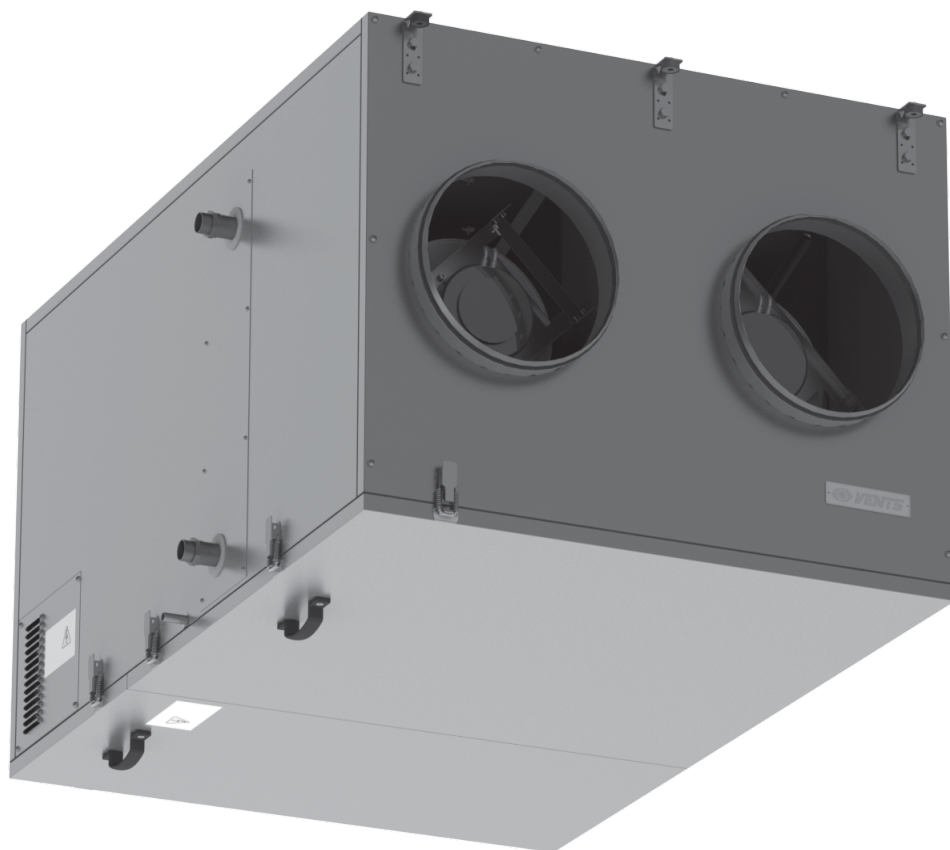


USER'S MANUAL

VUT 2000 PW EC
VUT 3000 PW EC



**Heat recovery
air handling unit**



CONTENTS

Safety requirements	3
Introduction	5
Purpose	5
Delivery set	5
Designation key	5
Technical data	6
Unit design and operating logic	8
Mounting and set-up	9
Connection to power mains	13
Functional diagram	14
Technical maintenance	15
Fault handling	17
Storage and transportation rules	17
Manufacturer's warranty	18
Acceptance certificate	19
Seller information	19
Mounting certificate	19
Warranty card	20




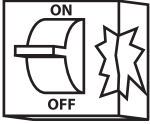
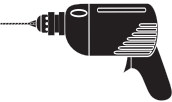
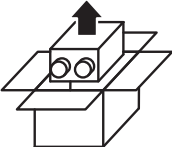

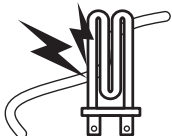
SAFETY REQUIREMENTS

- Read the user's manual carefully prior to the operation and installation of the heat recovery air handling unit.
- Fulfil the user's manual requirements as well as the provisions of all the applicable local and national construction, electrical and technical norms and standards.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control the User's manual must be turned over to the receiving operator.


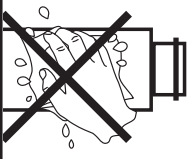
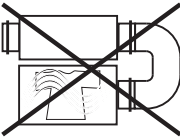
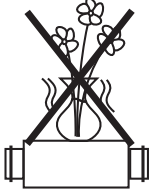

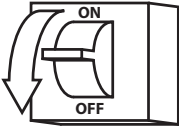
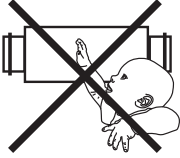

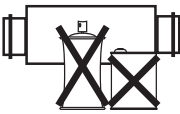
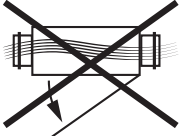
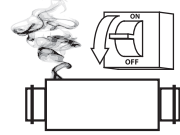
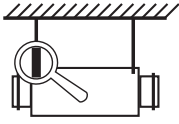
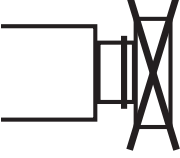

Symbol legend:

	WARNING!
	DO NOT!

UNIT MOUNTING SAFETY PRECAUTIONS

	Disconnect the unit from power mains prior to any installation or repair operations.		The unit must be grounded!
	The unit must not be operated outside the temperature range stated in the user's manual and in aggressive or explosive environments.		Do not use damaged equipment or cables when connecting the unit to power mains.
	While installing the unit follow the safety regulations specific to the use of electric tools.		Unpack the unit with care.
	Do not change the power cable length at your own discretion. Do not bend the power cord. Avoid damaging the power cord.		Do not position any heating devices or other equipment in close proximity to the unit power cable.

UNIT OPERATION SAFETY PRECAUTIONS

	Do not touch the unit controls with wet hands. Do not carry out the unit maintenance with wet hands.		Do not wash the unit with water. Protect the unit electric parts from water ingress.
	Use the unit only as intended by the manufacturer. Do not connect a clothes dryer or other similar equipment to the unit or the ventilation system.		Do not put any water containers on the unit, i.e. flower vases.
	Do not sit on the unit and avoid placing foreign objects on it.		Disconnect the unit from power mains prior to maintenance.
	Do not let children operate the unit.		Do not damage the power cable while operating the unit. Do not put foreign objects on the power cable.
	Keep combustible gases and inflammable products away of the unit.		Do not open the operating unit.
	When the unit generates unusual sounds, odour or emits smoke disconnect it from power supply and contact the Seller.		In case of continuous operation of the unit periodically check the security of mounting.
	Do not block the air duct when the unit is on.		Do not let air flow from the unit be directed to the open flame devices or candles.

INTRODUCTION

The user's manual consisting of the technical details, operating instructions and technical specification applies to the installation and mounting of the heat recovery air handling unit VENTS VUT 2000-3000 PW EC, hereinafter referred to as «the unit».

PURPOSE

The unit is designed to ensure continuous mechanical air exchange in houses, offices, hotels, cafés, conference halls, and other utility and public spaces as well as to recover the heat energy contained in the air extracted from the premises to warm up the filtered stream of supply air.

The unit is not intended for organizing ventilation in swimming pools, saunas, greenhouses, summer gardens, and other spaces with high humidity.

Due to the ability to save heating energy by means of energy recovery, the unit is an important element of energy-efficient premises. The unit is a component part and is not designed for stand-alone operation.

It is rated for continuous operation.

Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, sticky substances, fibrous materials, coarse dust, soot and oil particles or environments favourable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).

Relative humidity of transported air must not exceed 80 % at an ambient temperature of +20 °C.



THE UNIT MAY NOT BE OPERATED BY CHILDREN OR PERSONS WITH REDUCED PHYSICAL, MENTAL OR SENSORY CAPACITIES, OR LACKING THE APPROPRIATE TRAINING.

THE UNIT MUST BE INSTALLED AND CONNECTED ONLY BY PROPERLY QUALIFIED PERSONNEL AFTER THE APPROPRIATE BRIEFING.

THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.

DELIVERY SET

Name	Number
Unit	1 item
User's manual	1 item
Control panel	1 item
Packing box	1 item

DESIGNATION KEY

VUT XXX PB EC - X - X

- **Control panel**
 __ — PU SENS 01 with a sensor display
 A7 — PU JK 01 with an LCD display
- **Modification**
 L - left-handed modification
 R - right-handed modification
- **Motor type**
 EC - electronically commutated motors
- **Heater type**
 W - water heater
- **Mounting method**
 P — suspended mounting
- **Air capacity [m³/h]**
- **Unit type**
 VUT - ventilation with heat recovery

TECHNICAL DATA

The unit is designed for indoor application with the ambient temperature ranging from +1 °C up to +40 °C and relative humidity up to 80 %.

In order to prevent condensation on the internal walls of the units, it is necessary that the surface temperature of the casing is 2-3 °C higher than the dew point temperature of the transported air.

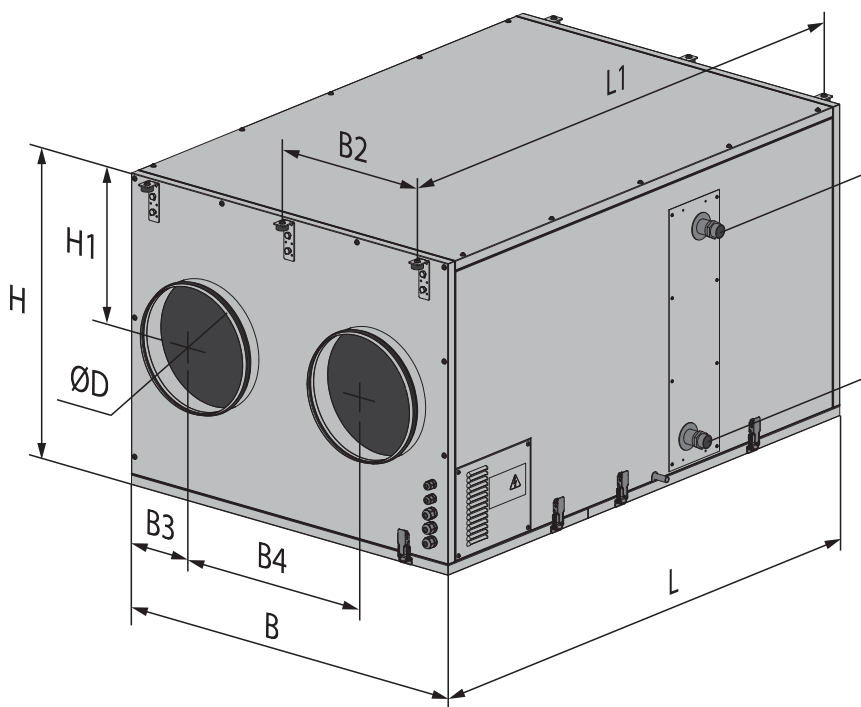
The unit is rated as a Class I electrical appliance.

Hazardous parts access and water ingress protection rating:

- IP22 for the unit connected to the air ducts
- IP44 for the unit motors

The unit design is constantly being improved, thus some models may be slightly different from those described in this manual.

OVERALL DIMENSIONS OF THE UNIT, MM



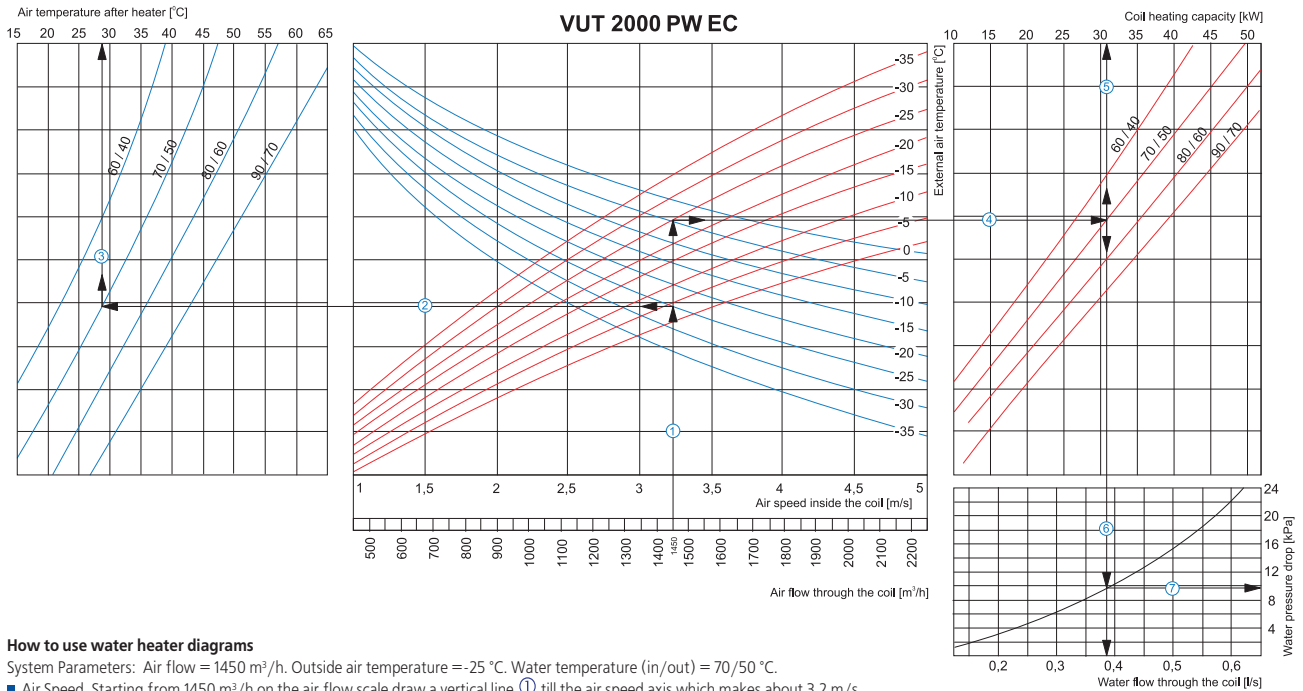
Model	VUT 2000 PW EC	VUT 3000 PW EC
Ø D	314	399
B	950	1265
B2	405	563
B3	225	347
B4	500	570
H	761	881
H1	367	427
H2	501	300
L	1400	1835
L1	1453	1888

UNIT TECHNICAL DATA

Model	VUT 2000 PW EC	VUT 3000 PW EC
Unit voltage [V /50-60 Hz]	1 ~ 230	3 ~ 400
Max. fan power [W]	2 items x 420	2 items x 990
Max. fan current [A]	2 items x 2,5	2 items x 1,7
Number of water heating coils	2	2
Total unit power [kW]	0,84	1,99
Total unit current [A]	5,0	3,4
Max. air capacity [m³/h]	1950	3800
RPM	2920	2580
Sound pressure level at 3 m distance [dB(A)]	58	59
Max. transported air temperature [°C]	from -25 up to +40	from -25 up to +50
Casing material	Aluzinc	
Insulation	25 mm mineral wool	
Filter:	Extract filter	G4
	Supply filter	G4
Connected air duct diameter [mm]	Ø315	Ø400
Weight [kg]	194	295
Heat recovery efficiency, %	up to 75	
Heat exchanger type	Cross flow	
Heat exchanger material	Aluminium	

PERFORMANCE CHARTS FOR THE WATER HEATER PARAMETERS OF THE UNIT

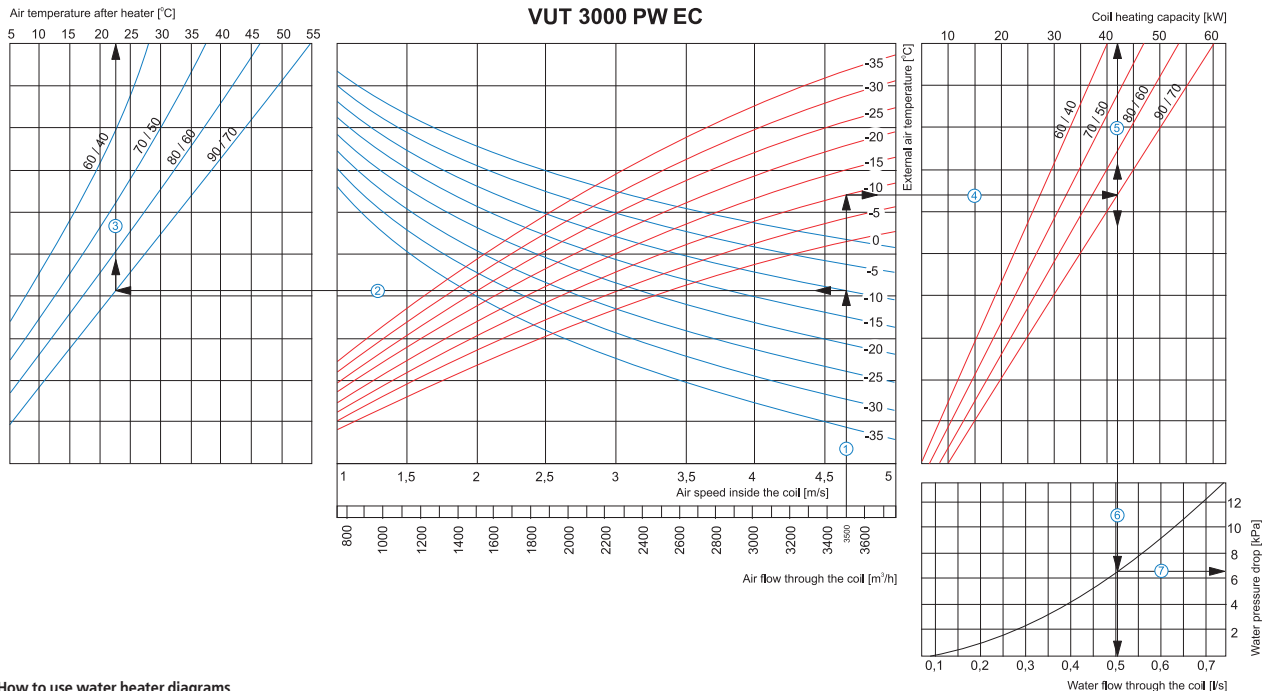
In order to attain maximum power the water heater should be counterflow connected. In case of the direct-flow connection the water heater has lower power but higher frost-resistant properties.



How to use water heater diagrams

System Parameters: Air flow = 1450 m³/h. Outside air temperature = -25 °C. Water temperature (in/out) = 70/50 °C.

- Air Speed. Starting from 1450 m³/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 3.2 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve, e.g. -25 °C); then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (e.g. 70/50 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+28 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature (e.g. -25 °C, red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (e.g., 70/50 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (31.0 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (0.38 l/s).
- Water pressure drop. Draw the line ⑦ from the point where the line ⑥ crosses the black curve to the pressure drop axis. (9.8 kPa).



How to use water heater diagrams

System Parameters: Air flow = 3500 m³/h. Outside air temperature = -10 °C. Water temperature (in/out) = 90/70 °C.

Air Speed. Starting from 3500 m³/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 4.65 m/s.

- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve, e.g. -10 °C); then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (e.g. 90/70 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+22.5 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature (e.g. -10 °C, red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (e.g., 90/70 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (42.0 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (0.5 l/s).
- Water pressure drop. Draw the line ⑦ from the point where the line ⑥ crosses the black curve to the pressure drop axis. (6.5 kPa).

UNIT DESIGN AND OPERATING LOGIC

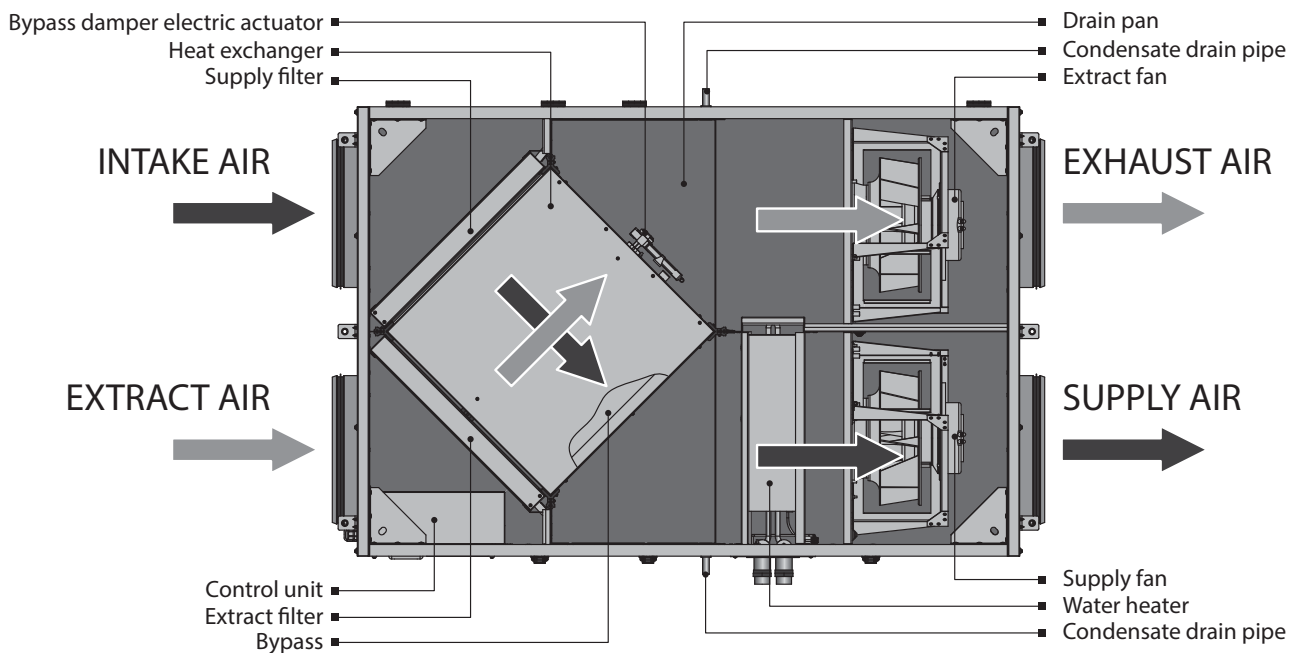
The unit has the following operating logic:

Warm stale extract air from the room flows to the unit, where it is filtered, then air flows through the heat exchanger and is exhausted outside by the extract fan. Clean cold air from outside is moved to the supply filter. Then filtered air flows through the heat exchanger and is moved to the room with the supply fan.

Heat energy of warm extract air is transferred to clean intake fresh air from outside and warms it up. Heat recovery minimizes thermal energy losses and space heating expenses in cold seasons.

The unit is equipped with a detachable service panel for repair and maintenance operations and a cover enabling access to the control system components.

UNIT OPERATING LOGIC (TOP VIEW) BASED ON VUT 2000 PW EC UNIT EXAMPLE



The basic unit delivery set includes a control panel for connection to the control system inside the unit casing using a data cable.

The unit is equipped with a supply and an extract centrifugal single-inlet fans with backward curved blades; maintenance-free EC motors with an external rotor and a built-in overheating protection; a plate counterflow heat exchanger and a water heater.

The supply G4 filter cleans supply air flow and prevents contamination of the unit parts. The extract G4 filter prevents contamination of the unit components.

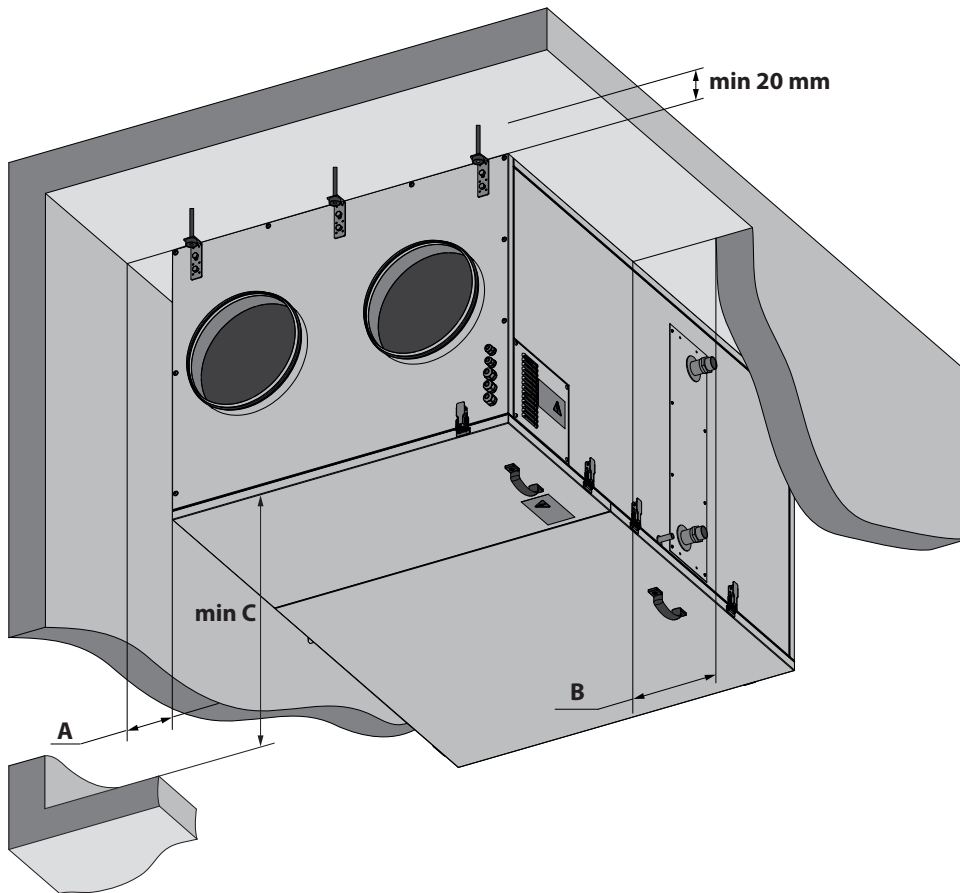
Some condensate may form during heat recovery. The condensate is collected in the drain pan and is removed from the unit through the drain pipes.

The unit is equipped with a heat exchanger freeze protection. If the air temperature in the intake air duct is below $+3^{\circ}\text{C}$, the bypass damper opens and automatically controls the air temperature.

MOUNTING AND SET-UP

MINIMUM DISTANCE FOR ACCESSING THE UNIT

While mounting the unit provide enough space for its maintenance or repair work.



A — minimum distance for condensate disposal arrangement. The distance is selected depending on the installation conditions at the discretion of the installer.

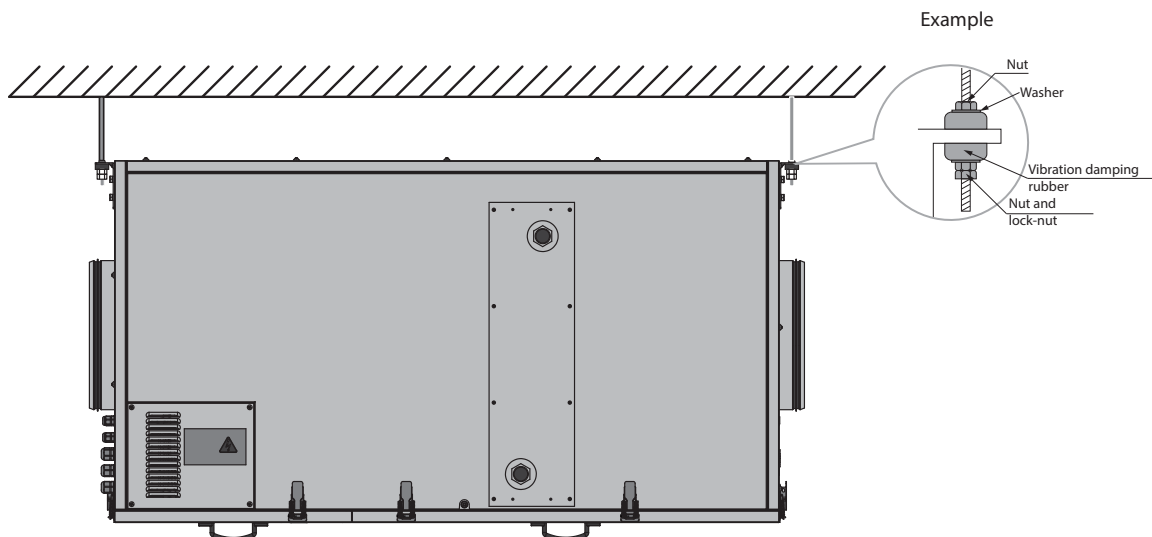
B — minimum distance for water heater connection and condensate disposal arrangement. The distance is selected depending on the installation conditions at the discretion of the installer.

C — minimum distance from the service panel to the floor.

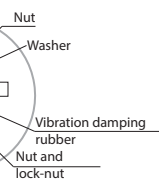
VUT 2000 PW EC	VUT 3000 PW EC
1000 mm	1300 mm

UNIT MOUNTING

The unit must be suspended to the ceiling on the threaded rod that is fixed inside a dowel.



Example



To attain the best performance of the unit and to minimise turbulence-induced air pressure losses connect a straight air duct section on both sides of the unit while mounting.

Minimum straight air duct length:

- equal to 1 air duct diameter on intake side.
- equal to 3 air duct diameters on outlet side.

If the air ducts are too short or not connected, protect the unit parts from ingress of foreign objects, e.g. by covering the spigots with a protecting grille or other protecting device with mesh width not more than 12.5 mm to prevent uncontrollable access to the fans.

Safety precautions:**The unit must be mounted to a rigid and stable structure.**

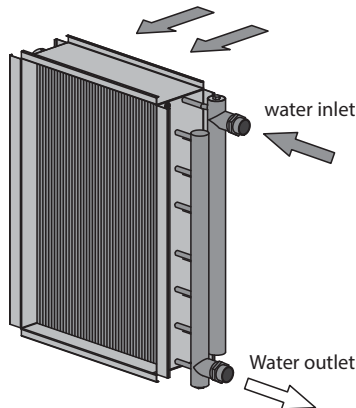
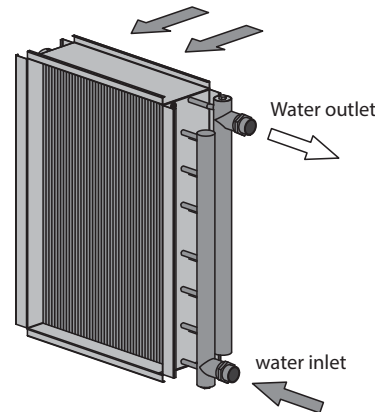
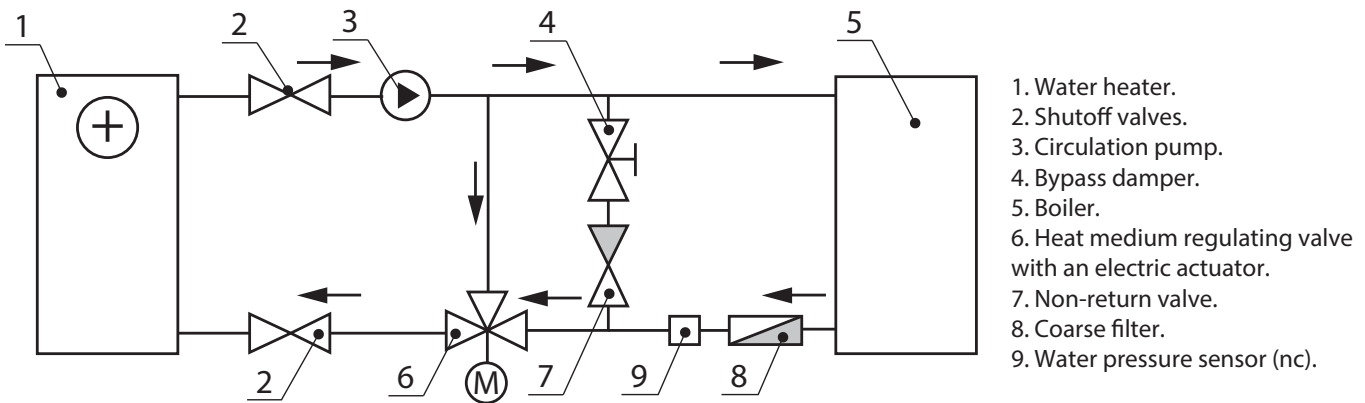
The unit must be suspended using threaded rods. Before starting mounting check that the mounting structure has sufficient loading capacity for the unit weight. Otherwise reinforce the mounting location with beams or similar elements.

If the threaded rods used for the unit mounting are too short, the unit can generate abnormal noise resulting from resonance with the ceiling. Use threaded rods of sufficient length to prevent resonance.

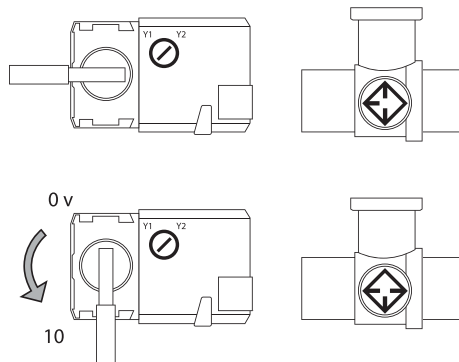
If the abnormal noise is generated at the spiral air duct joint replace the spiral air duct with a flexible one to prevent resonance. Flexible anti-vibration connectors are another alternative for dealing with resonance.

WATER HEATER CONNECTION

Mixing unit diagram (not included in the delivery set) of the water heater is shown in the following figure.

Direct flow connection**Counterflow connection****MIXING UNIT DIAGRAM**

1. Water heater.
2. Shutoff valves.
3. Circulation pump.
4. Bypass damper.
5. Boiler.
6. Heat medium regulating valve with an electric actuator.
7. Non-return valve.
8. Coarse filter.
9. Water pressure sensor (nc).

HEAT MEDIUM REGULATING VALVE ACTUATOR**WARNING!**

The unit operates either in Winter or Summer mode. If the outside air temperature is below +10 °C the Winter mode is activated. If the outside temperature accedes +10 °C the unit operates in Summer mode.

In Summer mode the unit operates regardless of the return heat medium temperature in the mixing unit.

In Winter mode the unit has following temperature limits:

- The unit may not be started when the return heat medium temperature is below +40 °C. If the return heat medium temperature is +40 °C and higher the unit will be turned on with a 90 seconds delay.
- The unit turns off when the return heat medium temperature falls below +20 °C.

CONDENSATE DRAINAGE ARRANGEMENT

The drain pan is equipped with two drain pipes for condensate removal outside the unit.

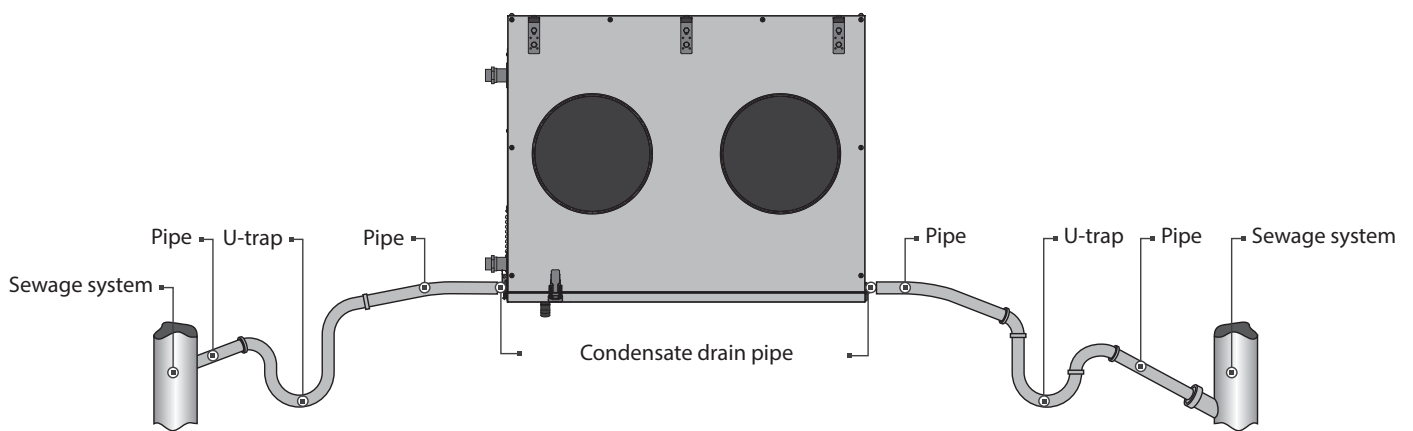
Connect the drain pipe, the U-trap (not included in the standard delivery set) and the sewage system with metal, plastic or rubber pipes.

While laying the hoses provide the slope downwards min. 3%. Fill the system with water prior to connecting it to power supply! During operation the U-trap must always be filled with water. Provide free drainage for the condensed water, otherwise it is accumulated inside the unit that may cause the equipment damage and condensate outflow to the room.

The condensate drainage system is designed for normal operation in premises with air temperatures above 0 °C! If the expected ambient air temperatures are below 0 °C the condensate drainage system must be equipped with heat insulation and pre-heating facilities.



**DO NOT CONNECT SEVERAL DRAIN PIPES FROM SEVERAL AIR HANDLING UNITS TO ONE U-TRAP!
DIRECT CONDENSATE DRAINAGE OUTSIDE WITHOUT CONNECTION TO SEWAGE SYSTEM IS NOT ALLOWED.**

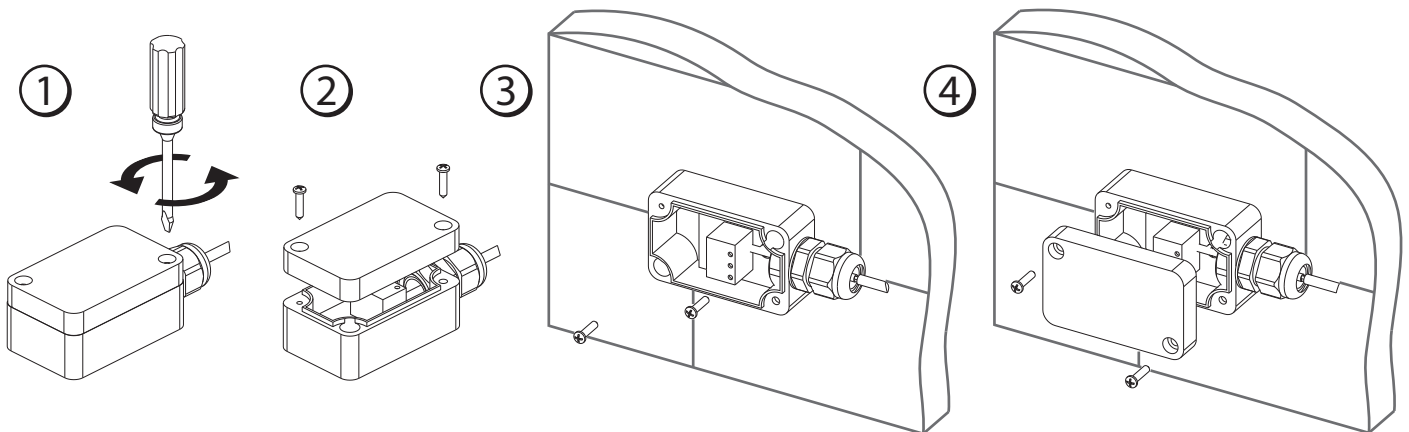


OUTDOOR TEMPERATURE SENSOR MOUNTING AND CONNECTION

The unit is supplied with the TE1 outdoor temperature sensor.

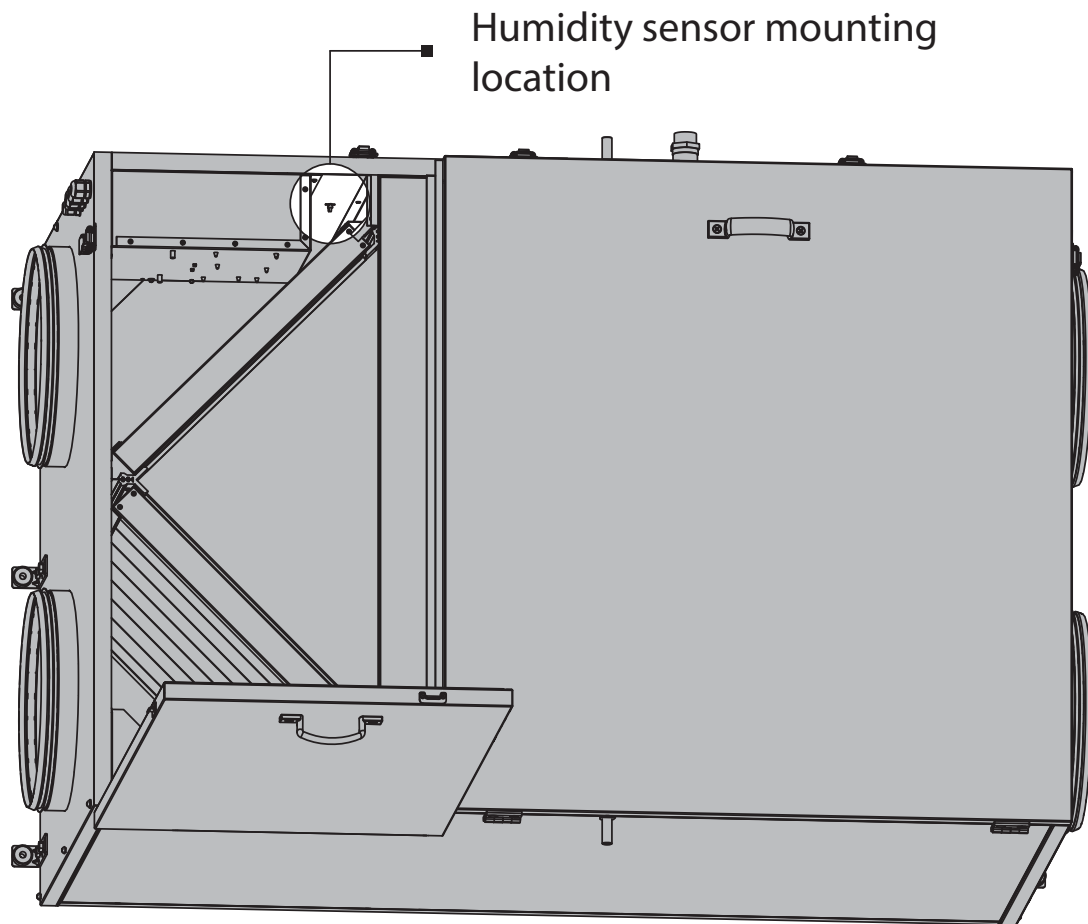
The outdoor temperature sensor mounting is as follows:

1. Remove two screws that retain the sensor cover.
2. Take off the sensor cover.
3. Install the sensor on the outer wall. The installation place must not be subjected to direct solar light.
4. Install the sensor cover back.
5. Connect the sensor to the X1 terminal block in compliance with the electric wiring diagram.

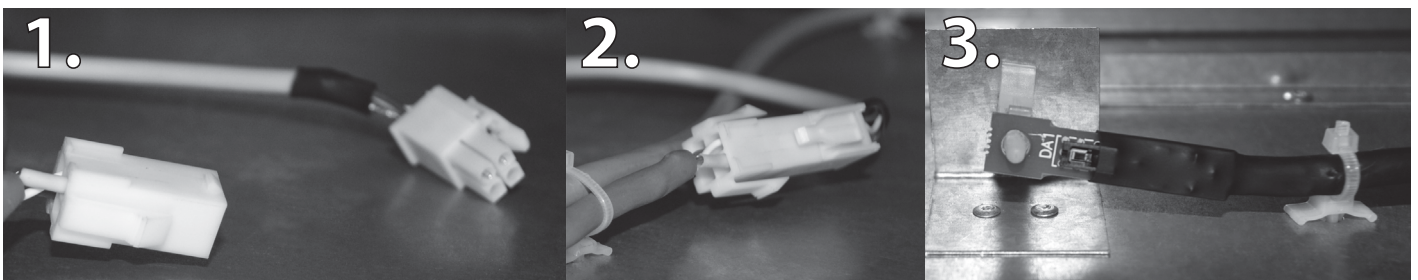


DUCT HUMIDITY SENSOR MOUNTING AND CONNECTION

The HV1 duct humidity sensor is a special accessory and is purchased separately. Connect the contact socket of the humidity sensor to the contact socket located inside of the heat recovery unit. After that fix the sensor using the clamp and the holder in the air duct upstream of the heat exchanger.



DUCT HUMIDITY SENSOR CONNECTION



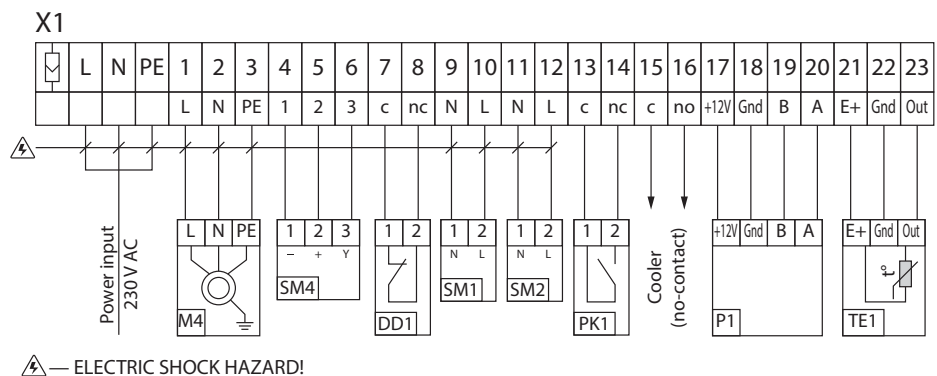
CONNECTION TO POWER MAINS



DISCONNECT THE UNIT FROM POWER MAINS PRIOR TO ANY ELECTRIC INSTALLATION OPERATIONS. CONNECTION OF THE UNIT TO POWER MAINS IS ALLOWED BY A QUALIFIED ELECTRICIAN WITH A WORK PERMIT FOR THE ELECTRIC UNITS UP TO 1000 V AFTER CAREFUL READING OF THE PRESENT USER'S MANUAL. THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE SHOWN ON THE RATING PLATE. ANY INTERNAL CONNECTION MODIFICATIONS ARE NOT ALLOWED AND RESULT IN WARRANTY LOSS.

The VUT 2000-3000 PW EC air-handling unit is rated for connection to single-phase AC 230 V / 50 Hz power mains. The unit must be connected to power mains using durable, insulated and heat-resistant conductors (cables and wires) with minimum cross section not less than 2.5 mm².

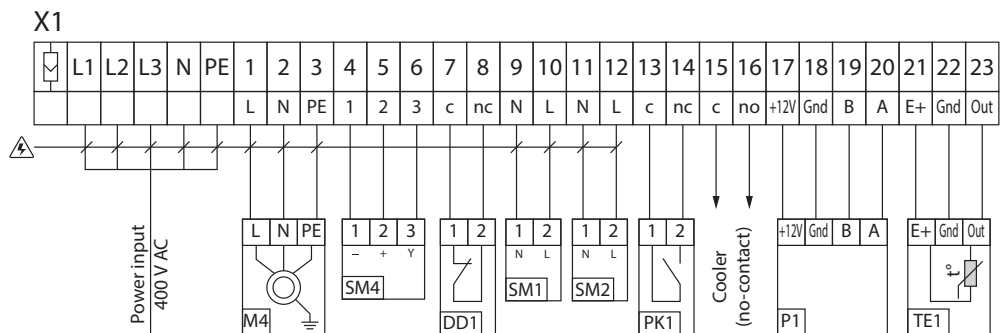
EXTERNAL WIRING DIAGRAM FOR THE UNIT VUT 2000 PW EC



⚠ — ELECTRIC SHOCK HAZARD!

The VUT 2000-3000 PW EC air-handling unit is rated for connection to three-phase AC 400 V / 50 Hz power mains. The unit must be connected to power mains using durable, insulated and heat-resistant conductors (cables and wires) with minimum cross section not less than 2.5 mm².

EXTERNAL WIRING DIAGRAM FOR THE UNIT VUT 3000 PW EC



⚠ — ELECTRIC SHOCK HAZARD!

Design.	Name	Model	Wire
Cooler	DX cooler	NO	2 x 0,75 mm ²
DD1	Pump dry run protection relay	NC	2 x 0,75 mm ²
M4	Circulation pump of the heater	max. 0,3 kW	3 x 0,75 mm ²
SM1	Supply air damper actuator	LF230	2 x 0,75 mm ²
SM2	Extract air damper actuator	LF230	2 x 0,75 mm ²
SM4	3-way valve actuator	LR24 SR	3 x 0,75 mm ²
PK1	Contact from fire alarm panel	NO	2 x 0,75 mm ²
P1**	Control panel		4 x 0,75 mm ²
TE1	Outdoor air temperature sensor		3 x 0,75 mm ²

1. The unit delivery set includes P1 and TE1 only.

2. ** - Max. connecting cable length is 20 m.

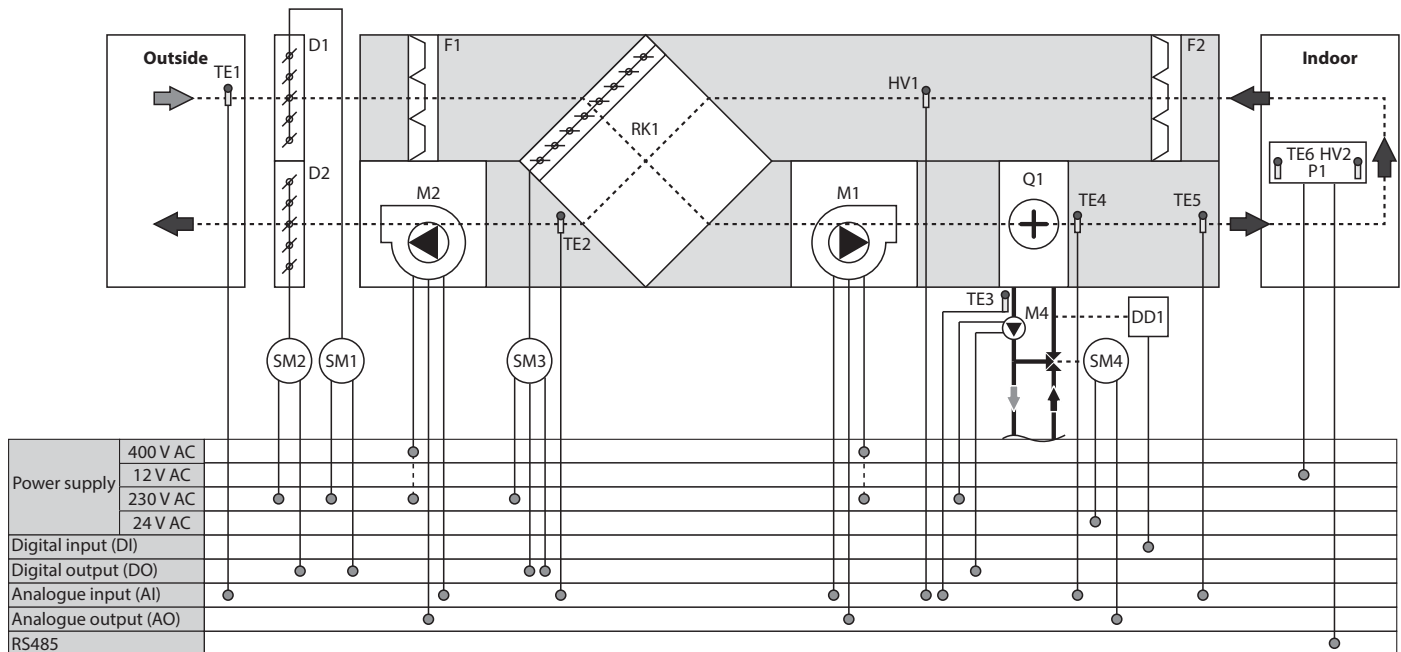
The above cross section is for reference only. The applicable cable cross section must be selected depending on the wire type, its maximum temperature and insulation, the maximum current, the wire length and its installation method.

Use copper wires only.

Connect the unit to power mains through the terminal block located in the terminal box on the side panel of the unit in compliance with the wiring diagram and terminal marking. Connect all the control and supply cables in compliance with the terminal marking and polarity!

Connect the unit to power mains through the external automatic circuit breaker with a magnetic trip integrated into the fixed wiring system. The trip current must be in compliance with current consumption.

FUNCTIONAL DIAGRAM



Designation	Name
D1*	Supply air damper.
D2*	Extract air damper.
F1	Supply filter.
F2	Extract filter.
M1	Supply fan.
M2	Extract fan.
P1	Control panel.
Q1	Water heater.
HV1*	Duct humidity sensor.
HV2	Indoor humidity sensor.
RK1	Plate heat exchanger.
SM1*	Supply air damper actuator.
SM2*	Extract air damper actuator.
SM3	Bypass damper electric actuator.
SM4*	3-way valve actuator.
TE1	Intake air temperature sensor.
TE2	Temperature sensor downstream of the heat exchanger.
TE3	Return heat medium temperature sensor.
TE4	Water heater freeze protection sensor.
TE5	Air temperature duct sensor.
TE6	Room air temperature sensor.
DD1*	Pump dry run protection relay.
M4*	Circulation pump of the water heater.

* - The appliances are not supplied with the unit, are available separately.

MAINTENANCE

Maintenance operations of the unit are required 3-4 times per year. Maintenance includes general cleaning of the unit and the following operations:

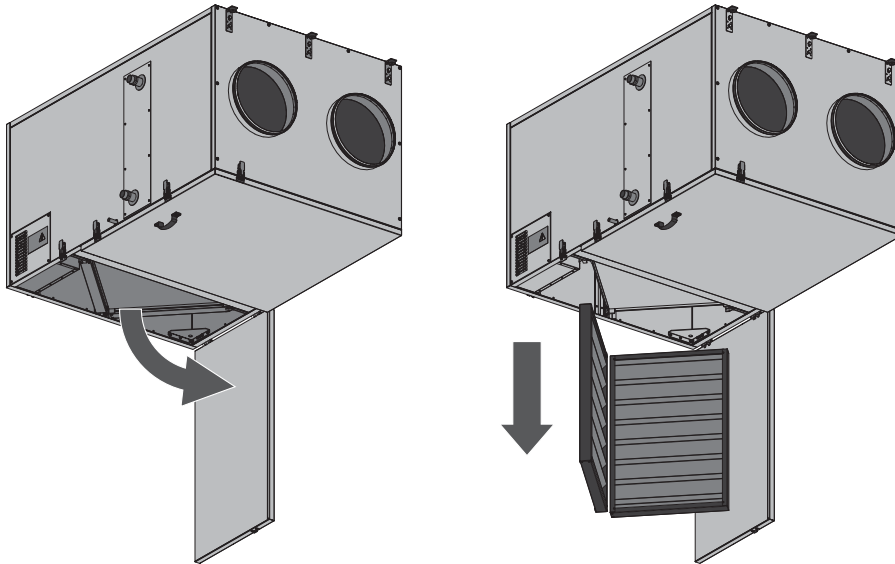
1. Filter maintenance (3-4 times per year).

Dirty filters increase air resistance in the system and reduce supply air volume. The filters require cleaning not less than 3-4 times per year. Vacuum cleaning is allowed. After two consecutive cleanings filters must be replaced. For new filters contact your Seller.

Sequence of filter removal:

1. Unlatch and open the service panel. Open the panel with care.
2. Set the retaining plate aside. Pull the filters until they slide off the guides.

Install the filters in the reverse order.



2. Heat exchanger cleaning (once per year).

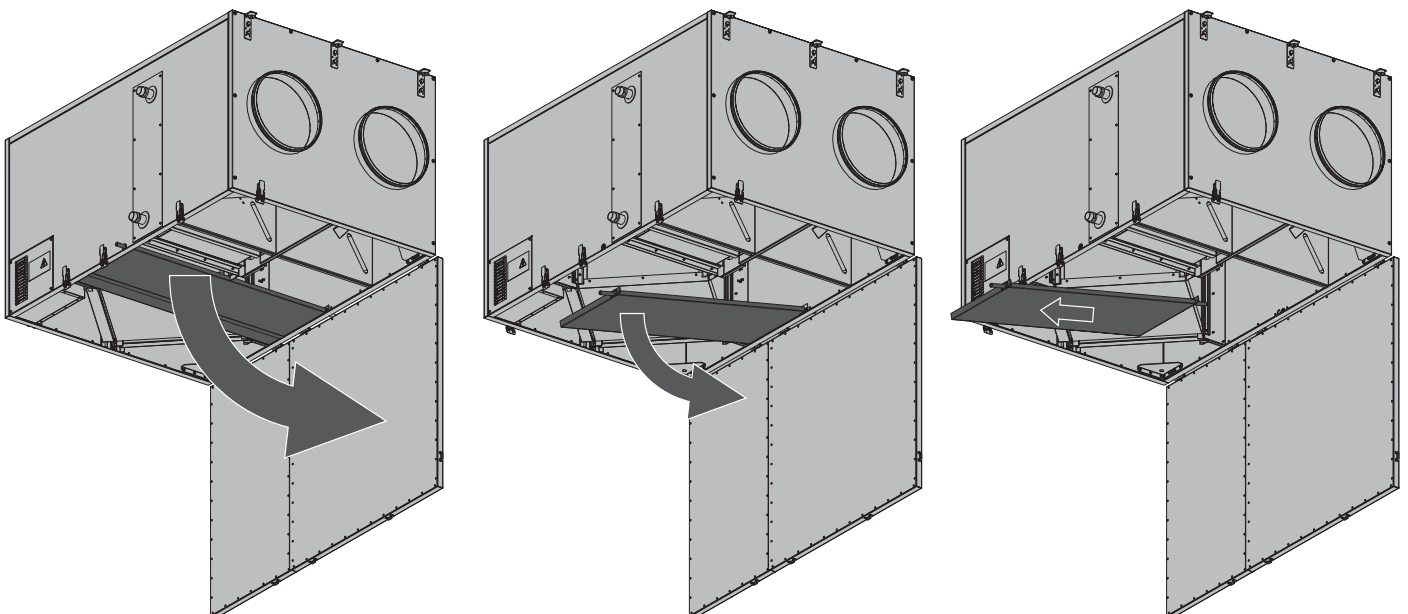
Some dust may accumulate on the heat exchanger block even in case of regular maintenance of the filters. To maintain the high heat recovery efficiency, regular cleaning is required. To clean the heat exchanger remove the drain pan and the filters from the unit and clean the heat exchanger by using compressed air or a vacuum cleaner.

Sequence of the drain pan removal:

1. Unlatch and open both service panels. Open the panels with care.
2. Release the drain pipe from the side of the water heater connection and pull it down.
3. Release the second drain pipe by pulling the drain pan aside.

Install the drain pan in the reverse order.

If a more thorough cleaning of the heat exchanger is required, call your service technician.



3. Fan inspection (once per year).

Even in case of regular maintenance of the filters, some dust may accumulate inside the fans and reduce the fan performance and supply air flow.

Clean the filters with a vacuum cleaner, a soft cloth or brush. Do not use water, aggressive solvents or sharp objects as they may damage the impeller.

Access to the fans is from the side of air ducts connections.

4. Condensate drainage inspection (once per year).

The condensate drainage (drain line) may get clogged by dirt and dust particles contained in the exhaust air. Check the drain line operation by filling the drain pan under the unit with water, clean the U-trap and the drain line, if necessary.

5. Exhaust louvre shutters and intake diffusers cleaning (as required).

Wash the diffusers and the louvre shutters with warm detergent solution.

6. Supply air flow control (twice per year).

The supply duct grille may get clogged with leaves and other objects reducing the unit performance and supply air delivery. Check the supply grille twice per year and clean it as required.

7. Ductwork system inspection (once in 5 years).

Even regular fulfilling of all the prescribed above maintenance operations may not completely prevent dirt accumulation in the air ducts which reduces the unit capacity. Duct maintenance means regular cleaning or replacement.

FAULT HANDLING

FAULTS AND FAULT HANDLING

Problem	Possible reasons	Fault handling
The fan(s) do(es) no start.	No power supply.	Make sure the power supply line is connected correctly, otherwise troubleshoot a connection error.
	The motor is jammed, the impeller blades are soiled.	Turn the unit off. Troubleshoot the motor jam and the impeller clogging. Clean the blades. Restart the unit.
	Alarm in the system.	For troubleshooting of the control system errors refer to the control panel manual.
Automatic circuit breaker tripping following the unit turning on.	Overcurrent resulted from short circuit in the electric circuit.	Turn the unit off. Contact the Seller.
Low air flow.	Low set fan speed.	Set higher speed.
	The filters and the fans are soiled, the heat exchanger is soiled.	Clean or replace the filters. Clean the fans and the heat exchanger.
	The ventilation system components (air ducts, diffusers, louvre shutters, grilles) are soiled or damaged.	Clean or replace the ventilation system components (air ducts, diffusers, louvre shutters, grilles).
	The air dampers, diffusers or the louvre shutters are closed.	Make sure that the air dampers, diffusers or louvre shutters are fully opened.
Cold supply air.	The extract filter is soiled.	Clean or replace the extract filter.
	The heat exchanger is frozen.	Check the heat exchanger for freezing. Turn the unit off if required and restart it after the freezing danger is no longer imminent.
	Malfunction of the water heater.	Contact the Seller.
Noise, vibration.	The impeller(s) is soiled.	Clean the impeller(s).
	The fan or casing screw connections are too loose.	Tighten the screw connection of the fans or the casing against stop.
	No anti-vibration connectors.	Install anti-vibration connectors.
Water leakage.	The drainage system is soiled, damaged or arranged not correctly.	Clean the drain line. Check the drain line slope angle. Make sure that the U-trap is filled with water and the drain pipes are frost protected.

STORAGE AND TRANSPORTATION RULES

Store the unit in the manufacturer's original packing box in a dry closed ventilated premise with temperature range from +5 °C to + 40°C. Vapours or particles which can cause corrosion or damage the insulation or connection tightness are not allowed in the storage environment. Use hoist machinery for handling and transportation to prevent possible mechanical damages of the unit. Fulfil the requirements for transportation of the specified cargo type. Use any vehicle types for the unit transportation provided that it is protected against mechanical or weather damage. Avoid any mechanical shocks and strokes during handling operations.

MANUFACTURER'S WARRANTY

The manufacturer hereby warrants normal operation of the unit over the period of 24 months from the retail sale date provided the user's observance of the transportation, storage, installation and operation regulations.

Should any malfunctions occur during the unit operation due to manufacturer's fault during the warranty period the user is entitled to elimination of faults by means of warranty repair performed by the manufacturer.

The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the warranty period. The faults are eliminated by means of replacement or repair of the complete unit or the faulty part thereof.

The warranty repair does not include:

- routine maintenance
- unit installation / dismantling
- unit setup

To benefit from warranty repair the user must provide the unit, the user's manual with stamped sale date and the payment document certifying the purchase.

The unit model must comply with the one stated in the user's manual.

Contact the Seller for warranty service.

The manufacturer's warranty does not apply to the following cases:

- user's failure to provide the unit with the entire delivery package as stated in the user's manual or with missing component parts previously dismantled by the user
- mismatch of the unit model and mark with the respective details stated on the unit packing and in the user's manual
- user's failure to ensure timely technical maintenance of the unit
- external damage to the casing (excluding external modifications of the unit as required for its installation) and the internal components of the unit
- alteration of the unit design or engineering changes of the unit
- replacement and use of the unit assemblies, parts and components not approved by the manufacturer
- unit misuse
- user's violation of the unit installation regulations
- user's violation of the unit management regulations
- unit connection to power mains with a voltage different from the one stated in the user's manual
- unit breakdown due to voltage surges in the power mains
- user's discretionary repair of the unit
- unit repair performed by any persons not authorized by the manufacturer
- expiry of the unit warranty period
- user's violation of the established regulations specific to the unit transportation
- user's violation of the unit storage regulations
- wrongful acts against the unit committed by third persons
- unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, or blockade)
- missing seals if provided by the user's manual
- failure to provide the user's manual with the sale date stamp
- missing payment document certifying the unit purchase



FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT.



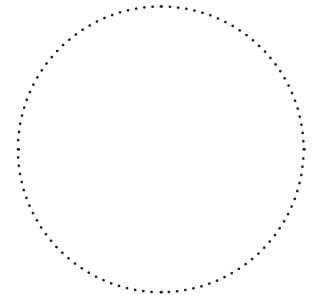
USER'S CLAIMS SHALL BE A SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE SALE DATE STAMP.

ACCEPTANCE CERTIFICATE

Product type	Heat recovery air handling unit
Model	VUT _____ PW EC
Serial number	
Manufacturing date	
We hereby declare that the product complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. This certificate is issued following test carried out on samples of the product referred to above.	
Quality inspector's stamp	

SELLER INFORMATION

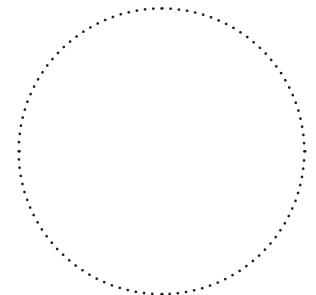
Shop name	
Address	
Phone number	
E-mail	
Sales date	
This is to certify delivery of the complete unit with the user's manual.	
Customer's signature	



Seller's seal

MOUNTING CERTIFICATE

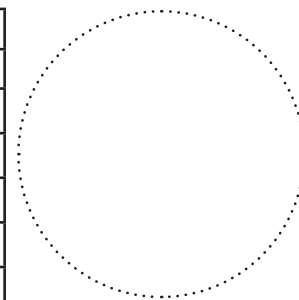
VUT ___ PW EC heat recovery air handling unit has been connected to power mains pursuant to the requirements stated in the present user's manual.	
Company name	
Address	
Phone number	
Installation technician's full name	
Installation date:	Signature:

Installation technician's
company seal

This is to certify that the works specific to the unit installation has been performed in accordance with all the applicable provisions of local and national construction, electrical and technical codes and standards. The unit operates normally as intended by the manufacturer.	
Signature:	

WARRANTY CARD

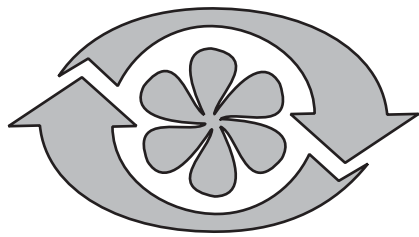
Product type	Heat recovery air handling unit
Model	VUT _____ PW EC
Serial number	
Manufacturing date	
Sales date	
Warranty period	
Sales company	



Seller's seal

Large rectangular area with horizontal lines for notes or additional information.





VENTS