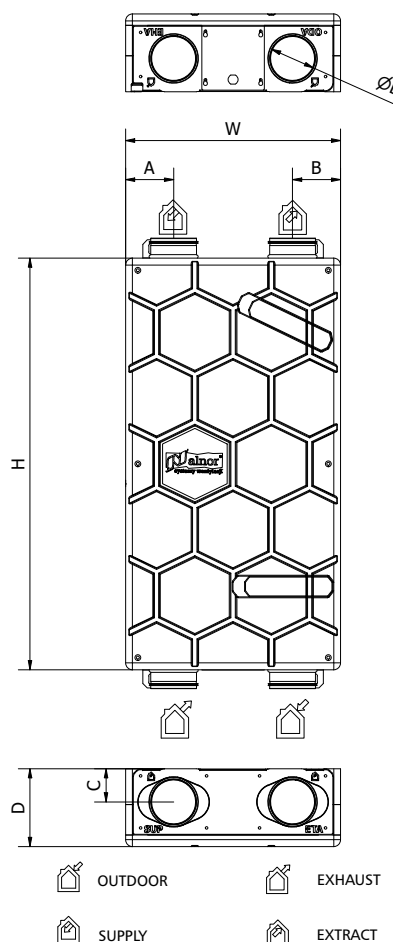


Heat recovery ventilation unit with counterflow exchanger HRU-FlatAIR-X



Dimensions



Description

HRU-FlatAIR-X series heat recovery units are flush-mounted units with a capacity of 80, 100 and 125 m³/h @100 Pa. Heat recovery is provided by a counter-flow exchanger made of plastic (PET) or an enthalpy heat exchanger that recovers moisture.

The unit is designed for studios and smaller apartments, both as a central and decentralized unit.

The built-in electric preheater protects the exchanger from freezing, and the RH sensor ensures an optimal humidity level in the house. Heat recovery unit is equipped with a modulated, automatically controlled by-pass as standard. HRU-FlatAIR-X units can be controlled using a mobile application. The unit is made of a self-supporting housing made of EPP, which is characterized by its durability, light weight, and excellent thermal and acoustic insulation.

Heat recovery selector



Product code example

Product Code: **HRU-FlatAIR-X-80E-H-CF-P-F75**

type _____
air flow _____
enthalpic heat exchanger _____
pre-heater _____
constant flow _____
wired control _____
duct connections _____

The unique design of the interchangeable connectors allows for standard installation with Ø100mm ducts or direct connection of Ø75mm semi-rigid ducts FLX, 4 per supply and exhaust. Thanks to this solution, it is possible to do without manifolds, which saves space and reduces installation costs. What is more, the inlet and outlet ducts can be connected on 3 sides, which creates possibilities for versatile installation, both flush-mounted and surface-mounted.



Standard

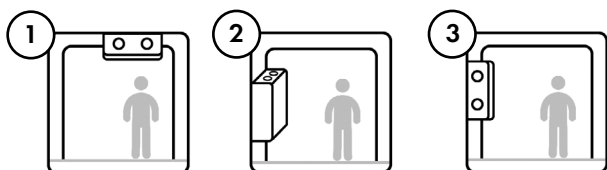


F75

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Version installation



Installation / Model	FlatAIR-X-80-H	FlatAIR-X-100-H	FlatAIR-X-125-H
Suspended	✓	✓	✓
Vertical	✓	✓	✓
Horizontal	✓	✓	✓



Technical data

	HRU-FlatAIR-X-80-H	HRU-FlatAIR-X-80E-H	HRU-FlatAIR-X-100-H	HRU-FlatAIR-X-100E-H
Air flow [m³/h] @ 100 Pa	80	80	100	100
Maximal efficiency % ¹	94,6	89,3	94,1	88,6
Efficiency % (acc. 1254/2014) ²	87,5	85,5	91,6	83,9
Maximal moisture efficiency %	-	76,5	-	74,2
Heat exchanger	Counterflow PET	Enthalpy	Counterflow PET	Enthalpy
Voltage [V/Hz]	230 / 50	230 / 50	230 / 50	230 / 50
Maximum power consumption [W]	29	29	48	48
Sound power level <i>L_{WA}</i> [dB (A)]	46	46	50	50
Weight [kg]	15	15	15	15
Filters	ISO Coarse 70% / ISO Coarse 70%			
Built-in pre-heater	✓	✓	✓	✓
Pre-heater power [W]	800	800	800	800
Built-in RH sensor	✓	✓	✓	✓
Automatic by-pass modulated	✓	✓	✓	✓

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

	HRU-FlatAIR-X-125-H	HRU-FlatAIR-X-125E-H
Air flow [m³/h] @ 100 Pa	125	125
Maximal efficiency % ¹	93,4	87,6
Efficiency % (acc. 1254/2014) ²	76,1	72,8
Maximal moisture efficiency %	-	71,1
Heat exchanger	Counterflow PET	Enthalpy
Voltage [V/Hz]	230 / 50	230 / 50
Maximum power consumption [W]	72	72
Sound power level L_{WA} [dB (A)]	52	52
Weight [kg]	15	15
Filters	ISO Coarse 70% / ISO Coarse 70%	
Built-in pre-heater	✓	✓
Pre-heater power [W]	800	800
Built-in RH sensor	✓	✓
Automatic by-pass modulated	✓	✓

Wired control

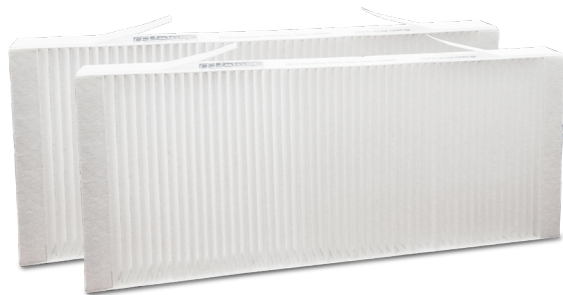


LOXONE
SMART HOME

Heat recovery selector



Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X**Filtres**

ISO coarse 70% filters according to ISO 16890 (former G4) and ISO ePM1 55% according to ISO 16890 (former F7) standard with pleated design, resulting in greater filtration area and low pressure drops.

	Code	Filter class
HRU-FlatAIR-X-80	HRQ-FlatAIR-X-100-FILT-C70	ISO Coarse 70%
HRU-FlatAIR-X-100		
HRU-FlatAIR-X-125	HRQ-FlatAIR-X-100-FILT-ePM155	ISO ePM ₁ 55%

Cooperation with the kitchen hood

The cooker hood can be connected to the MVHR system via the X25 contact on the main board of the FlatAIR-X heat recovery units. It is a potential-free contact. Short-circuits of contact inputs will result in an exhaust fan stopping completely during the period the contact is closed.

Connecting the ground heat exchanger

Heat recovery unit has a possibility to connect the ground heat exchanger. This function allows you to control a valve that optionally supply air through the ground-to-air heating system. To do this, install a dedicated damper with the actuator (DATVTML).

Constant Flow (CF)

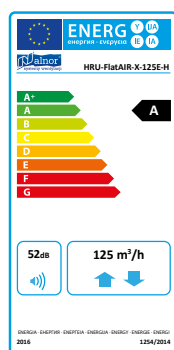
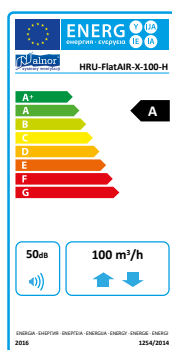
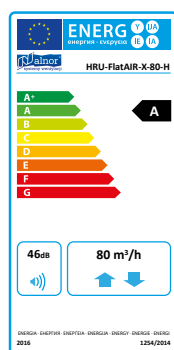
FlatAIR air handling units optionally can be equipped with the Constant Flow system, whose task is to maintain a constant air flow in the installation. CF works by reading the difference between the dynamic pressure around the fan and the static pressure in the duct in front of the fan. The CF system constantly monitors the pressure in the ducts and if the resistance increases, it increases the speed of the fans to maintain a constant flow, such as on the first day when the ventilation unit was commissioned. During exploitation, the installation pressure is naturally disrupted (dirty filters, condensation of water in the heat exchanger, temperature difference changing the air mass). CF counteracts to those changes, thanks to which the airflows remain sustainable, and only a sustainable system takes full advantage of the air handling unit's capabilities.

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Energy class

Model	Sound power level L_{WA} dB(A)* [dB]	Air flow rate [m³/h]	Energy class			
			Manual control	Clock control	Central demand control (1 sensor)	Local demand control (2 sensors)
HRU-FlatAIR-X-80-H	48	80	A	A	A	A+
HRU-FlatAIR-X-80-H-CF	48	80	A	A	A	A+
HRU-FlatAIR-X-80E-H	48	80	A	A	A	A+
HRU-FlatAIR-X-80E-H-CF	48	80	A	A	A	A+
HRU-FlatAIR-X-120-H	50	120	A	A	A	A+
HRU-FlatAIR-X-120-H-CF	50	120	A	A	A	A+
HRU-FlatAIR-X-120E-H	50	120	A	A	A	A
HRU-FlatAIR-X-120E-H-CF	50	120	A	A	A	A
HRU-FlatAIR-X-125-H	52	125	A	A	A	A
HRU-FlatAIR-X-125-H-CF	52	125	A	A	A	A
HRU-FlatAIR-X-125E-H	52	125	B	B	A	A
HRU-FlatAIR-X-125E-H-CF	52	125	B	B	A	A



Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X**Product fiche HRU-FlatAIR-X-80****Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV**

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-80-H, HRU-FlatAIR-X-80-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control facotr	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-77,22	-39,54	-15,33	-78,10	-40,23	-15,91	-79,79	-41,53	-16,99	-82,86	-43,84	-18,86
SEC class	A+	A	E	A+	A	E	A+	A	E	A+	A+	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	783	246	201	764	227	182	727	190	145	667	130	85
The annual heating saved (AHS) [kWh/a/100m ²]	8808	4502	2036	8847	4522	2045	8924	4562	2063	9080	4642	2099
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	87,5%											
Maximum flow rate [m ³ /h] ²	80											
Maxium electric power input [W]	28											
Sound power LWA [dB(A)]	46											
Reference flow rate [m ³ /s] ³	0,016											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,16											
Declared maxiumum leakages ⁶	External: 1,75% Internal:3,00%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010² According to EN 13141-7:2010 at pressure difference 100Pa³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa⁴ According to EN 13141-7:2010⁵ According to EN 13141-7:2010 at reference point - 70% of maxiumum air flow⁶ According to EN 13141-7:2010

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Product fiche HRU-FlatAIR-X-80E

Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-80E-H, HRU-FlatAIR-X-80E-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control factor	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-70,81	-35,99	-13,41	-72,03	-36,88	-14,12	-74,41	-38,58	-15,44	-78,81	-41,66	-17,75
SEC class	A+	A	E	A+	A	E	A+	A	E	A+	A	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	806	269	224	784	247	202	744	207	162	677	140	95
The annual heating saved (AHS) [kWh/a/100m ²]	8222	4203	1900	8290	4238	1916	8427	4307	1948	8700	4447	2011
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	78,1%											
Maximum flow rate [m ³ /h] ²	80											
Maximum electric power input [W]	28											
Sound power LWA [dB(A)]	46											
Reference flow rate [m ³ /s] ³	0,016											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,18											
Declared maximum leakages ⁶	External: 1,75% Internal: 3,00%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010

² According to EN 13141-7:2010 at pressure difference 100Pa

³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa

⁴ According to EN 13141-7:2010

⁵ According to EN 13141-7:2010 at reference point - 70% of maximum air flow

⁶ According to EN 13141-7:2010

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Product fiche HRU-FlatAIR-X-100

Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-100-H, HRU-FlatAIR-X-100-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control facotr	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-73,98	-36,84	-12,94	-75,12	-37,77	-13,74	-77,30	-39,51	-15,24	-81,23	-42,57	-17,80
SEC class	A+	A	E	A+	A	E	A+	A	E	A+	A+	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	868	331	286	840	303	258	789	252	207	703	166	121
The annual heating saved (AHS) [kWh/a/100m ²]	8695	4445	2010	8740	4468	2020	8829	4513	2041	9007	4604	2082
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	85,7%											
Maximum flow rate [m ³ /h] ²	100											
Maxium electric power input [W]	48											
Sound power LWA [dB(A)]	50											
Reference flow rate [m ³ /s] ³	0,019											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,23											
Declared maxiumum leakages ⁶	External: 1,40% Internal: 2,40%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010

² According to EN 13141-7:2010 at pressure difference 100Pa

³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa

⁴ According to EN 13141-7:2010

⁵ According to EN 13141-7:2010 at reference point - 70% of maximum air flow

⁶ According to EN 13141-7:2010

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Product fiche HRU-FlatAIR-X-100E

Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-100E-H, HRU-FlatAIR-X-100E-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control factor	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-69,20	-34,84	-12,53	-70,54	-35,82	-13,30	-73,13	-37,69	-14,77	-77,92	-41,06	-17,32
SEC class	A+	A	E	A+	A	E	A+	A	E	A+	A	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	833	296	251	808	271	226	763	226	181	688	151	106
The annual heating saved (AHS) [kWh/a/100m ²]	8128	4155	1879	8201	4192	1896	8347	4267	1929	8639	4416	1997
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	76,6%											
Maximum flow rate [m ³ /h] ²	100											
Maximum electric power input [W]	48											
Sound power LWA [dB(A)]	50											
Reference flow rate [m ³ /s] ³	0,019											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,26											
Declared maximum leakages ⁶	External: 1,40% Internal: 2,40%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010

² According to EN 13141-7:2010 at pressure difference 100Pa

³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa

⁴ According to EN 13141-7:2010

⁵ According to EN 13141-7:2010 at reference point - 70% of maximum air flow

⁶ According to EN 13141-7:2010

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Product fiche HRU-FlatAIR-X-125

Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-125-H, HRU-FlatAIR-X-125-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control factor	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-65,85	-31,64	-9,41	-67,50	-32,92	-10,49	-70,66	-35,36	-12,51	-76,43	-39,67	-15,99
SEC class	A+	B	F	A+	B	E	A+	A	E	A+	A	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	954	417	372	918	381	336	851	314	269	739	202	157
The annual heating saved (AHS) [kWh/a/100m ²]	8097	4139	1872	8172	4177	1889	8321	4253	1923	8619	4406	1992
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	76,1%											
Maximum flow rate [m ³ /h] ²	125											
Maximum electric power input [W]	62											
Sound power LWA [dB(A)]	52											
Reference flow rate [m ³ /s] ³	0,024											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,30											
Declared maximum leakages ⁶	External: 1,12% Internal: 1,92%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010

² According to EN 13141-7:2010 at pressure difference 100Pa

³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa

⁴ According to EN 13141-7:2010

⁵ According to EN 13141-7:2010 at reference point - 70% of maximum air flow

⁶ According to EN 13141-7:2010

Heat recovery ventilation unit with counterflow exchanger

HRU-FlatAIR-X

Product fiche HRU-FlatAIR-X-125E

Commission Regulation (UE) Nr 1253/2014, 1254/2014, Annex IV

Supplier's name or trade mark	ALNOR Ventilation Systems											
Model identifier	HRU-FlatAIR-X-125E-H, HRU-FlatAIR-X-125E-H-CF											
Control	Manual control			Clock control			Central demand control			Local demand control		
Control facotr	1			0,95			0,85			0,65		
Climat	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC) [kWh/(m ² .a)]	-63,43	-30,23	-8,58	-65,22	-31,60	-9,72	-68,66	-34,21	-11,85	-74,95	-38,84	-15,53
SEC class	A+	B	F	A+	B	F	A+	A	E	A+	A	E
The annual electricity consumption (AEC) [kWh/a/100m ²]	969	432	387	931	394	349	861	324	279	745	208	163
The annual heating saved (AHS) [kWh/a/100m ²]	7892	4034	1824	7976	4077	1844	8146	4164	1883	8485	4337	1961
Declared typology	Bidirectional											
Type of drive	Variable											
Type of heat recovery system	Recuperative											
Thermal efficiency ¹	72,8%											
Maximum flow rate [m ³ /h] ²	125											
Maxium electric power input [W]	75											
Sound power LWA [dB(A)]	52											
Reference flow rate [m ³ /s] ³	0,024											
Reference pressure difference [Pa] ⁴	50											
SPI [W/m ³ /h] ⁵	0,31											
Declared maxiumum leakages ⁶	External: 1,12% Internal: 1,92%											
Position and description of visual filter warning	Visual on status LED light on unit and on status LED light on controller											
Internet address	www.ventilation-alnor.co.uk											

¹ According to EN 13141-7:2010

² According to EN 13141-7:2010 at pressure difference 100Pa

³ According to EN 13141-7:2010 at 70% of maximum flow at static pressure difference 50Pa

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⁵ According to EN 13141-7:2010 at reference point - 70% of maximum air flow

⁶ According to EN 13141-7:2010