

## UNITÀ DI TRATTAMENTO ARIA

### TROX AUTOMATICALLY CHECKS ENERGY EFFICIENCY ACCORDING TO ECODESIGN DIRECTIVE

ErP-Stage		January 2016	January 2018
Heat recovery system (HRS) BVU with a regulator device		demand	demand
HRS BVU heat recovery efficiency $\eta$ [%]	Run-around coil system	63	68
	Plate heat exchangers, rotary heat exchanger, miscellaneous	67	73
Filter differential pressure monitoring		—	demand
Fan speed regulation		demand	demand
Fan efficiencies UUV			
$\eta_{fan}$ [%]	$P_{air} \leq 30$ kW	$6,2 \times \ln(P_{air}) + 35$	$6,2 \times \ln(P_{air}) + 42$
	$P_{air} > 30$ kW	56,1	63,1
Internal SFP-Value reference configuration [W/(m³/s)]	BVU		
	Run-around coil system		
	$q < 2$ m³/s	$1700 + E - 300 \times q/2 - F$	$1600 + E - 300 \times q/2 - F$
	$q \geq 2$ m³/s	$1400 + E - F$	$1300 + E - F$
	Plate heat exchangers, rotary heat exchanger, miscellaneous		
	$q < 2$ m³/s	$1200 + E - 300 \times q/2 - F$	$1100 + E - 300 \times q/2 - F$
	$q \geq 2$ m³/s	$900 + E - F$	$800 + E - F$
HRS-Efficiency bonus E [W/(m³/s)]	UUV	250	230
	Run-around coil system	$(\eta - 0,63) \times 3000$	$(\eta - 0,68) \times 3000$
	Plate heat exchangers, rotary heat exchanger, miscellaneous	$(\eta - 0,67) \times 3000$	$(\eta - 0,73) \times 3000$
Filter correction value F [W/(m³/s)]	Reference configuration	0	0
	Filter M5 is missing	160	150
	Filter F7 is missing	200	190
	Filters M5 + F7 are missing	360	340

With the adoption of the Kyoto Protocol, the European Union has committed itself to reducing CO<sub>2</sub> emissions by at least 20 percent by 2020. In order to reach this goal, the EU adopted already in 2005 the Energy-Using Products Directive. The Energy-Related Products Directive 2009/125/EG, colloquially called 'ecodesign directive', defines minimum requirements for many energy-related products. Within the European Union, air handling units have to meet new energy efficiency requirements from 1 January 2016 onwards. The next step after that will become effective two years later, on 1 January 2018.

TROX air handling units of Type X-CUBE are configured to individual customer requirements with a dedicated configuration software. This software automatically considers the new energy efficiency requirements for all X-CUBE air handling units and hence ensures their correct configuration. All X-CUBE air handling units that are produced and placed on markets of the European Union from 1 January 2016 onwards meet the new requirements.

Please find attached the table ErP – Efficiency Requirements as of 2016

## TROX SERVICES



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