



EU Regulation No. 1253/2014 is the implementation of Directive 2009/125/EC, which is a mandatory and not voluntary regulation.

Directive 2009/125/EC is the European directive that regulates Energy Related Products (ERP), which defines the specifications for environmentally friendly design of Air Handling Units (AHU). The European Parliament adopted this directive to expand the scope of the Directive on environmentally friendly design 2005/32/EC to include products that consume energy ("Energy-using Products Directive" - EuP), which was limited to products that consume energy during use, such as boilers, computers, televisions, industrial fans, and light bulbs.

This regulation entails the development of specifications that energy-related products must comply with to be placed on the market. It contributes to sustainable development by increasing energy efficiency and environmental protection, while simultaneously improving energy supply security.

ErP-Stage			January 2016	January 2018	
BVU: Heat Recovery System			Mandatory	Compulsory	
BVU: Free Cooling			Compulsory	Compulsory	
nt_nrvu Minimum Heat Recovery Efficiency	Twin Batteries		63%	68%	
	Other Types of Recovery		67%	73%	
Differential Pressure Filter Monitoring System			Recommended	Compulsory	
Fan Speed Control System			Compulsory	Compulsory	
UVU Fan Efficiency			$P_{sys} \leq 30kW$	$6,2\% * \ln(P) + 35\%$	$6,2\% * \ln(P) + 42\%$
			$P_{sys} > 30kW$	56,1%	63,1%
SPFint [W / (m ³ /s)]	BVU	Twin Batteries	$Q_{nom} < 2m^3/s$	$1700 + E - (300 * Q_{nom} / 2) - F$	$1600 + E - (300 * Q_{nom} / 2) - F$
			$Q_{nom} \geq 2m^3/s$	$1400 + E - F$	$1300 + E - F$
	Other Types of Recovery	$Q_{nom} < 2m^3/s$	$1200 + E - (300 * Q_{nom} / 2) - F$	$1100 + E - (300 * Q_{nom} / 2) - F$	
		$Q_{nom} \geq 2m^3/s$	$900 + E - F$	$800 + E - F$	
UVU			250	230	
Efficiency Bonus (E) [W / (m ³ /s)]		Twin Batteries	$E = (nt_nrvu - 0,63) * 3000$	$E = (nt_nrvu - 0,63) * 3000$	
		Other Types of Recovery	$E = (nt_nrvu - 0,63) * 3000$	$E = (nt_nrvu - 0,63) * 3000$	
Filter Correction (F) [W / (m ³ /s)]		Reference Configuration	0	0	
		Missing M5 Filter	160	150	
		Missing F7 Filter	200	190	
		Missing F5 + F7 Filters	360	360	

Ventilation Unit “VU”:

An electrically powered appliance equipped with at least one impeller, a motor, and a casing, intended to exchange exhaust air with outdoor air in a building or a part thereof.

Unidirectional Ventilation Unit “UVU”:

A ventilation unit that produces airflow in only one direction, either from inside to outside (exhaust) or from outside to inside (intake), in which mechanically produced airflow is balanced by natural systems of air intake or expulsion.

Bidirectional Ventilation Unit “BVU”:

A ventilation unit that produces airflow between the interior and exterior and is equipped with both exhaust and intake fans.

The following units may be exempt from this regulation:

- Units that include a heat exchanger and a heat pump for heat recovery, or to allow heat transfer or extraction that is additional to the heat recovery system device.
- ATEX units (designated exclusively as operating in a potentially explosive atmosphere as defined in Directive 94/9/EC).
- Classified as kitchen extraction hoods.
- Units operating in full recirculation mode.
- Units operating under the following conditions:
 - At operating temperatures above 100°C.
 - With the ambient temperature of the motor driving the fan, if located outside the airflow, exceeding 65°C.
 - With the motor located outside the airflow, and the temperature of the air being moved or the ambient temperature for motor operation below -40°C.
 - At a supply voltage exceeding 1,000 V AC or 1,500 V DC.
 - In toxic, highly corrosive, or flammable environments or with abrasive substances.
- Units exclusively intended for use in emergencies, for short periods of time, and that comply with the basic safety specifications in case of fire from Regulation (EU) No 305/2011 of the European Parliament and of the Council.
- Units with only fans (extractors without filters). The definition according to the regulation is: axial or centrifugal fans equipped solely with a casing complying with Regulation (EU) No 327/2011.