KOMFORT LE

Heat recovery air handling units

Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- Heat recovery minimises ventilation heat losses.
- Control of air exchange for creating comfortable indoor microclimate.
- Compatible with round ∅ 125 to 315 mm air ducts.

Air flow:
up to 2200 m³/h
611 l/s

Heat recovery efficiency:
up to 88 %

ErP 2016

Design

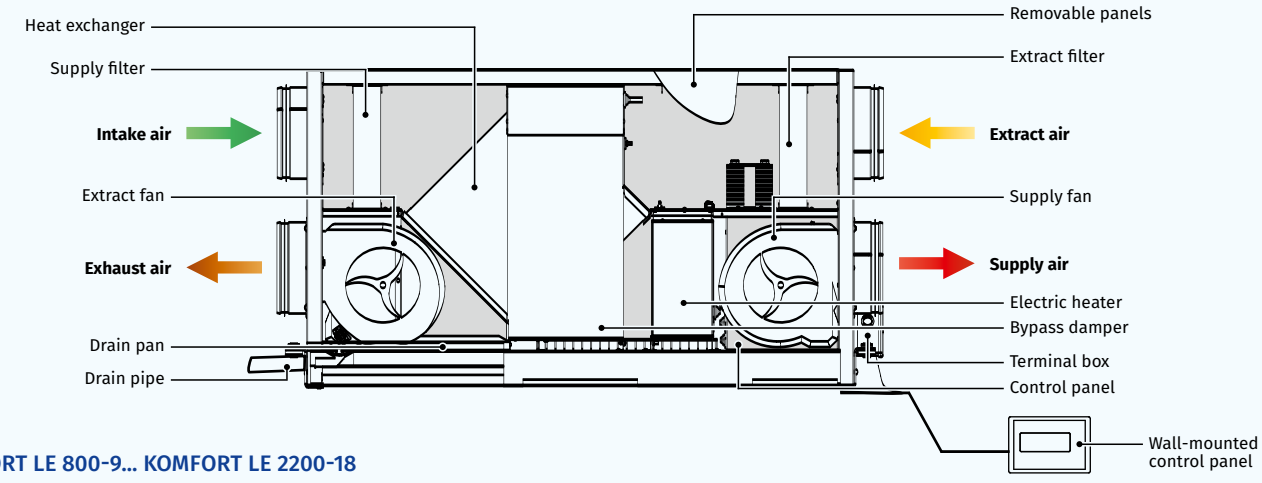
- The casing is made of double-skinned aluzinc panels, internally filled with 25 mm mineral wool layer for heat and sound insulation.
- The casing has fixing brackets with vibration absorbing connectors for easy installation.
- The spigots for connection to the air ducts are located at the side of the unit and are rubber sealed for airtight connection to the air ducts.
- The hinged casing side panels ensure easy access to the internals for cleaning, filter replacement and other maintenance operations.

Fans

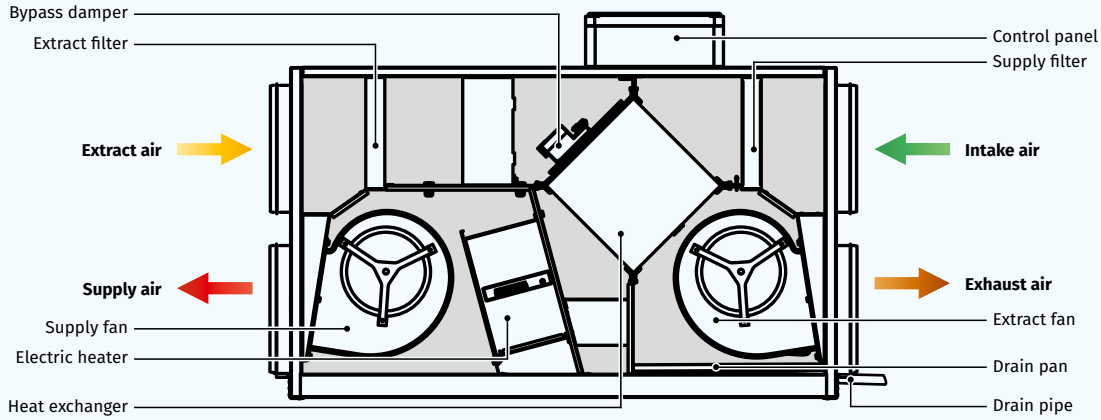
- Asynchronous external rotor motors and centrifugal double-intake impellers with forward curved blades are used for air supply and exhaust.
- Integrated motor overheating protection with automatic restart.
- Dynamically balanced impellers.
- Equipped with ball bearings for longer service life.
- Reliable and quiet operation.

HEAT RECOVERY AIR HANDLING UNITS

KOMFORT LE 350-3... KOMFORT LE 600-4



KOMFORT LE 800-9... KOMFORT LE 2200-18



Heat recovery

- The unit is equipped with a plate cross-flow polystyrene heat exchanger for heat recovery. The unit condensate is collected and drained to the drain pan under the heat exchanger.

- The air flows are completely separated in the heat exchanger. Thus smells and contaminants are not transferred from the extract air to the supply air.
- Heat recovery is based on heat and/or humidity transfer through the heat exchanger plates. In the cold season supply air is heated in the heat exchanger by transferring the heat energy of warm and humid extract air to the cold fresh air. Heat recovery minimizes ventilation heat losses and heating costs respectively.
- In the warm season the heat exchanger performs reverse and intake air is cooled in the heat exchanger by the cool extract air. That reduces operation load on air conditioners and saves electricity.
- When the indoor and outdoor temperature difference is insignificant, heat recovery is not reasonable. In this case the heat exchanger can be temporary replaced with a summer block for the warm season (available as a specially ordered accessory).

FREEZE PROTECTION

- The electronic protection system based on bypass and heater is used for freezing protection of the unit in cold seasons. The bypass damper is opened and the heater is turned on automatically according to temperature sensor readings. Cold intake air passes by the heat exchanger and is warmed up to set temperature in the heat exchanger. Synchronously extract air that passes by the heat exchanger is used for its defrosting. After a freezing danger is over the bypass damper is closed, the heater is turned off. The heat exchanger reverts to the normal operation mode.

Air heater

- The unit is equipped with an electric heater for operation during cold seasons at low outside temperature.
- The integrated electric heater is activated to warm up supply air flow if set indoor air temperature may not be reached by means of heat recovery only.
- Smooth heat output control ensures automatic supply air temperature maintaining.
- Two integrated overheat protection thermostats, one actuated at +60 °C with automatic restart and the other one actuated at +90 °C with manual restart.

Air filtration

- The built-in G4 supply filter and G4 extract filter provide air filtration.

Control and automation

- The unit incorporates an integrated control system with a wall-mounted control panel and LCD display.
- The standard delivery set includes a 10 m cable for connection of the unit and the control panel.
- **Control panel functions:**
  - Switching on/off.
  - Three-speed fan selection, selecting heating/cooling modes (if connected to duct heater).
  - Temperature display.
- **Automation functions:**
  - Maintaining supply air temperature set from the control panel by controlling the circulation pump and actuating the heat medium regulating valve; input from the heat medium flow switch (pump alarm);
  - Safe start-up/ shutdown of the fans, warming up of the water heater before start-up; return heat medium temperature control when the fan is off.
  - Freezing protection of the water heating coils by the exhaust temperature sensor and the return heat medium temperature sensor.
  - Control of the compressor and condensing unit of the water cooler by the room temperature sensor (for the models equipped with a duct air cooler);
  - Actuating the external air dampers with a return spring
  - Unit operation according to week schedule (set at the system setup).
  - Unit shut down at signal from the fire alarm system.
  - Smooth bypass damper control in the bypassing mode to prevent the heat exchanger freezing.

Mounting

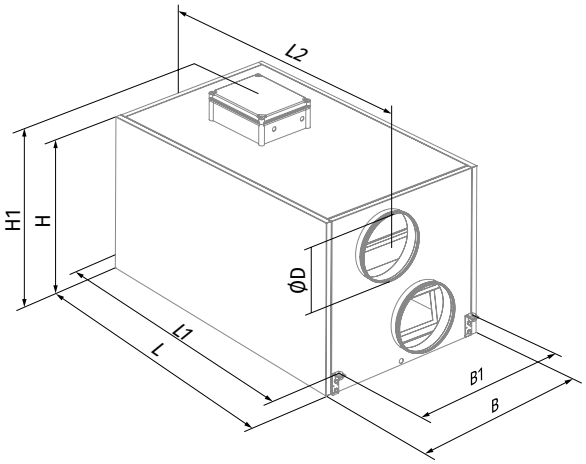
- Mounting to floor, ceiling or wall with fixing brackets.
- The correct mounted unit must provide condensate collecting and drainage and free access to the hinged side panel for servicing and filter replacement.

Designation key

Series	Spigot modification	Heater type	Rated air flow [m³/h]		Heater power [kW]
KOMFORT	**L:** horizontal spigot orientation	**E:** electric heater	**350; 500; 530; 600; 800; 1200; 1700; 2200**	–	**3; 4; 9; 18**

Overall dimensions [mm]

Model	∅ D	B	B1	H	H1	L	L1	L2
KOMFORT LE 350-3	124	497	403	554	–	954	996	1057
KOMFORT LE 500-3	149	497	403	554	–	954	996	1057
KOMFORT LE 530-4	159	497	403	554	–	954	996	1057
KOMFORT LE 600-4	199	497	403	554	–	954	996	1057
KOMFORT LE 800-9	249	613	460	698	832	1071	1117	1176
KOMFORT LE 1200-9	249	613	460	698	832	1071	1117	1176
KOMFORT LE 1700-18	314	842	581	814	947	1345	1394	1447
KOMFORT LE 2200-18	314	842	581	814	947	1345	1394	1447

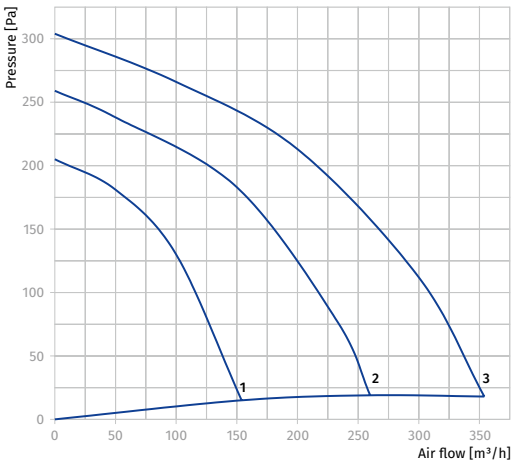


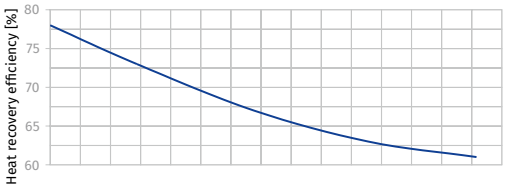
Technical data

Parameters	KOMFORT LE 350-3	KOMFORT LE 500-3
Voltage [V / 50 (60) Hz]	1 ~ 230	1 ~ 230
Power [W]	3260	3300
Heater power [W]	3000	3000
Power without heater [W]	260	300
Current [A]	14.2	14.32
Electric heater current [A]	13	13
Current without heater [A]	1.2	1.32
Maximum air flow [m³/h (l/s)]	350 (97)	500 (139)
RPM [min⁻¹]	1150	1100
Sound pressure level at 3 m [dBA]	24–45	24–47
Transported air temperature [°C]	-25...+40	-25...+40
Casing material	aluzinc	aluzinc
Insulation	25 mm mineral wool	25 mm mineral wool
Extract filter	G4	G4
Supply filter	G4	G4
Connected air duct diameter [mm]	125	150
Weight [kg]	45	49
Heat recovery efficiency [%]*	up to 78	up to 88
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	polystyrene	polystyrene
SEC class	E	E
ErP	2016	2016

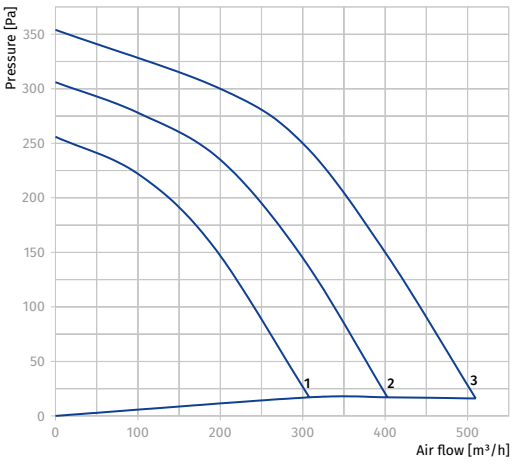
*Heat recovery efficiency is specified in compliance with the EN308 EU norms.

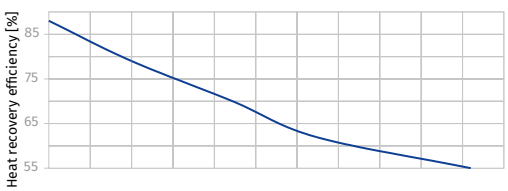
KOMFORT LE 350-3





KOMFORT LE 500-3

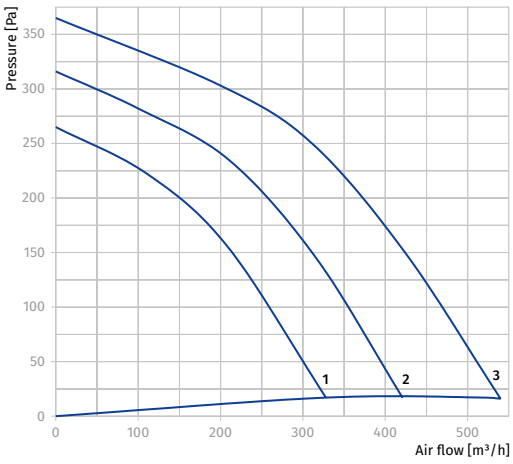


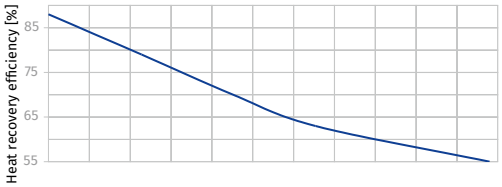


Parameters	KOMFORT LE 530-4	KOMFORT LE 600-4
Voltage [V / 50 (60) Hz]	1 ~ 230	1 ~ 230
Power [W]	4300	4390
Heater power [W]	4000	4000
Power without heater [W]	300	390
Current [A]	18.72	19.1
Electric heater current [A]	17.4	17.4
Current without heater [A]	1.32	1.72
Maximum air flow [m³/h (l/s)]	530 (147)	600 (167)
RPM [min⁻¹]	1100	1350
Sound pressure level at 3 m [dBA]	28–47	32–48
Transported air temperature [°C]	-25...+40	-25...+40
Casing material	aluzinc	aluzinc
Insulation	25 mm mineral wool	25 mm mineral wool
Extract filter	G4	G4
Supply filter	G4	G4
Connected air duct diameter [mm]	160	200
Weight [kg]	49	54
Heat recovery efficiency [%]*	up to 88	up to 85
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	polystyrene	polystyrene
SEC class	E	E
ErP	2016	2016

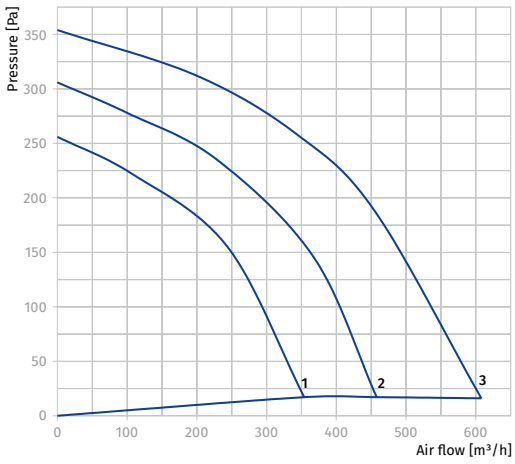
*Heat recovery efficiency is specified in compliance with the EN308 EU norms.

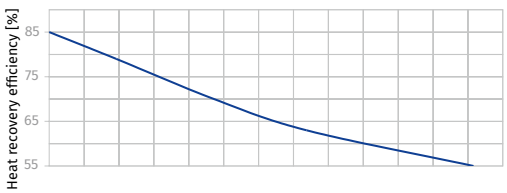
KOMFORT LE 530-4





KOMFORT LE 600-4

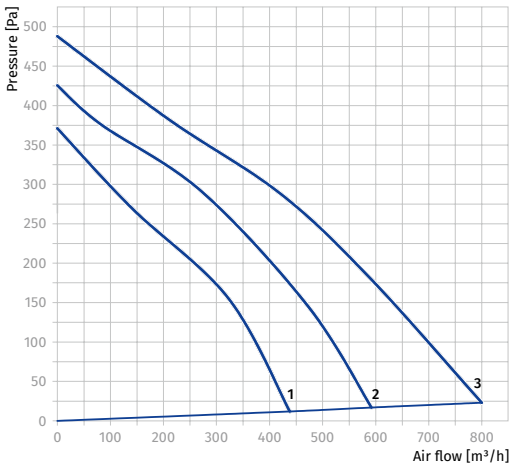


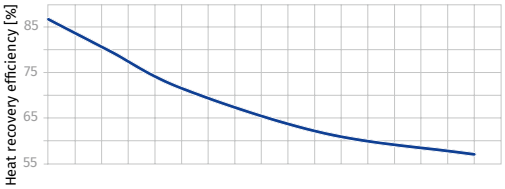


Parameters	KOMFORT LE 800-9	KOMFORT LE 1200-9
Voltage [V / 50 (60) Hz]	3 ~400	3 ~400
Power [W]	9490	9800
Heater power [W]	9000	9000
Power without heater [W]	490	800
Current [A]	15.16	16.6
Electric heater current [A]	13.0	13.0
Current without heater [A]	2.16	3.6
Maximum air flow [m³/h (l/s)]	800 (222)	1200 (333)
RPM [min⁻¹]	1650	1850
Sound pressure level at 3 m [dBA]	48	60
Transported air temperature [°C]	-25...+40	-25...+40
Casing material	aluzinc	aluzinc
Insulation	25 mm mineral wool	25 mm mineral wool
Extract filter	G4	G4
Supply filter	G4	G4
Connected air duct diameter [mm]	250	250
Weight [kg]	85	85
Heat recovery efficiency [%]*	up to 78	up to 78
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	polystyrene	polystyrene
SEC class	E	NRVU**
ErP	2016	–

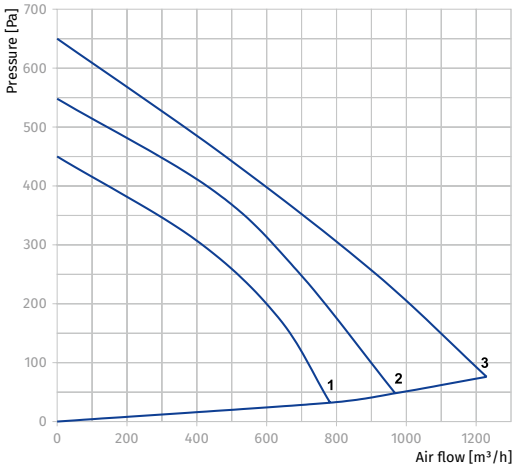
*Heat recovery efficiency is specified in compliance with the EN308 EU norms.
**Nonresidential Ventilation Unit.

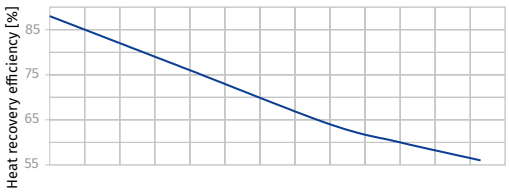
KOMFORT LE 800-9





KOMFORT LE 1200-9

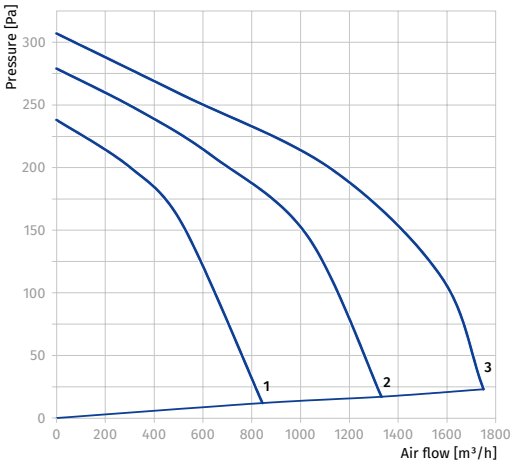


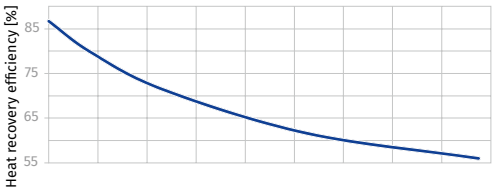


Parameters	KOMFORT LE 1700-18	KOMFORT LE 2200-18
Voltage [V / 50 (60) Hz]	3 ~ 400	3 ~ 400
Power [W]	18980	19300
Heater power [W]	18000	18000
Power without heater [W]	980	1300
Current [A]	30.3	31.7
Electric heater current [A]	26	26
Current without heater [A]	4.3	5.7
Maximum air flow [m³/h (l/s)]	1750 (486)	2200 (611)
RPM [min⁻¹]	1100	1150
Sound pressure level at 3 m [dBA]	49	65
Transported air temperature [°C]	-25...+40	-25...+40
Casing material	aluzinc	aluzinc
Insulation	25 mm mineral wool	25 mm mineral wool
Extract filter	G4	G4
Supply filter	G4	G4
Connected air duct diameter [mm]	315	315
Weight [kg]	96	96
Heat recovery efficiency [%]*	up to 77	up to 77
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	polystyrene	polystyrene
SEC class	NRVU**	NRVU**
ErP	–	–

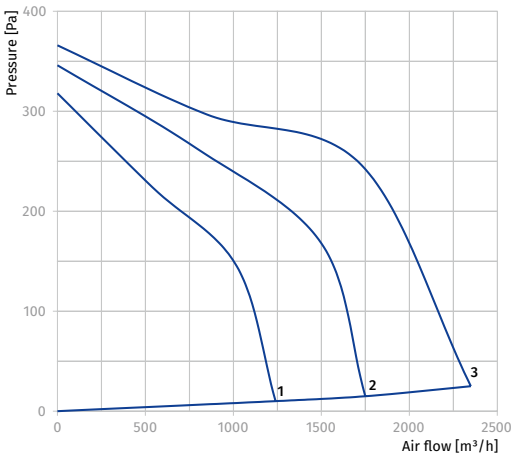
*Heat recovery efficiency is specified in compliance with the EN308 EU norms.
**Nonresidential Ventilation Unit.

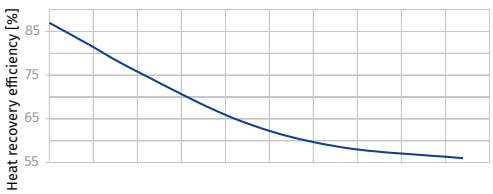
KOMFORT LE 1700-18





KOMFORT LE 2200-18





Accessories

		KOMFORT LE 350-3	KOMFORT LE 500-3	KOMFORT LE 530-4	KOMFORT LE 600-4
G4 panel filter		FP 438x215x48 G4	FP 438x215x48 G4	FP 438x215x48 G4	FP 438x215x48 G4
Silencer		SD 125	SD 150	SD 160	SD 200
Silencer		SDF 125	SDF 150	SDF 160	SDF 200
Backdraft air damper		VRV 125	VRV 150	VRV 160	VRV 200
Air damper		VK 125	VK 150	VK 160	VK 200
Summer block		SB C4 300/300	SB C4 300/300	SB C4 300/300	SB C4 300/300

		KOMFORT LE 800-9	KOMFORT LE 1200-9	KOMFORT LE 1700-18	KOMFORT LE 2200-18
G4 panel filter		FP 550x253x48 G4	FP 550x253x48 G4	FP 780x273x48 G4	FP 780x273x48 G4
Silencer		SD 250	SD 250	SD 315	SD 315
Silencer		SDF 250	SDF 250	SDF 315	SDF 315
Backdraft air damper		VRV 250	VRV 250	VRV 315	VRV 315
Air damper		VK 250	VK 250	VK 315	VK 315
Summer block		SB C4 300/384	SB C4 300/384	SB C4 300/300 (2 pcs.)	SB C4 300/300 (2 pcs.)