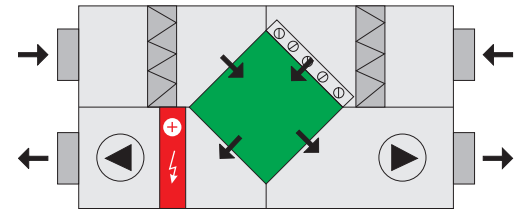


VUT 300 EH EC
VUT 300 WH EC
VUT 400 EH EC
VUT 400 WH EC
VUT 600 EH EC
VUT 600 WH EC



A range of compact heat recovery units equipped with centrifugal fans with EC motors for supply and exhaust air, counter-flow heat exchanger, water (VUT WH) or electric (VUT EH) heater and filters.

VUT EH/WH EC is a complete air handling unit designed to provide supply and exhaust ventilation with air cleaning and heat recovery. The energy from the extract air is used for heating the incoming fresh air. Maximum air flow varies from 300 to 600 m³/h depending on size of the unit.

Models range

VUT 300 EH EC - maximum air flow is 300 m³/h. Electric heater.
Duct connections \varnothing 150 mm.

VUT 300 WH EC - maximum air flow is 300 m³/h. Water heater.
Duct connections \varnothing 150 mm.

VUT 400 EH EC- maximum air flow is 400 m³/h. Electric heater.
Duct connections \varnothing 160 mm.

VUT 400 WH EC- maximum air flow is 400 m³/h. Water heater.
Duct connections \varnothing 160 mm.

VUT 600 EH EC- maximum air flow is 600 m³/h. Electric heater.
Duct connections \varnothing 200 mm.

VUT 600 WH EC- maximum air flow is 600 m³/h. Water heater.
Duct connections \varnothing 200 mm.

Unit Casing

The casing is manufactured from aluminum-zinc compound with 25 mm mineral cotton heat and sound insulation layer.

Filters

The heat recovery unit is supplied with EU 4 exhaust filter and EU 7 intake filter.

Fans with EC motors

Units are equipped with exhaust and supply fans with forward curved blades and energy-saving electronically commutated motors. These motors give up to 50% electric power economy as compared with standard AC motors. Motors have built-in over-heating protection with automatic restart and enable speed regulation from 0 to 100%. Ball-bearings used in motors don't require any service and have at least 40000 hours lifecycle.

Heat recovery section

Counterflow air-to-air heat exchanger block is manufactured from polystyrene. There is no heat recovery but much less pressure drop in the section when the "summer" block is mounted. The unit is equipped with a drain pan for condensed water drainage.

By-pass valve

To prevent icing between plates of the heat exchanger the unit is fitted with a by-pass air valve at air supply side. Normally in winter the valve is closed, but if external temperature falls down below minus 9 °C, the heat recovery unit starts working in defrost mode. In this mode the by-pass shutter is closed for 25 minutes (with full recovery) and then opened for 5 minutes to warm the recovery element up (for these 5 minutes external cold air moves through by-pass shutter while extract air still moves through heat recovery element and warms it up very fast). After that the by-pass shutter closes again for 25 minutes and so on. The unit thus works automatically. Also in "summer mode" when heat recovery is inefficient the valve will open to allow better air circulation.

Heater

If the external temperature is low and heat energy transfer from the extract air is insufficient to heat the incoming air to required temperature, the heater will automatically turn on. A control system regulates the heating power to maintain the indoor temperature set up by user. Unit supplied with water heaters are marked as VUT WH, and units with electrical heaters are marked as VUT EH.

Control system

Units are equipped with the control panel

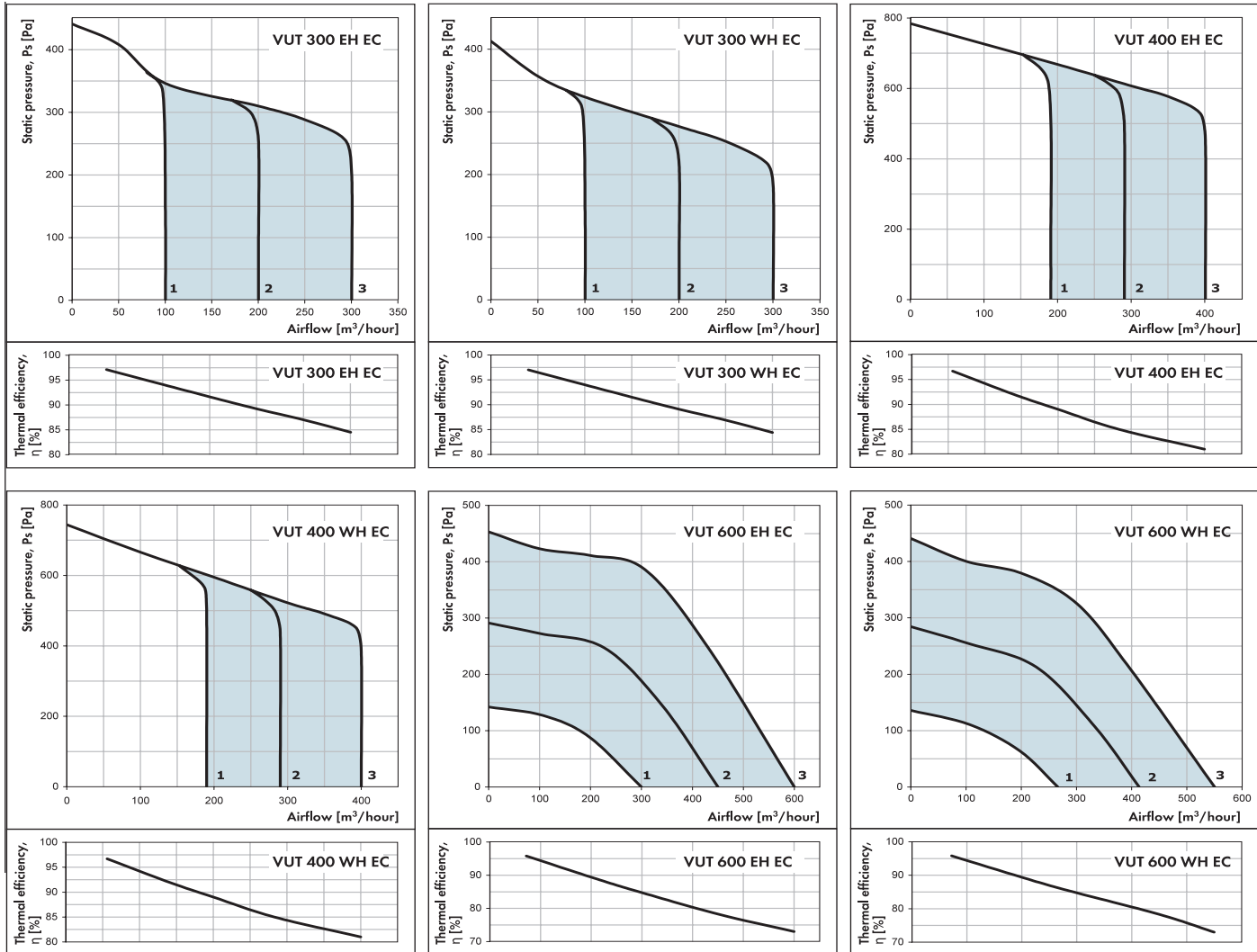
A control system provides the following main functions:

- safe starting and stopping operation;
- maintaining temperature and motors speed set up by user;
- daily and weekly timer programmed by user;
- preventing electric heater from overheating (VUT EH) or water heater from freezing (VUT WH);
- working together with air shutter actuators in ventilation system (if connected);

Mounting

The unit is developed for indoor installation on the floor, on the wall or under the ceiling in position which provides correct condensation water drainage. Space for service access should be reserved at the side of the inspection door.

Thermal efficiency and air flow diagrams



	VUT 300 EH EC	VUT 300 WH EC	VUT 400 EH EC	VUT 400 WH EC	VUT 600 EH EC	VUT 600 WH EC
Phase - Voltage/Frequency [V] / 50 Hz	1 - 230		1 - 230		1 - 230	
Power, motors [W]	2 x 70		2 x 175		2 x 175	
Current, motors [A]	2 x 0,60		2 x 1,3		2 x 1,3	
Power, heater battery [kW]	2,0	-	3,0	-	3,0	-
Current, heater battery [A]	8,7	-	13,0	-	13,0	-
Nuber of electric/water battery rows	1	2	1	2	1	2
Power maximum, total [kW]	2,14	0,14	3,35	0,35	3,35	0,35
Current, total [A]	9,9	1,2	15,6	2,6	15,6	2,6
Airflow max [m³/hour]	300		400		600	550
R.p.m [min-1]	1380		1340		2150	
Sound pressure level at 3m, dB(A)	24-45		28-47		28-47	
Ambient temperature [°C]	-25 till +60		-25 till +60		-25 till +60	
Casing material	alu-zinc		alu-zinc		alu-zinc	
Insulation	25 mm mineral cotton		25 mm mineral cotton		25 mm mineral cotton	
Filter:						
exhaust	G4		G4		G4	
supply	F7 (EU7)		F7 (EU7)		F7 (EU7)	
Overall size:						
length [mm]	1090		1090		1090	
width [mm]	500		500		500	
heidht [mm]	550		550		550	
Duct connection Ø [mm]	Ø160		Ø200		Ø200	
Weight [kg]	38	40	38	40	38	40
Thermal efficiency	up to 95%		up to 95%		up to 95%	
Heat exchanger type	counterflow		counterflow		counterflow	
Heat exchanger material	polystyrene		polystyrene		polystyrene	