS)

XH1-30-ECS0HRxAS-0A0 - radiating the unit into the interior (inside the room)									Sound power level LWA (dB A)	Sound pressure level in a free field on a reflecting plane	
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		LPA (dB) in 1,5m	LPA (dB) in 3m
45	14,4	21,0	26,7	28,0	28,8	19,6	10,4	12,2	33,3	<20	<20
85	18,6	33,4	38,8	36,0	32,8	26,5	13,3	12,4	42,1	23,3	<20
125	32,0	38,0	50,5	44,5	41,7	38,3	24,6	15,5	52,3	33,5	28,4
170	35,4	40,6	56,4	50,5	47,5	46,3	34,2	21,6	58,2	39,4	34,4
210	37,3	45,5	60,7	57,8	53,4	51,9	42,2	29,2	63,4	44,6	39,6
250	48,1	50,1	59,6	64,7	58,3	56,1	48,1	35,5	67,1	48,3	43,3
300	46,7	50,6	62,0	66,0	62,1	60,0	52,4	40,2	69,3	50,5	45,5
Boost *	46,3	50,5	61,8	66,8	62,1	60,0	52,3	40,1	69,7	50,9	45,8

XH1-30-ECS0ERxAS-0A0 - radiating the unit into the interior (inside the room)									Sound power level LWA (dB A)	Sound pressure level in a free field on a reflecting plane	
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		LPA (dB) in 1,5m	LPA (dB) in 3m
45	14,1	20,9	26,2	27,7	28,1	18,8	9,5	11,2	32,8	<20	<20
80	18,3	33,3	38,3	35,7	32,0	25,7	12,5	11,4	41,7	22,9	<20
120	31,8	37,9	50,0	44,3	40,9	37,5	23,7	14,6	51,9	33,1	28,0
165	35,1	40,5	55,9	50,3	46,8	45,5	33,4	20,7	57,8	39,0	34,0
205	37,0	45,4	60,2	57,6	52,7	51,1	41,3	28,3	63,0	44,2	39,2
245	47,8	50,0	59,1	64,4	57,6	55,4	47,3	34,6	66,7	47,9	42,9
290	46,4	50,5	61,6	65,8	61,4	59,2	51,5	39,2	68,9	50,1	45,1
Boost *	46,0	50,4	61,3	66,6	61,3	59,2	51,5	39,2	69,2	50,46	45,4

XH1-30-ECS0HRxAS-0A0 - radiating the unit into the duct									Sound power level LWA (dB A)
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
ODA	48,5	54,6	54,6	65,6	58,6	47,2	37,5	26,7	67,0
SUP	53,0	63,3	60,9	70,1	63,1	59,6	54,7	42,7	72,3
ETA	51,0	53,9	55,3	66,4	56,9	46,0	37,7	25,6	67,5
EHA	51,9	61,9	60,9	77,7	66,3	60,9	56,0	43,7	78,3

XH1-30-ECS0ERxAS-0A0 - radiating the unit into the duct									Sound power level LWA (dB A)
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
ODA	48,3	54,5	54,1	65,3	57,9	46,4	36,7	25,8	66,6
SUP	52,7	63,2	60,4	69,8	62,4	58,9	53,8	41,8	71,9
ETA	50,7	53,8	54,8	66,1	56,1	45,2	36,9	24,7	67,0
EHA	51,6	61,8	60,4	77,4	65,5	60,2	55,1	42,7	77,8

XHOUSE - 300 (MECHANICAL BYPASS)

XH1-30-ECS0HRxAS-1A0 - radiating the unit into the interior (inside the room)									Sound power level LWA (dB A)	Sound pressure level in a free field on a reflecting plane	
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		LPA (dB) in 1,5m	LPA (dB) in 3m
40	13,5	20,7	25,3	27,2	26,6	17,2	7,8	9,4	32,0	<20	<20
75	17,8	33,1	37,3	35,2	30,5	24,2	10,8	9,6	40,8	22,0	<20
115	31,2	37,7	49,0	43,7	39,4	36,0	22,0	12,7	51,0	32,2	27,1
155	34,5	40,2	54,9	49,7	45,2	43,9	31,7	18,8	56,9	38,1	33,1
195	36,5	45,2	59,2	57,0	51,2	49,5	39,6	26,4	62,1	43,3	38,3
230	47,3	49,8	58,1	63,9	56,1	53,8	45,6	32,8	65,8	47,0	42,0
270	45,9	50,3	60,6	65,2	59,8	57,7	49,8	37,4	68,0	49,2	44,2
Boost *	45,4	50,2	60,3	66,0	59,8	57,6	49,8	37,4	68,3	49,58	44,48

XH1-30-ECS0ERxAS-1A0 - radiating the unit into the interior (inside the room)									Sound power level LWA (dB A)	Sound pressure level in a free field on a reflecting plane	
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		LPA (dB) in 1,5m	LPA (dB) in 3m
40	13,2	20,6	24,8	26,9	25,8	16,4	7,0	8,5	31,5	<20	<20
70	17,5	33,0	36,8	34,9	29,7	23,4	9,9	8,7	40,3	21,5	<20
110	30,9	37,6	48,5	43,4	38,7	35,2	21,1	11,8	50,5	31,7	26,6
150	34,2	40,1	54,4	49,4	44,5	43,1	30,8	17,9	56,4	37,6	32,6
190	36,2	45,1	58,7	56,7	50,4	48,8	38,8	25,5	61,7	42,8	37,8
225	47,0	49,7	57,6	63,6	55,3	53,0	44,7	31,8	65,4	46,5	41,5
260	45,6	50,2	60,1	65,0	59,1	56,9	49,0	36,5	67,6	48,7	43,7
Boost *	45,1	50,1	59,8	65,7	59,0	56,8	48,9	36,4	67,9	49,14	44,04

XH1-30-ECS0HRxAS-1A0 - radiating the unit into the duct									Sound power level LWA (dB A)
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
ODA	47,7	54,3	53,1	64,7	56,4	44,9	35,0	24,0	65,7
SUP	52,2	63,0	59,4	69,3	60,9	57,3	52,1	40,0	71,0
ETA	50,2	53,6	53,8	65,5	54,6	43,6	35,2	22,9	66,1
EHA	51,0	61,6	59,4	76,9	64,0	58,6	53,4	40,9	77,0

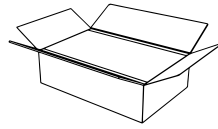
XH1-30-ECS0ERxAS-1A0 - radiating the unit into the duct									Sound power level LWA (dB A)
Airflow - setting	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
ODA	47,4	54,2	52,6	64,5	55,6	44,1	34,1	23,0	65,2
SUP	51,9	62,9	58,9	69,0	60,1	56,5	51,3	39,0	70,5
ETA	49,9	53,5	53,3	65,3	53,9	42,9	34,3	21,9	65,7
EHA	50,7	61,5	59,0	76,6	63,3	57,8	52,6	40,0	76,5

Packaging and dimensions

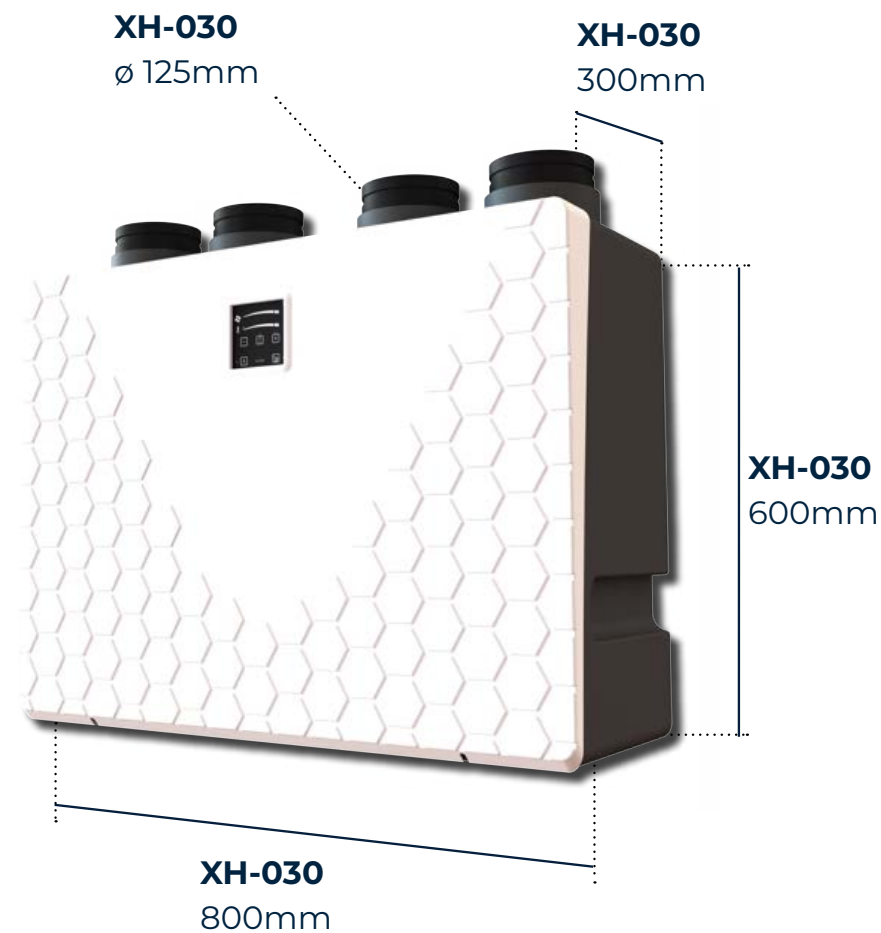
	Type	Coding	Weight		Package size (width x length x height)	Pieces on a pallet (max.stackability)
			Brutto	Netto		
			kg		m	pcs
XHOUSE 300	XHOUSE UNIT	XH1-30-ECS0HRXAS-xA0	18,1	16,1	0,88*0,74*0,36	6
		XH1-30-ECS0ERXAS-xA0	18,6	16,6		

Package includes:

- Unit Xhouse
- Quick manual
- Safety instruction



Basic dimensions



Accessories

Filters Xhouse

M5 - Coarse 90% ISO 16890	F7 - ePM1 50 % ISO 16890
XH-030-FILTER-M5	XH-030-FILTER-F7

CO₂ room sensor

CO2 sensor
NL-ECO-CO2

CO2 room sensor - after switching the unit to automatic mode, the air flow is regulated based on the CO2 concentration in the room.

Rh room sensor

RH sensor
NL-ECO-RH

RH room sensor - after switching the unit to automatic mode, the air flow is regulated based on the concentration of relative humidity in the room.

CO₂+RH sensor

RH sensor
NLII-CO2+RH

CO₂+RH room sensor - after switching the unit to automatic mode, the air flow is regulated based on the concentration of relative humidity or CO2 in the room - it always records a higher value.

ModbusBox

ModBus box
XCONT-HUB

ModbusBox - extension control module for connection to a superior unit control system. (Modbus).

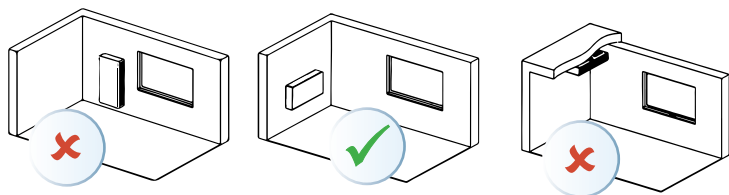
AQS extension

AQA extension
PRO-SUM-08

AQS extension - allows to connect up to 8 pcs of air quality sensors

Instalation Xhouse

WALL INSTALLATION



Xhouse has to be operated in indoor and dry space with temperature between +5°C up to +40°C. The unit can be installed only in vertical position. When breaking the security distances the unit can operate improperly and the fans might come damaged, the noise level might increase or the service-access might get blocked off. Xhouse equipped with heat exchanger (HRV) can produce the condensate and it is necessary to realized.



Installation and service manual on our website



more information



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