

CENTRAL AIR HANDLING UNITS

TROX X-CUBE X2



THE NEW SERIES FROM THE TROX X-CUBE RANGE

The X-CUBE units from TROX set new benchmarks in terms of flexibility, hygiene, energy efficiency, ease of maintenance and connectivity.

X-CUBE X2 is a newly developed series from TROX, designed specifically to extend the X-CUBE range. The new generation is optimised for small to medium volume flow rates and offers tried-and-tested TROX system quality with sophisticated details.

AHU ONLINE CONFIGURATOR



NO EXPERT KNOWLEDGE REQUIRED:

No expert knowledge required:

- Configure TROX X-CUBE units
- Calculate energy and other consumption values
- Calculate life cycle costs

FROM GOOD TO BETTER



REDUCE ENERGY COSTS WITH THE X-CUBE DOWNSTREAM SOUND ATTENUATOR

Sound attenuators improve, obviously, the acoustics; but they can also help to reduce energy costs, as is proven by the new TROX downstream sound attenuator for the X-CUBE AHU.

It is placed just downstream of the fan and, due to the clever air distribution, creates a much lower pressure drop while at the same time reducing the sound power level.

- Patented new product
- Ideal for air volumes up to 9,000 m³
- Optimised performance, improved downstream characteristics
- Lower noise emission levels
- Increased energy efficiency

FOR EFFICIENT HEAT RECOVERY



The Ecodesign Directive prescribes that from 2018 onwards, air handling units must offer a heat recovery efficiency of more than 73%, and RAC systems more than 68%. A run around coil system from TROX with a TROX hydraulic unit including special RAC control guarantees highly efficient heat recovery of up to 80 %.

Furthermore: A special highlight is the reliable technical data by a certified design software.

The perfect overall system:

- Optimum control
- High operational reliability
- State-of-the-art technology
- Economic efficiency

Suitable for all requirements:

- Optional cold and heat feed
- Dehumidification recovery
- Preheating/filter
- Indirect adiabatic cooling

Find out more in our brochure "X-CUBE Run around coil system for efficient heat recovery".

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 η [%]	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 UVU η_{fan} [%]				
		$P_{net} \leq 30$ kW	$6.2 \times \ln(P_{net}) + 35$	$6.2 \times \ln(P_{net}) + 42$
		$P_{net} > 30$ kW	56,1	63,1
Internal SFP-Value reference configuration [W/(m³/s)]	BVU			
		Run-around coil system	$q < 2$ m³/s	$1700+E-300 \times q/2-F$
		$q \geq 2$ 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	$900+E-F$	$800+E-F$
	UVU			250
HRS-Efficiency bonus E [W/(m³/s)]	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 CO₂ 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

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