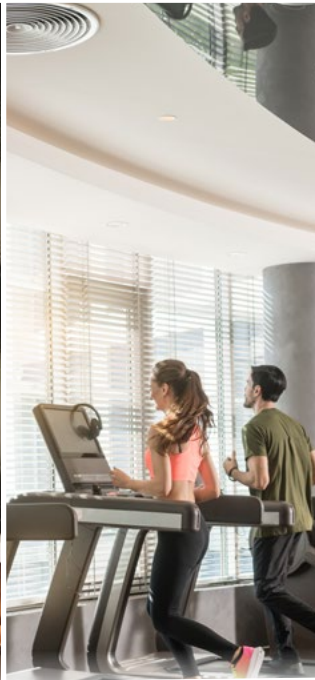# X CUBE X2 compact

Slim. Smart. TROX.

TROX® TECHNIK

The art of handling air

▶X-CUBE X2 compact ▶▶

X-CUBE technology in a compact format

The X-CUBE X2 compact is a ready-to-operate, pre-configured air handling unit that combines the quality features of X-CUBE technology in the smallest of spaces. Energy-efficient, free-running fans with EC motors guarantee maximum efficiency and low sound pressure levels at volume flows from 600 to 15,000 m^3/h.

Heat recovery via efficient heat exchangers using the counterflow or rotation method, with heat recovery rates of up to 82 % (dry according to DIN EN 308). A wide range of accessories such as reheaters, humidifiers, CO_2 sensors, room control panels and much more are available for customisation to local requirements. This makes the X-CUBE X2 compact the ideal solution for small and medium-sized ventilation requirements:

- Doctors' offices, clinics, health and rehabilitation centres
- Schools, offices and training centres
- Club houses, event rooms, cafes and restaurants
- Shops, retail stores
- Fitness centres, sports studios

The X-CUBE X2 compact is available ex works in many standard versions

Top performance, slim size

The X-CUBE X2 compact offers exactly the same quality as the large X2 AHU. The standardised compact design offers many smart advantages and also short delivery times. Even installation on site is extremely easy - thanks to the small packing dimensions and modular design.

Advantages at a glance

- Volume flow rates of 600 to 15,000 m³/h
- Efficient heat recovery ventilation via counterflow plate heat exchanger or rotary heat exchanger with heat recovery efficiency of up to 82 % (dry according to DIN EN 308)
- High-performance and low-noise EC fans
- High level of hygiene (conforms to VDI 6022)
- Ready-to-operate unit (plug and play)
- Integrated, bus-capable measuring and control technology via BACnet IP or Modbus TCP/IP
- Intuitive operation via integrated or external touch panel
- Direct integration into MCE
- Easy transport through doors with a width > 900 mm
- Optional weather protection roof for outdoor use

New, the X-CUBE C2 compact in vertical design

Compact packing dimensions facilitate transport and installation

The X-BIM CAD Browser

The browser-based software developed in co-operation with LINEAR enables the direct integration of 3D data sets of X-CUBE air handling units and other TROX components into planning programmes such as Revit and AutoCAD. After selecting the desired product type in the browser, the 3D data is transferred to X-BIM. Your X-CUBE model is now available for integration into your Revit or AutoCAD project.

X CUBE X2 compact

Panel construction
- Seamless foam seal, maintenance-free
- Low leakage
- Minimal heat loss
- Thermal transmittance class T2

Surfaces
- Corrosion-resistant powder coating, meets C4 corrosion class
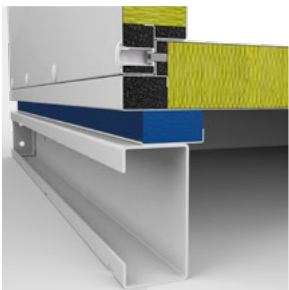- No protruding frame parts, and smooth surfaces for easy cleaning

Control panel
- Intuitive operation with 3.5" touch display
- Status display of all functions
- Integrated alarm messages, e.g. for filter changes

Base frame
- Separate base frame, powder coated
- Adjustable feet for optimum levelling (supplied separately)

Casing construction
- Particularly light and stable sandwich construction
- Optionally with vibration-damped base frame

Casing tested according to EN 1886 by TÜV Süd, Germany
- Leakage class L1 (M)
- Mechanical strength class D1 (M)
- Filter classes up to F9 (M)
- Thermal transmittance class T2
- Thermal bridging class TB2

Industrie Service

EUROVENT
CERTIFIED
PERFORMANCE
AHU N° 13.02.005
Range X-CUBE
www.eurovent-certification.com

►Compact. Efficient. Strong. ►►

Centrifugal fan
- Free-running fan with EC Motor
- High efficiency
- Low sound pressure level
- Complies with efficiency class IE 5 according to IEC 60034-30

Filters
- Eurovent-certified
- Low installation depth
- Low initial differential pressure
- High dust holding capacity
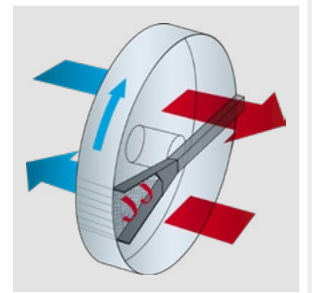- Quick-release clamping mechanism

Heat recovery
- Rotary or counterflow plate heat exchanger
- Heat recovery efficiency (dry) up to 82 %
- Condensation rotor
- Optional sorption rotor for moisture transfer

Purge sector
- Prevents exhaust air from entering the supply air duct in rotary heat exchangers

Multileaf dampers
- Aerodynamically profiled hollow blades
- Leakage class 4 according to EN 1751

Control technology
- Prepared for Modbus or BACnet communication with MCE (BMS)
- Control input signal for peripheral accessories possible

Heating coil module
XCC-HM-X2

Heating/cooling coil module
XCC-HCM-X2

Droplet eliminator for
XCC-HCM-X2

PWW heating coil module

Weatherproof roof for
outdoor operation

Optional extension modules

Various expansion modules and components have been specially developed for the X-CUBE X2 compact, which can be seamlessly attached to or integrated into the central unit. The high-quality, corrosion-resistant modules have powder-coated casings and offer easy access for cleaning and maintenance, as well as external standard connections.

Depending on the design and temperature control requirements, the heating and cooling coils, for example, are connected directly to the X-CUBE X2 compact unit as combined assemblies via the connection spigot, or integrated further away in the ductwork.

Heating module XCC-HM-X2 and PWW duct heating coil XCC-HD-X2
The heating coil module is simply integrated into the heating circuit from the outside. A frost protection device protects the module from damage in extreme subzero temperatures.

Heating/cooling coil module XCC-HCM-X2
The heating coil/cooling coil module helps to provide the ideal adjustment of the supply air temperature.

Droplet eliminator for XCC-HCM-X2
The fins of the removable droplet eliminator ensure optimum drainage of the condensate into the stainless steel drip tray underneath.

Integrated Heating Module
Heating module inlay for the vertical unit with water coil or electrical coil.

Weather protection roof
A weatherproof roof is available to protect the X-CUBE X2 compact when installed outdoors, e.g. on roofs.

Extensive range of accessories

Room control panel XCC-CD-ST-X2
The XCC-CD-ST-X2 is a control panel with touchscreen and user-friendly graphic interface, specially designed for controlling the X-CUBE X2 compact. The control panel communicates with the X-CUBE control master via a Modbus interface, which ensures simple installation.

Room control panel (digital) XCC-CD-RD-X2
Digital flush-mounted control panel for operation and temperature measurement. Integral Modbus communication interface to control push button functions or access the display. The room temperature is measured with an integral sensor.

Room control panel (analogue) XCC-CD-RA-X2
Analogue surface-mounted control panel for setting the room temperature, to be used in the room where the setpoint value is to be adjusted. The setpoint value can be adjusted by +/-5 °C. The room temperature is measured with an integral sensor.

Sensors
Sensors are available for further recording of the system conditions, such as
– Temperature sensor for duct installation (XCC-S-TD-X2)
– Combined CO_2 and VOC sensor for duct installation (XCC-S-CO2VOCd-X2)
– Combined temperature, CO_2 and humidity sensor (XCC-S-TCO2HR-X2)

Constant pressure control XCC-CPC-X2
The XCC-CPC-X2 module is available for converting from volume flow control to constant pressure control.

Electric duct air heater XCC-EHD-X2
An electric duct air heater is available for installation directly into the duct. It is used to increase the supply air temperature or as a preheater in the outdoor air duct.
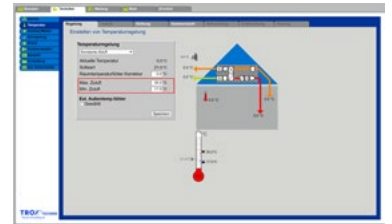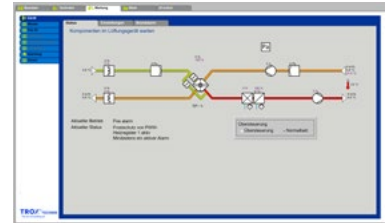
An optional electronically controlled circulator pump and a 3-way control ball valve with actuator complete the range of modules.

Control panel XCC-CD-ST-X2

Room control panel XCC-CD-RD-X2

Combination sensor XCC-S-TCO2HR-X2

Constant pressure control XCC-CPC-X2
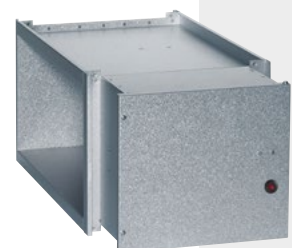
Electric duct air heater XCC-EHD-X2

Operating comfort: measuring and control technology


Full control at all levels

The X-CUBE X2 compact has extensive measuring and control technology for operation and maintenance. In addition to the integrated touch display, which enables complete control and status messages from all components, a complex control system can also be realised via TROX X-CUBE control. This also enables connection to existing Management and Control Equipment (MCE) via standard BUS systems.

■ Integrated touch panel with intuitive user interface
■ Optional control via X-CUBE control
■ Easily accessible interfaces for expanding components
■ Simple integration into existing MCE
■ Connection via BUS systems such as BACNet or ModBUS IP
■ Extensive analysis data for optimisation
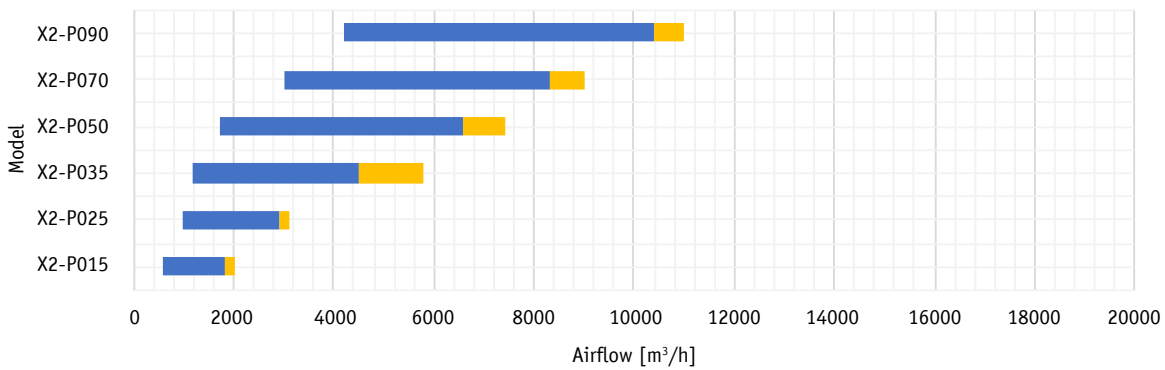■ Versatile alarm messages with customisable threshold values

Sizes and volume flow rates
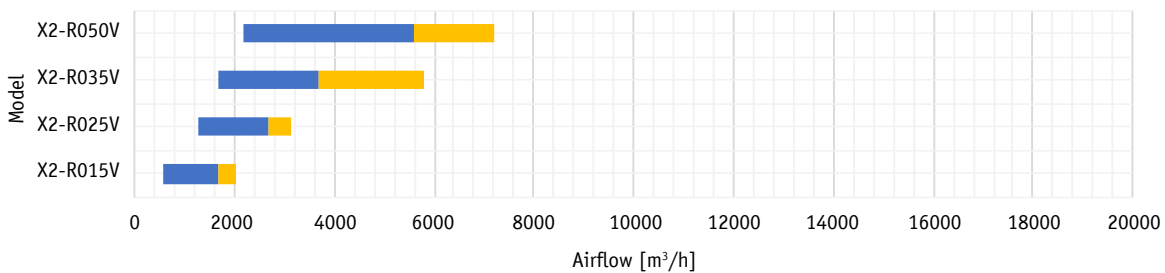
X-CUBE X2 compact - with rotary heat exchanger
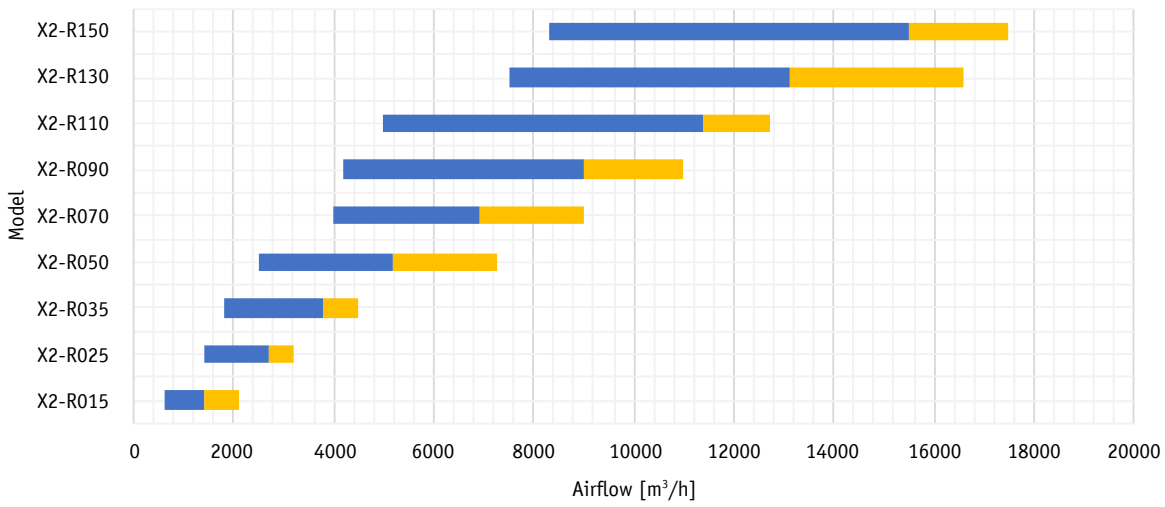
### X-CUBE X2 compact - with counterflow plate heat exchanger

### X-CUBE X2 compact - vertical with rotary heat exchanger

■ Max ErP Compliant Airflow
■ Max Available Airflow
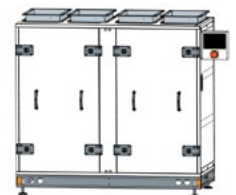
X-CUBE X2 compact: Device types and technical data

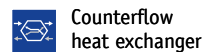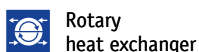| Device size		X2-015			X2-025			X2-035	
Ventilation unit type		R	VR	P	R	VR	P	R	VR
Heat exchanger type		(rotary)	(rotary)	(plate)	(rotary)	(rotary)	(plate)	(rotary)	(rotary)
Construction ventilation unit		horizontal	vertical	horizontal	horizontal	vertical	horizontal	horizontal	vertical
Installation location		indoor/ outdoor	indoor	indoor/ outdoor	indoor/ outdoor	indoor	indoor/ outdoor	indoor/ outdoor	indoor
Nominal volume flow according to ErP 2018 @200Pa	m³/h	1400	1700	1800	2700	2700	2900	3500	3700
Maximum volume flow rate @0Pa	m³/h	2100	2050	2000	3200	3150	3100	4500	5800
Dimensions	W, mm	776	776	776	1126	939	1126	1276	1126
	H, mm	1043	1543	1100	1304	1775	1304	1422	1925
	L, mm	1575	1638	2183	1743	1800	2634	1831	1800
Weight	kg	270	391	467	430	532	677	519	650
Duct connections	mm	700x250	450x300	700x250	1050x350	600x300	1050x350	1200x400	800x300
Nominal files of the fan actuator	V/Ph/Hz kW/A	230/1/50 0,5/1,8	230/1/50 0,5/1,8	230/1/50 0,5/1,8	230/1/50 0,78/2,9	230/1/50 0,78/2,9	230/1/50 0,78/2,9	400/3/50 2,4/3,0	400/3/50 2,4/3,0
Supply voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Fan type		EC	EC	EC	EC	EC	EC	EC	EC
Filters (filter classes)	Supply air (ePM %) Extract air (ePM %)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)
TAccessories type: E = electric; W = water; CW = Changeover; DX = Direct evaporator		E,W,CW,DX	E,W	E,W,CW,DX	E,W,CW,DX	E,W	E,W,CW,DX	E,W,CW,DX	E,W
Nominal output electric air heater	kW	5,4	5,4	5,4	9	9	9	12,6	12,6
Supply voltage electric air heater	V/Ph/Hz	400/2/50	400/2/50	400/2/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Extra accessories		Vibration-decoupled base frame, levelling feet							
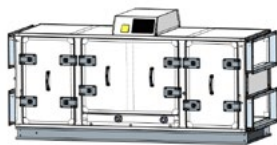
X2-015 R
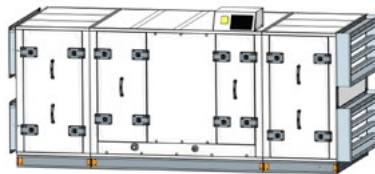
X2-025 P

X2-015 VR

Heat exchanger type: ⊡ Rotary heat exchanger   ⊡ Counterflow heat exchanger

	X2-050				X2-070		X2-090		X2-110	X2-130	X2-150
	P	R	VR	P	R	P	R	P	R	R	R
	⊡	⊡	⊡	⊡	⊡	⊡	⊡	⊡	⊡	⊡	⊡
	horizontal	horizontal	vertical	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal
	indoor/ outdoor	indoor/ outdoor	indoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor	indoor/ outdoor
	4500	5000	5600	6600	6900	8300	9000	10400	11000	13000	15000
	5800	7250	7200	7400	9000	9000	11000	11000	12700	16600	17500
	1276	1476	1617	1476	1676	1676	1876	1876	2076	2176	2276
	1422	1533	2065	1551	1573	1839	1773	2122	1957	2075	2185
	2911	1873	1800	3255	1810	3394	2074	3816	2179	2380	2450
	866	615	872	1171	780	1455	953	1797	1140	1275	1420
	1200x400	1400x450	1300x300	1400x450	1600x550	1600x550	1800x650	1800x650	2000x750	2100x800	2200x850
	400/3/50 2,4/3,0	400/3/50 2,5/3,2	400/3/50 2,5/3,2	400/3/50 2,5/3,2	400/3/50 2,5/3,2	400/3/50 2,5/3,1	400/3/50 3,4/4,2	400/3/50 3,4/4,2	400/3/50 3,5/4,4	400/3/50 4,6/5,8	400/3/50 4,6/5,8
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC	EC
	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)	F7 (ePM1 60%) M5 (ePM10 60%)
	E,W,CW,DX	E,W,CW,DX	E,W	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX	E,W,CW,DX
	12,6	18	18	18	25,2	25,2	32,4	32,4	39,6	46,8	54
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
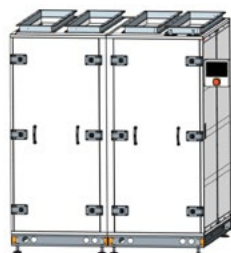
X2-050 VR
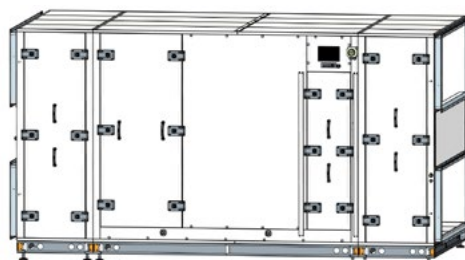
X2-150 R

TROX® TECHNIK

The art of handling air