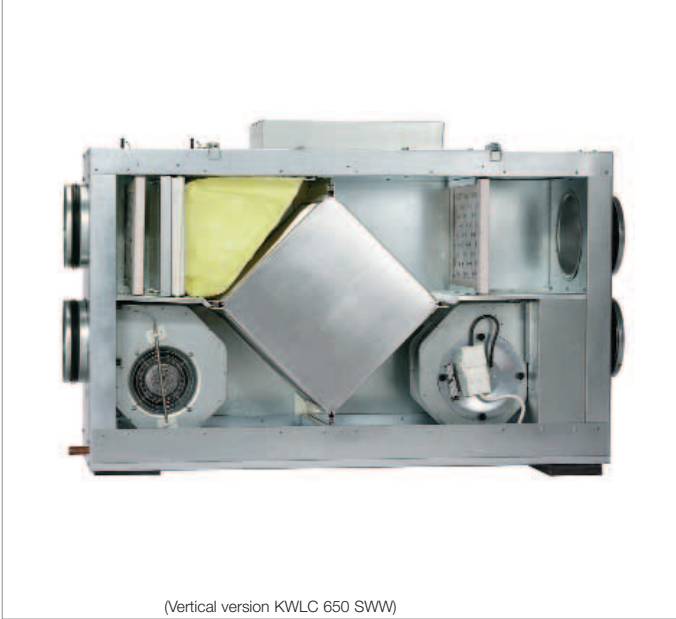


KWLC 650



(Vertical version KWLC 650 SWW)

Units for universal installation for ventilation with heat recovery. KWLC 650 for vertical or horizontal installation.

Suitable as central unit for controlled ventilation of residential buildings and low-energy houses. Also suitable as central or decentral solution for commercial and industrial applications for room sizes up to 445 m².

The units are according to EN 60 335-1 including supplement No. A 51.

Special characteristic

- Easy installation.
Both side panels are removable without tools. Unit can be positioned to give right or left hand installation.
- Easy servicing.
Free access to all parts. Perfect for cleaning, filter change and service
- Easy listening.
Double skinned casing for excellent heat and noise insulation.

Specification

- Casing**
 - Made from galvanised steel. Double skinned with 50 mm thick heat and noise insulating mineral wool.
 - Side panels are easily removable without tools by opening the clamps. This allows free access to all parts. Perfect for cleaning, filter change and service.
 - Anti vibration feet supplied with a drop towards condensation spigot, for vertical units.

Heat exchanger

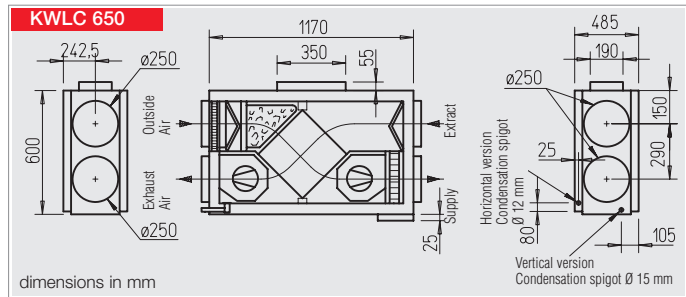
With a large surface the exchanger provides an exceptionally high efficiency. Made from aluminium to ensure a durable high quality. Easy to remove for cleaning.

Air flow

Two silent and energy saving centrifugal fans move the supply air and extract air. They are free of maintenance and easy to clean.

Filters

- Supplied as standard: Clean intake air by two filters. The intake air is filtered by a pre-filter EU3 and pollen filter EU5 before entering the heat recovery section. The extract filter (EU3) cleans the air before the heat exchanger. A finer pollen filter class EU7 is available (accessory).
- All filters can be easily removed for cleaning and exchange.



Frost protection/pre-heating

An electric pre heater prevents the heat exchanger from icing up.

Speed control – KWLC 650..

- The three-speed controller is supplied in the package. One of five speeds can be selected as medium speed (as per the required capacity, see performance curve).
- The controller includes two push switches with the following functions:
 - Control of the ventilation power: “min., medium, max.”
 - On/off switch of the electric heater. The settings are displayed with 6 LEDs: 3 ventilation steps, heater/exchanger “auto/off” and heater/exchanger “active”, “failure” (red).
- The controller comes with 12 mtrs. of cable and can be installed surface or flush mounted.
- Combined with the differential pressure switch, the condition of the filter is displayed with the red LED (accessory).

Type DDS Ref. No. 0445

- The controller can be combined with a seven day clock timer WSU for automatic operation (accessory).

Type KWL-WSU No. 0856

Heater battery

Supply air can be warmed up with a heater battery:

- Electric heater battery (types ..EH) to be controlled by built-in adjustable thermostat.
- Hot water heater battery (types ..WW) controlled by built-in adjustable thermostat with control strategy for motorised valve (by others).

Summer operation

To supply cool outside air in warmer periods the KWLC 650 unit is equipped with a summer kit (for self assembly) as standard. Simple exchange for heat exchanger.

Electrical connection

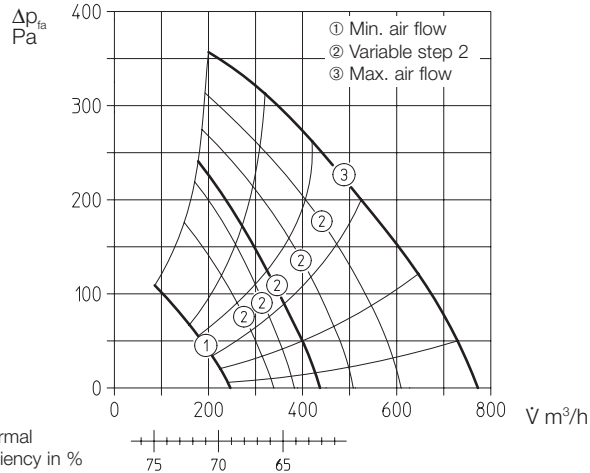
Large terminal box with easy access on the upper side of the casing.

Condensation connection

Condensation spigot at the bottom of a front side. To be connected to the drainpipe on site.

KWLC 650

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	55	46	50	48	48	47	43	36
L _{WA} Supply Air	dB(A)	68	53	59	57	60	65	61	56
L _{PA} Case breakout	dB(A)	50	39	44	46	44	42	35	28



■ Accessory

Clock timer (for KWLC 650..)

Digital clock timer with LCD and factory-set time. Programmable for all weekdays.



Type KWL-WSU Ref. No.. 0856
 dim. mm W 85 x H 85 x D 52

Technical data

	KWLC 650 with electric heater battery			with hot water heater battery (LPHW)		
	Type	Ref. No.	Type	Ref. No.	Type	Ref. No.
For vertical installation	KWLC 650 SEH	0176	KWLC 650 SWW	0167		
For horizontal installation	KWLC 650 LEH	0178	KWLC 650 LWW	0170		
Air flow volume on speed step*	③	②	①	③	②	①
Supply/Extract Air V m ³ /h approx	650	450	240	650	450	240
Sound levels in dB(A)*						
Supply L _{WA} (sound power level)	68	61	45	68	61	45
Extract L _{WA} (sound power level)	55	48	38	55	48	38
case breakout L _{PA} in 1 m	50	44	35	50	44	35
power fan 2 x W*	200	115	75	200	115	75
Voltage/Frequency	230 V ~, 50 Hz			230 V ~, 50 Hz		
Nominal power max. Amps	- fan 2.5			2.5		
- pre heater/heater battery	4.3/8.7			4.3/—		
- max. total	15.5			6.8		
Thermal efficiency	see performance curve			see performance curve		
Heat power/heater battery kW	2			4 ¹⁾		
Electric pre-heater kW	1			1		
Electric supply	NYM-J 3 x 2.5 mm ²			NYM-J 3 x 1.5 mm ²		
Wiring diagram No.	833			833		
- With remote switch	—			—		
- With remote type AFS	—			—		
- Principle wiring	—			—		
Temperature operation range	-20 °C to +40 °C			-20 °C to +40 °C		
Connection of PWW heater battery	—			ø 12		
Weight in kg	72			72		

* Figures relate to the three performances with the thick lines, achieved either through a stepped controller or the time clock WSU

¹⁾ At supply air temperature (before heater) of 0 and water temperature of 60 °C.