

ComX-VCF

Vertical Heat Recovery Unit



VEHUM

www.vehum.com.au

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About Us

VEHUM is the commercial ventilation brand of DEHUM, created to meet the practical demands of modern commercial and industrial buildings. It builds on DEHUM's long experience in ventilation and humidity control and focuses solely on reliable ventilation systems.

Our systems are manufactured for us in Europe and built to high standards of performance and durability. This gives us confidence in the quality, consistency, and compliance of every unit we supply, even in demanding operating environments.

With over 17 years of direct experience in heat recovery ventilation, we understand how these systems perform in the real world and what the Australian market actually needs. That experience shapes the way VEHUM systems are designed — from component choice and layout to efficiency, access, and long-term serviceability.

VEHUM systems are designed to deliver steady airflow, effective heat recovery, and solid construction, providing practical solutions that installers, consultants, and end users can trust.

COMX-VCF UNIT

Studies show that people in developed societies spend most of their lives indoors. As a result, indoor air quality has become a critical factor affecting human health. At the same time, the growing demand for energy efficiency and the limited availability of energy resources make efficient energy use essential.

ComX-VCF heat recovery ventilators are engineered for long-term operation, delivering both superior indoor air quality and high energy efficiency. The ComX-VCF Heat Recovery Ventilator range includes 2 standard models with airflows from 2000 m³/h to 4,000 m³/h. They can be manufactured custom to suit a many other airflow requirements

These units are designed to recover and transfer thermal energy from exhaust air to incoming fresh air, significantly reducing energy losses.

VEHUM ComX-VCF Vertical Heat Recovery Unit

High-efficiency fresh air. Engineered for performance. Designed for flexibility.

What the ComX-VCF Delivers

The ComX-VCF vertical heat recovery unit is designed to supply clean, balanced fresh air while recovering energy from exhaust air — reducing operating costs without compromising comfort.

- Continuous supply of **filtered fresh air**
 - Controlled **exhaust air removal**
 - **High-efficiency heat recovery** from exhaust air to incoming air
 - Balanced ventilation for residential, commercial, and light industrial applications
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Engineered Advantages

Every detail of the ComX-VCF is designed to simplify installation, improve performance, and reduce lifetime maintenance.

- **Galvanised steel casing** for long-term durability
 - **Removable plate heat exchanger** for easy servicing
 - Optional **electric heater or water coil** integration
 - **Eurovent-certified, high-efficiency plate heat exchangers**
 - **Low noise operation** with high-efficiency backward-curved plug fans
 - Full **component access for maintenance** without dismantling the unit
 - **Thermal and acoustic insulation**, non-flammable by design
 - Integrated, **user-friendly control panel**
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Why Choose VEHUM Heat Recovery Ventilators

VEHUM systems are built for projects where efficiency, reliability, and flexibility matter.

- **Lower energy consumption** through high-efficiency plug fans
 - **Eurovent-certified aluminum heat recuperator** for superior thermal performance
 - **Exceptionally low noise levels**, ideal for occupied spaces
 - **G-class filtration** for cleaner indoor air
 - Optional **smart automation and control solutions**
 - **Proportional speed control** for precise airflow management
 - Simple integration of **electric heaters**
 - Optional **water coil** for heating or cooling applications
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The VEHUM Difference

Flexible installation. Proven efficiency. Quiet operation.
The ComX-VCF is engineered to adapt to your project.

UNIT SPECIFICATIONS

ComX-VCF units are equipped with direct-driven EC plug fans featuring backward-curved impellers.

Their aerodynamic blade design delivers high efficiency while maintaining excellent performance at exceptionally low noise levels.

All components are designed for easy maintenance and can be accessed or removed without demounting the unit.

The functional design also provides flexible duct connection options through additional inlet and outlet configurations.

ComX-VCF units incorporate high-efficiency, Eurovent-certified heat exchangers that are laboratory tested and performance verified.

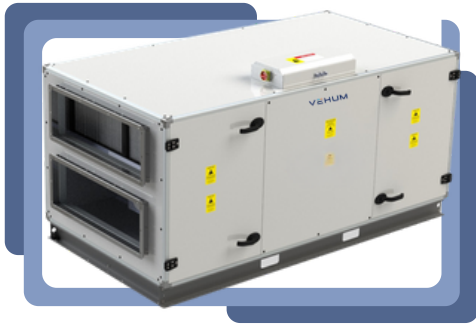
The advanced fin and airflow geometry ensures low pressure drop, improving overall energy efficiency while reducing heating and cooling capacity requirements.



ComX-VCF units are insulated with flame-retardant polyurethane foam to provide effective thermal and acoustic isolation while minimizing unwanted heat transfer.

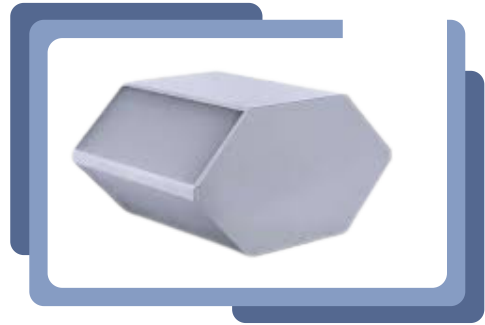
Fans, filters, and heat recovery exchangers are easily accessible via service doors, allowing maintenance directly from the false ceiling.

UNIT SPECIFICATIONS



Casing

The body consists of a 0.8 mm galvanised inner sheet and a 0.8 mm outer sheet painted RAL 9002. 50 mm panel, filled with rockwool (70 kg/m³), provides sound and thermal insulation.



Exchanger

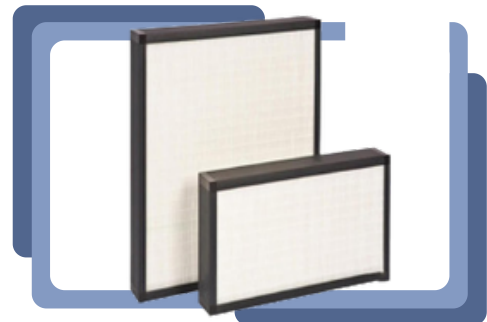
Eurovent-certified counterflow aluminium plate exchangers, achieving efficiency levels up to 90% according to EN 308, are used in ComX-CF units.



Fans

Fans with EC motors are used in ComX-VCF units. EC motors have higher efficiencies than AC motors, and allow easy speed control.

Fan blades are backward-curved impellers which have high aerodynamic efficiency.



Filters

F9-G4 Filter on the fresh air side and M5 filter on exhaust side are used.

COMX-VCF UNIT



Technical Specifications		
Nominal Air Flow (m ³ /h)	2000	4000
Efficiency (EN 308)	80%	79%
Fans	EC	EC
Heat exchanger type	Counter-Flow	Counter-Flow
Supply Air Filter	ePM10 60% (G4) ePM1 90% (F9)	ePM10 60% (G4) ePM1 90% (F9)
Extract Air Filter	ePM10 70% (M5)	ePM10 70% (M5)
Operating Temperature (°C)	-20/60	-20/60
Protection Class	IP 31	IP 31
Nominal Voltage (VAC)	220	380
Current (A)	2,2x2	1,89x2
Fan Power Input (W)	500x2	1234x2

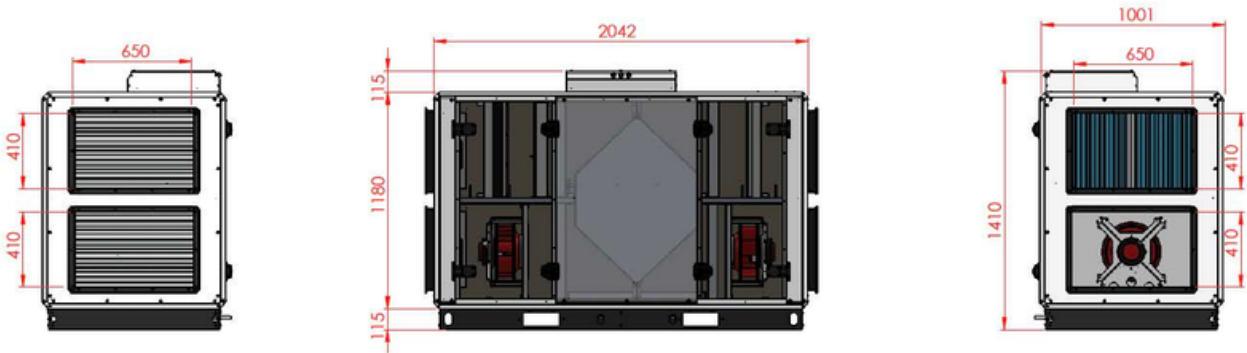
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COMX-VCF-2000



Technical Specifications	
Nominal Air Flow (m³/h)	2000
External Pressure (Pa)	200
Efficiency (EN 308)	80
Supply Air Filter	ePM10 80% (M6) ePM1 70% (F8)
Extract Air Filter	ePM10 70% (M5)
Operrating Temperature (°C)	-20/60
Protection Class	IP 31
Nominal Voltage (VAC)	220
Current (A)	2,2x2
Fan Power Input (W)	500x2
Weigthy (kg)	550

ComX-VCF 2000	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	LwA-tot
Airborne Sound Power Level (dBA)	39	38	35	33	31	27	23	43
Air Outlet Sound Power Level (dBA)	59	62	58	56	55	54	50	67
Air Inlet Sound Power Level (dBA)	50	52	49	47	44	42	39	55



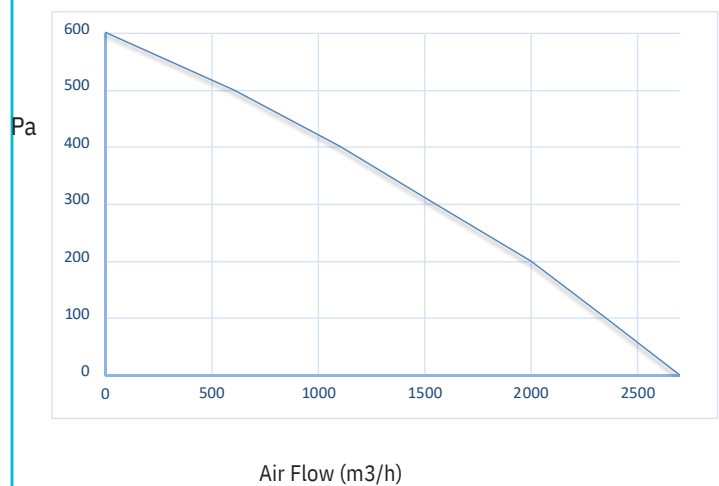
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COMX-VCF-2000

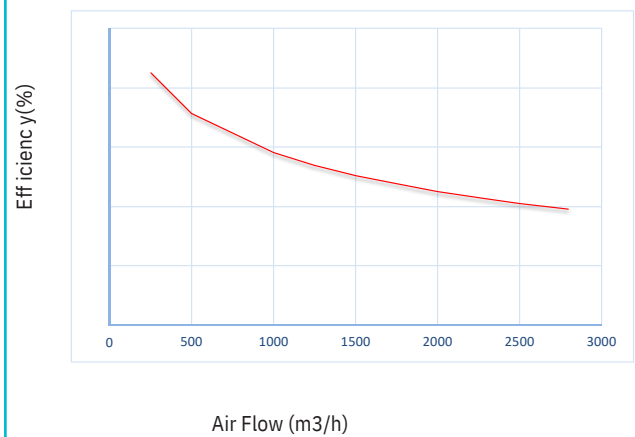


FEATURES	
Casing	Painted steel
Insulation	50 mm mineral wool
Fans	EC
Heat exchanger type	Rotor
Filter: extract	M6-F8
Filter: supply	M5
Preheating	Optional
Reheating	Optional
Wired remote control panel	Standard
BMS	MODBUS
Freeze protection	Standard
Weekly schedule operation	Standard
Alarm indication	Standard
Filter maintenance warning	According to filter timer
Boost mode	Standard
CO2 sensor	Option
Constant Flow Control	Option
Duct	800x200 mm

Performance Values



Efficiency



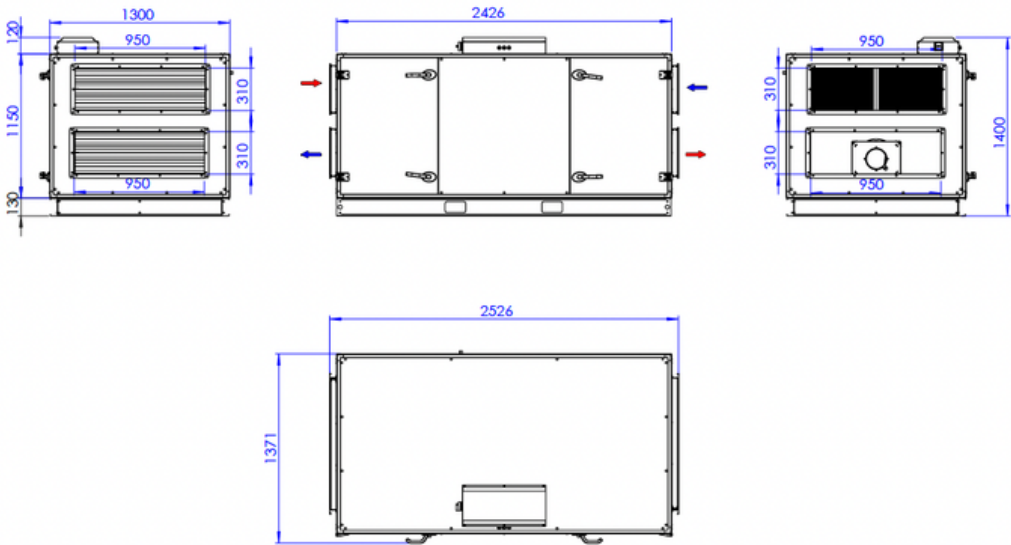
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COMX-VCF-4000



Technical Specifications	
Nominal Air Flow (m³/h)	4000
External Pressure (Pa)	200
Weigthy (kg)	650
Supply Air Filter	G4-F7
Extract Air Filter	G4-F7
Operrating Temperature (°C)	-20/60
Protection Class	IP 31
Nominal Voltage (VAC)	220
Current (A)	1,65x2
Fan Power Input (W)	1072x2

ComX-VCF 4000	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	LwA-tot
Airborne Sound Power Level (dBA)	42	41	38	36	34	30	26	46
Air Outlet Sound Power Level (dBA)	62	65	61	59	57	55	52	69
Air Inlet Sound Power Level	54	56	53	50	47	45	41	58



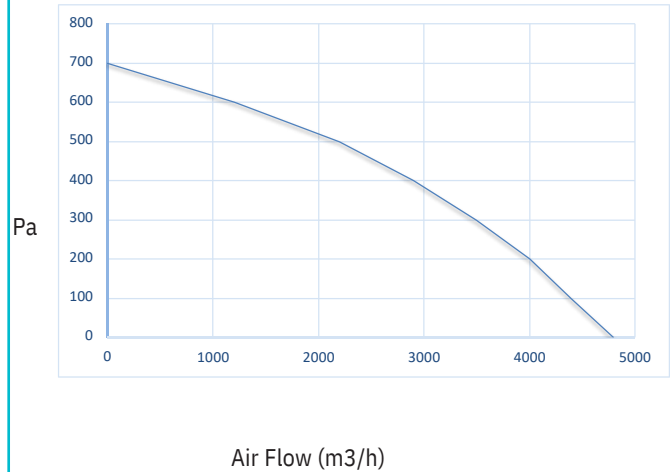
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COMX-VCF-4000

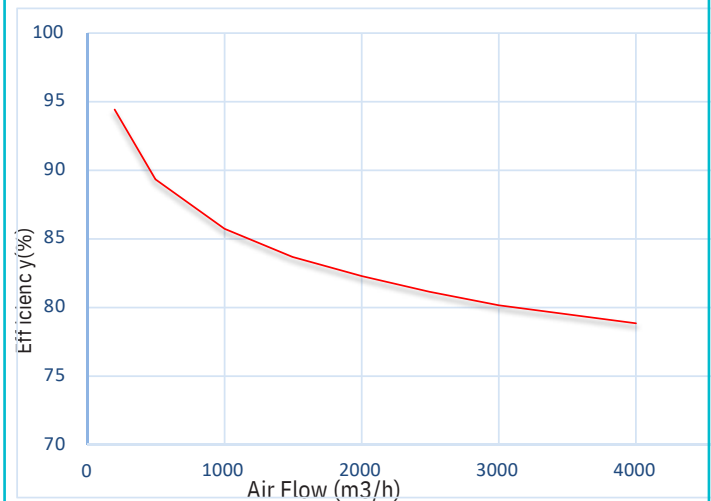


FEATURES	
Casing	Painted steel
Insulation	50 mm mineral wool
Fans	EC
Heat exchanger type	Counterflow
Filter: extract	G4-F7
Filter: supply	G4-F7
Preheating	Optional
Reheating	Optional
Wired remote control panel	Standard
BMS	MODBUS
Freeze protection	Standard
Weekly schedule operation	Standard
Alarm indication	Standard
Filter maintenance warning	According to filter timer
Boost mode	Standard
CO2 sensor	Option
Constant Flow Control	Option
Duct	1100x300 mm

Performance Values



Efficiency



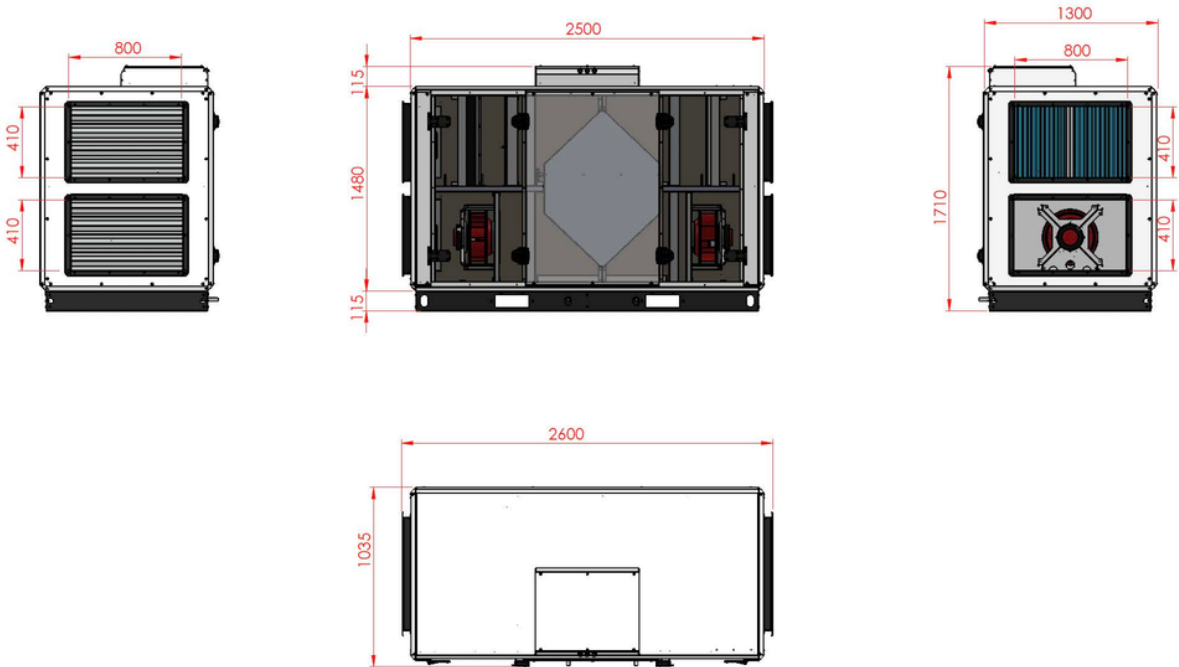
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COMX-VCF-5000



Technical Specifications	
Model	ComX VCF 5000
Nominal Air Flow (m³/h)	5500
External Pressure (Pa)	200
Efficiency (EN 308)	80
Supply Air Filter	ePM10 80% (M5) ePM1 70% (F9)
Extract Air Filter	ePM10 70% (M5)
Operrating Temperature (°C)	-20/60
Protection Class	IP 31
Nominal Voltage (VAC)	380
Current (A)	1,80x2

ComX-VCF 5000	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	LwA-tot
Airborne Sound Power Level (dBA)	39	38	35	33	31	27	23	43
Air Outlet Sound Power Level (dBA)	59	62	58	56	55	54	50	67
Air Inlet Sound Power Level (dBA)	50	52	49	47	44	42	39	55

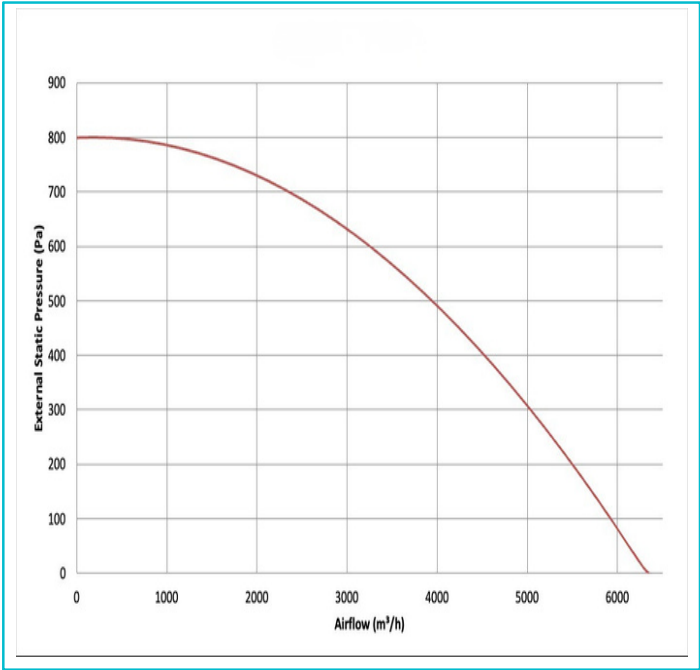


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COMX-VCF-5000



FEATURES	
Casing	Painted steel
Insulation	50 mm mineral wool
Fans	EC
Heat exchanger type	Rotor
Filter: extract	M5-F9
Filter: supply	M5
Preheating	Optional
Reheating	Optional
Wired remote control panel	Standard
BMS	MODBUS
Freeze protection	Standard
Weekly schedule operation	Standard
Alarm indication	Standard
Filter maintenance warning	According to filter timer
Boost mode	Standard
CO2 sensor	Option
Constant Flow Control	Option

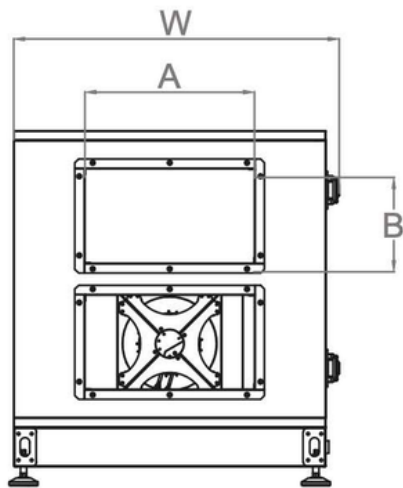
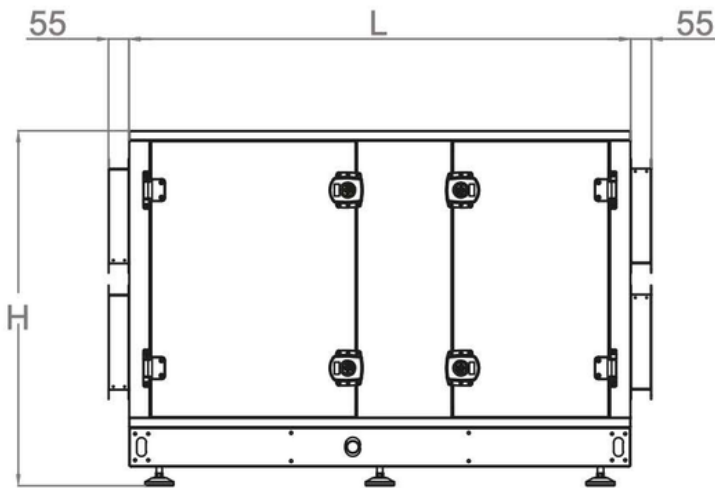


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COMX-VECF-7000



Technical Specifications	
Nominal Air Flow (m ³ /h)	7000
External Pressure (Pa)	200
Weigthy (kg)	1900
Supply Air Filter	G4-F7
Extract Air Filter	G4-F7
Operating Temperature (°C)	-20/60
Protection Class	IP 31
Nominal Voltage (VAC)	380
Current (A)	4,2x2
Fan Power Input (W) Sound	2730x
Power Level (LWA)	253

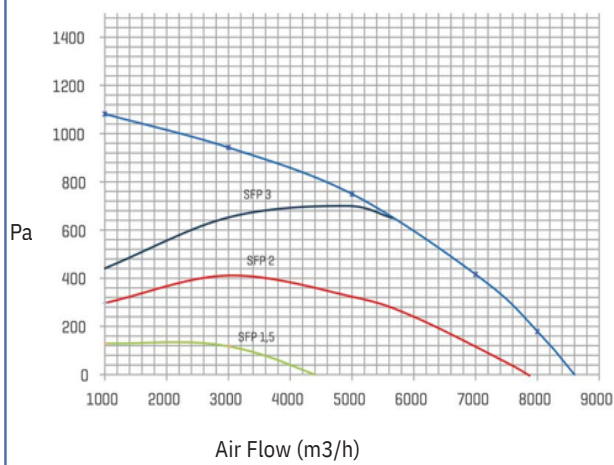


ComX-VECF 7000	A	B	L	W	H
Dimensions (mm)	1200	500	3165	1800	1550

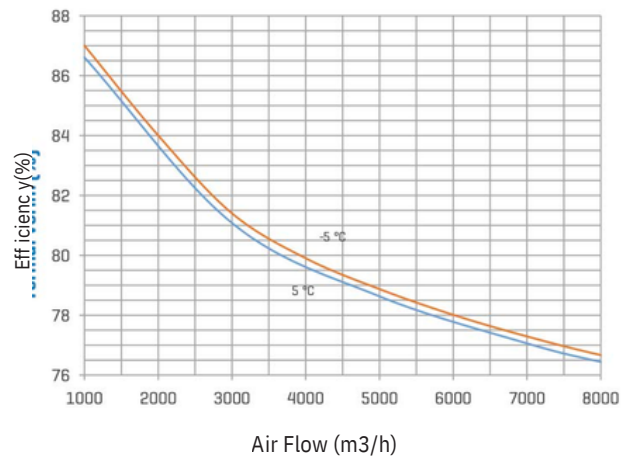


FEATURES	
Casing	Painted Steel
Insulation	50 mm mineral wool
Fans	EC
Heat exchange type	Counterflow
Filter: extract	G4-F7
Filter: supply	G4-F7
Preheating	Optional
Reheating	Optional
Wired remote control panel	Standard
BMS	MODBUS
Freeze Protection	Standard
Weekly schedule operation	Standard
Alarm indication	Standard
Filter maintenance warning	According to filter timer
Boost mode	Standard
CO2 sensor	Option
Constant Flow Control	Option
Duct	1200x500 mm

Performance Values

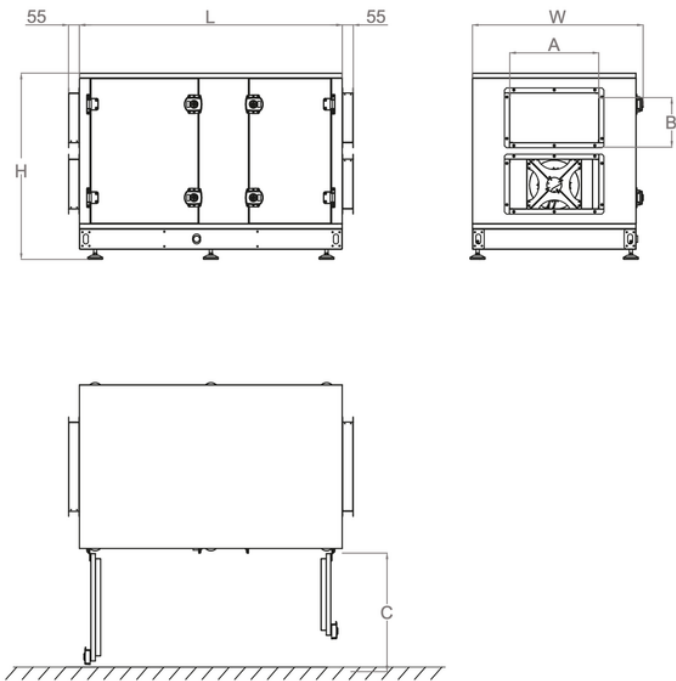


Efficiency





Technical Specifications	
Nominal Air Flow (m ³ /h)	11000
External Pressure (Pa)	250
Supply Air Filter	(G4) (F7)
Extract Air Filter	(G4)
Operating Temperature (°C)	-20/60
Protection Class	IP 31
Nominal Voltage (VAC)	380
Current (A)	5,4
Fan Power Input (W)	3510
Weigthy (kg)	2520



ComX-VCF 11000	L	W	H	A	B	C	Weight (KG)
Airborne Sound Power Level (dBA)	3165	2075	1655	1450	600	1300	250

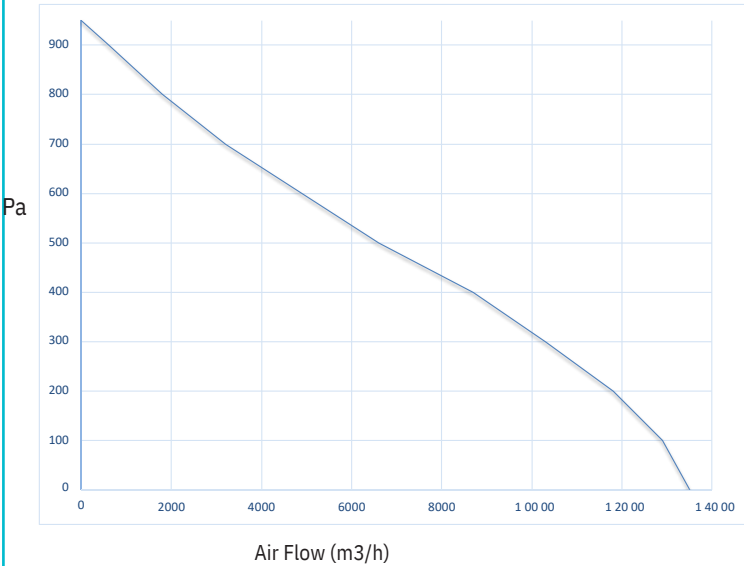
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COMX-VCF-I5000

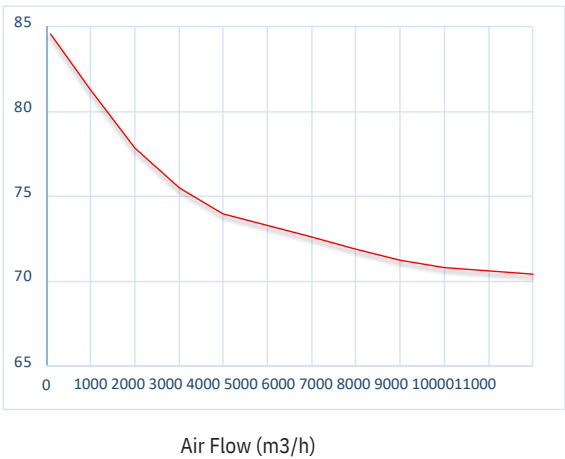


FEATURES	
Casing	Painted steel
Insulation	50 mm mineral wool
Fans	EC
Heat exchanger type	Counter Flow
Filter: extract	G4-F7
Filter: supply	G4
Preheating	Optional
Reheating	Optional
Wired remote control panel	Standard
BMS	MODBUS
Freeze protection	Standard
Weekly schedule operation	Standard
Alarm indication	Standard
Filter maintenance warning	According to filter timer
Boost mode	Standard
CO2 sensor	Option
Constant Flow Control	Option
Duct	800x200 mm

Performance Values



Efficiency



ACCESSORIES

Digital Room Controller

ComX-VCF units are supplied with a digital room control panel. It can control air flow while changing the exhaust and fresh air flows individually (L/M/H). All the changes could be followed on LCD screen. The mode of the unit can be adjusted to winter or summer. In summer mode only the unit works. In winter mode, Unit and electrical heater works. According to the temperature adjusted on the control panel, electrical heater start up automatically. The "off" button on the control panel stops both electrical heater and unit.

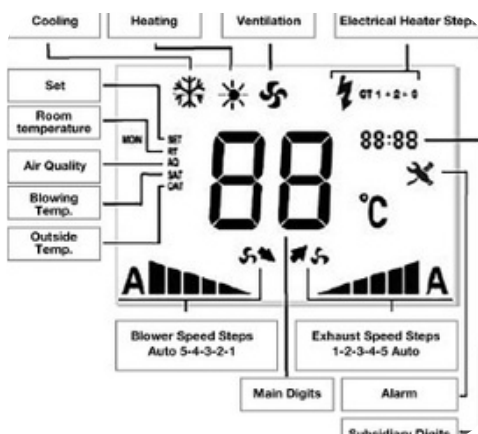


Electrical board comes with the unit, it adopts unit orders coming from room controller. Components like relay, contactor, capacitor and connector are located in electrical board. Required electrical power should be supplied to heater and also to unit

ComX-VCF Units can connect to Building Automation System via contactor or MODBUS (RS485). Thereby all the features of the unit can be controlled through a centralized system.

Fresh air and return air flows can be adjusted with automation panel. Thus, negative or positive pressure could be obtained.

By using Air Quality or CO2 sensors (optional) Ventilation on demand feature could be started. To use it, either room control panel or building automation panel should be taken to VOD mode.



Advanced Panel Specifications

1. Manages exhaust and fresh air fan volumes individually in 6 steps
2. Filter service alarm after 1200 hours of performance
3. Thermal protection for motors
4. Electrical heater connection
5. Water Coil connection
6. Protection of heaters for over-heating
7. Boost Function
8. Carbon dioxide sensor connection
9. Control of damper motor
10. BMS control
11. Control of heating and cooling coil valves
12. Fire alarm
13. Weekly programming
14. Thermal check with a sensor located on duck



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