Wall installation unit with heat recovery for single rooms, with air flow rates up to approx. 45 m³/h

KWL EC 45-160



Efficiency class

A+ KWL EC 45-160 with additional room sensor

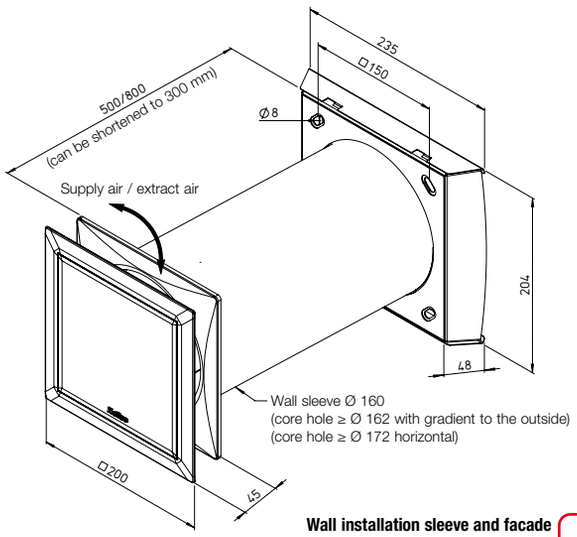
A KWL EC 45-160

BEST OF SHK AWARD

PLUS X AWARD® 2016 achieved for: High Quality, Functionality, Ecology

EC

Dimensions KWL EC 45-160



Dimensions in mm

Wall installation sleeve and facade panel essential for unit installation.

KWL EC 45-160 belongs to the category of switching ventilation units with heat recovery.
It is intended for installation in the external building wall.
The passage of air is from the outside of the wall through a stainless steel panel. A closable plastic panel on the inner side of the wall, which has integrated sound insulation and a fibre fleece air filter (class ISO Coarse 50 % (G3)), is used for this purpose.
The KWL EC 45-160 has an EC axial fan which operates in reversing cycles. In this respect, the supply air phases, where the intake air flows into the building, continuously alternate with the extract air phases, which are characterised by the extraction of indoor air from the building.

The heat recovery is regenerative using a ceramic heat exchanger. During extract air operation, this absorbs heat from the indoor air (storage charge) to transfer it to the incoming intake air (storage discharge) in the subsequent supply air cycle. Heat recovery efficiency up to 88 %.
There is an insect screen on the outside of the ceramic heat exchanger in order to protect against course dirt.
In order to maintain balanced ventilation operation, at least 2 units are required for a residential unit, which operate out of phase in terms of operating phases (supply air/extract air). Depending on the total air requirement of the residential unit, more than 2 units are normally installed, whose individual volume flows are automatically coordinated using the central control unit.

Highlights KWL EC 45-160

- ☐ Economical, quiet EC axial fan.
- ☐ Elegant and timeless design.
- ☐ Tool-free, simple installation and dismantling of components.
- ☐ Integrated sound insulation.
- ☐ Integrated ISO Coarse 50 % (G3) air filter, easily accessible and changeable without tools.
- ☐ Simple, intuitive operation via two keys.
- ☐ LED display for operating mode and current ventilation level.
- ☐ Up to 8 controllable units.
- ☐ 5 ventilation levels: 14, 24, 32, 37, 45 m³/h.
- ☐ 4 operating modes: Heat recovery (= reversing operation), cross ventilation and supply air/extract air mode.
- ☐ Possibility of external activation from standby, cross ventilation, supply air mode or party mode (maximum ventilation level) by evaluating an external, potential-free contact.
- ☐ Intelligent integration of e.g. demand-controlled extract air fans via an extension module (accessories).
- ☐ Filter change indicator.
- ☐ Configuration via laptop/PC possible.

Control

The central control unit with control element enables the controlling of up to 8 units.
5 ventilation levels and 4 operating modes can be set on the control element:
Heat recovery (= reversing operation), cross ventilation and supply air/extract air mode.
The user is reminded to replace the filter by flashing LEDs on the control element after a preset time period.

GUI user interface

It is possible to connect the control element to a PC or laptop via the USB interface with Helios software.
This makes it easy and convenient to access the control settings.

- ☐ Thus, the commissioning and entry of required values (e.g. filter replacement interval or minimum ventilation level) within a very short time.
All specified setting options can be changed quickly via the programme interface with the user-friendly assistance of appropriate help texts.

- ☐ The configuration settings can be stored directly on the PC or laptop and reloaded into the control system, if required. This makes installation in larger buildings particularly straightforward. If several identical ventilation systems are installed, the required configuration is carried out once for a ventilation system and it can then be transferred to any number of control elements. Controller and software can be secured with a PIN.

Replacement air filter

– 2 pcs. ISO Coarse 50 % (G3)
ELF-KWL 45-160/3/3 No. 09366

Sound insulation element

Sound insulation element for use in the soffit channel, fire protection class B1.
KWL 45 SEL No. 04170

Sound insulation element for use in the wall sleeve, fire protection class B1.
KWL 45-160 SE No. 09362

Technical data

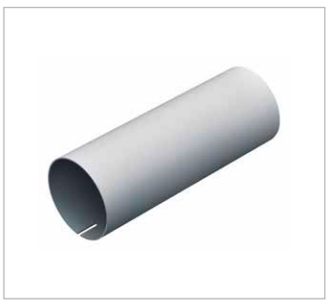
Unit[1]	**KWL EC 45-160**[1]				Ref. no. 09361
Flow rate at level supply air/extract air $\dot{V}$ m³/h	❺ 45	❹ 37	❸ 32	❷ 24	❶ 14
Sound pressure L_{PA} dB(A) at 3 m	34	29	27	21	14
Sound power L_{WA}	52	47	45	39	32
Standard sound level diff. $D_{n,e,w}$ dB[2]	Facade panel 44 / Soffit				
Power consumption W	4.5	3.4	2.8	2.1	1.6
Heat recovery efficiency	up to 88 %				
Operating voltage mains adapter	Input 230 V~, 50/60 Hz / Output 12 V⎓				
Rated current mA	42	32	27	21	17
El. supply line mains adapter[3]	NYM-O 2 x 1.5 mm²				
El. supply line power supply control[3]	NYM-O 2 x 1.5 mm²				
El. supply line to fan[4]	J-Y (ST) Y 3 x 0.8 mm				
Protection class III, protection cat.	IP20				
Wiring diagram no.	1091 / 1093				
Temperature operating range	– 12 °C to + 40 °C				
Weight (unit+inner panel) approx. kg	2.8				

[1] The required wall installation sleeve and facade panel must be ordered separately.
[2] Test value. [3] Use of NYM-J 3 x 1.5 mm² is permitted. [4] Use of J-Y (ST) Y 2 x 2 x 0.8 mm is permitted.

Unit with inner panel
KWL 45-160 No. 09361
Consists of design inner panel with filter, ceramic heat exchanger, flow straightener, insect screen, EC axial fan with protection grille, removal tool (cord) and EPP half shell base.



Wall installation sleeve
Length 500 mm
KWL 45-160 WH No. 09319
Length 800 mm
KWL 45-160 WH-L No. 09320
Ø 160 mm, plastic, incl. condensate wedge and 2 covers.



Facade panel
Made of stainless steel
KWL 45-160 FB-E No. 09321
With additional coating
KWL 45-160 FB-B No. 09322
For use in environments with severe air pollution or high salt concentration in the air (near the coast).
With white coating
KWL 45-160 FB-W No. 09323



Facade panel DEEP
Made of stainless steel
KWL 45-160 FBT-E No. 09324
For installation in external wall thicknesses from 250 – 300 mm.
With additional coating
KWL 45-160 FBT-B No. 09326
For use in environments with severe air pollution or high salt concentration in the air (near the coast).
With white coating
KWL 45-160 FBT-W No. 09340



Control set UP
KWL 45 STS-UP No. 03006
Consists of control element KWL 45 BEU and switching power supply KWL 45 SNU for installation in flush-mounted box. Allows the connection of up to 6 units. In case of more than 6 units, an additional KWL 45 SNU is required. Max. 8 units per control element.



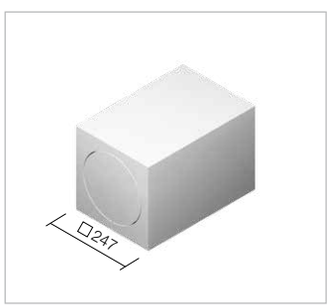
Reference
A flush-mounted box (depth 61 mm) is required for the control element KWL 45 BEU and for each installed switching power supply KWL 45 SNU.
Control element (w/o adapter)
KWL 45 BEU No. 03041

Control set HS
KWL 45 STS-HS No. 03007
Consists of control element KWL 45 BEU and switching power supply KWL 45 SNH for top-hat rail (2 pcs). Allows the connection of up to 4 units. In case of more than 4 units, an additional KWL 45 SNH is required. Max. 8 units per control element.









Switching power supply UP
KWL 45 SNU No. 03008
For extending the control set KWL 45 STS-UP from 6 to 8 units.
Input 230 V AC, 50/60 Hz. output 12 V DC / 1.9 A for flush-mounted installation in insulated wall.
Output voltage according to SELV protection class 3.

Switching power supply HS
KWL 45 SNH No. 03001
For extending the control set KWL 45 STS-HS from 4 to 8 units.
Input 230 V AC, 50/60 Hz.
Output 12 V DC / 1.5 A for installation in distribution box (2 pcs). Output voltage according to SELV protection class 3.

Installation package soffit
KWL 45-160 LE-RP No. 08160
With wall sleeve and plaster protective cover. Made of EPP, fire protection class B1.

Soffit grille
Made of stainless steel
KWL 45 LG No. 04167
External grille with integrated condensate drain and seal.
Dim. mm (H x W) 324 x 74
With additional coating
KWL 45 LG-B No. 04168
For use in environments with severe air pollution or high salt concentration in the air (near the coast).
With white coating
KWL 45 LG-W No. 04169

Insect screen
KWL 45 ISL No. 03004
Made of stainless steel.
For installation package soffit (KWL 45-160 LE-RP).
Suitable for retrofitting.
Dim. mm (H x W) 203 x 48

Installation kit pitched roof
Colour: Black
KWL 45-160 SD-RP-S No. 40731
Colour: Red
KWL 45-160 SD-RP-R No. 40732
Pipe bend element incl. universal roof pan tile and roof hood.

Pipe bend element
KWL 45-160 SD-RS No. 40733
Pipe bend element without universal roof pan tile and roof hood.

Wall stone
Length 365 mm
KWL 45-160 WS No. 09302
Length 490 mm
KWL 45-160 WS-L No. 09306
Installation aid for brickwork. Made of EPS, fire protection class B1. Replaces the otherwise necessary core hole drilling.

Casing for surface installation
KWL-APG* No. 04270

Extension module
KWL 45 EM No. 03012
For the combined operation of an extract air system, e.g. according to DIN 18017-3 with KWL EC 45-160 (combined ventilation). Installation in flush-mounted box.
Dim. mm (WxHxD) 40 x 40 x 29

Room sensor
HY 3 No. 01359
With internal scale
HY 3 SI No. 01360
Electromechanical humidity controller for connection to the external contact of the control element. For surface installation. Function type can be adjusted using Helios software or control element.
Attention: Parallel use with KWL-EM is not possible.

* Hinweis: Nur für die AP-Montage des KWL 45 BEU in Verbindung mit Hutschienennetzteil KWL 45 SNH.