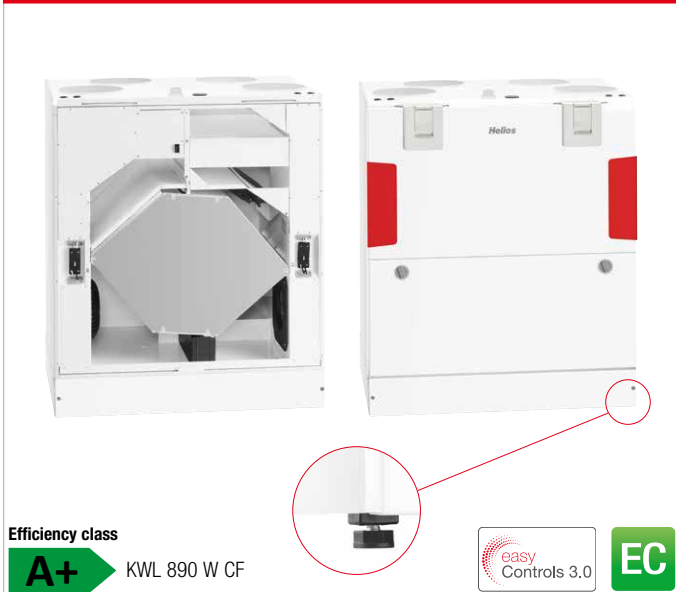


KWL 890 W CF



Efficiency class



KWL 890 W CF



Compact unit with heat recovery for the central supply and extract ventilation of residential buildings, commercial units and practices. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection.

Equipped with energy-efficient EC fans featuring constant airflow or constant speed control, as well as a highly efficient aluminium heat exchanger or, optionally, an enthalpy heat exchanger for additional moisture recovery.

■ Casing

Made of galvanised steel sheet, powder-coated in white, double-walled, with heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removable front panels. Adjustable feet for balancing.

■ Heat exchanger

□ Large cross counterflow heat exchanger made of aluminium, heat recovery efficiency up to 86 %.

□ Type "ET" is equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

■ Fans

Two low-noise, high-performance centrifugal fans with EC motors and constant airflow or constant speed control ensure supply and extract air ventilation.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and

supply air through ducts with NW 250 mm. Direct connection of e.g. Aluflex pipe by means of an external double nipple joint.

■ Condensate connection

Double condensate drain at the bottom; ball siphons included in delivery. On-site connection to drain pipe.

■ Air filter

Clean outdoor air supply via ISO Coarse 75 % (G4) filter and 2nd filter stage ISO ePM₁ 50 % (F7). Extract air side equipped with an ISO Coarse 75 % (G4) filter in front of the heat exchanger. Easy filter maintenance.

■ Summer operation

Equipped with automatic bypass function and heat exchanger cover as standard.

■ Heat exchanger anti-frost protection

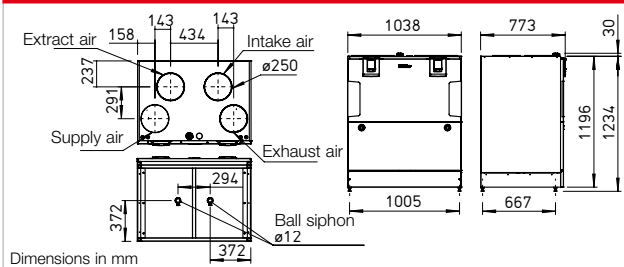
The standard frost monitoring system automatically controls the supply air flow volume and the optionally internal electrical postheater (KWL-ENH 890 W, accessories).

■ Control system

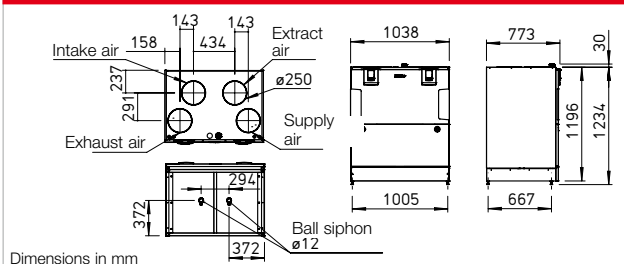
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. Helios easyControls 3.0 is prepared for:

□ The control elements KWL-BE ECO and KWL-BE Touch

Dimensions KWL 890 W R CF



Dimensions KWL 890 W L CF



(optional accessories)

□ The humidity- and CO₂-Sensor integrated as standard

and other optionally available external air quality sensors (KWL-CO₂ eC, -FTF eC, -VOC eC, accessories) enable automatic, demand-controlled ventilation.

□ Connection to building control system via integrated Modbus interface or optional KNX module (KWL-KNX Connect, accessories).

■ Electrical connection

Fixed connection via a mains connection cable 3 x 1.5 mm², approx. 2 m with wire end ferrules.

■ **Accessories – Functional description (see right for details)**
KWL 890 W CF can be individually expanded with the following accessories:

□ Control element ECO

– Three ventilation profiles selectable via slide switch.
– Control voltage can be measured directly on the control element.
– LED for visual indication of operating statuses, e.g. filter replacement and faults.

□ Control element Touch

Touch control element with graphic display and user-friendly menu navigation:
– Commissioning assistant.
– Selection of four ventilation profiles.
– Adjustment of an individual weekly programme.
– Adjustment of parameters for room sensors.
– Indication of e.g. filter replacement, operating statuses and error messages.
– Different access authorisations

and child lock.

– Other functions (see operating instructions).

□ KNX/EIB module

For connecting the ventilation unit to the building control system via the KNX Connect module.

□ Room sensors

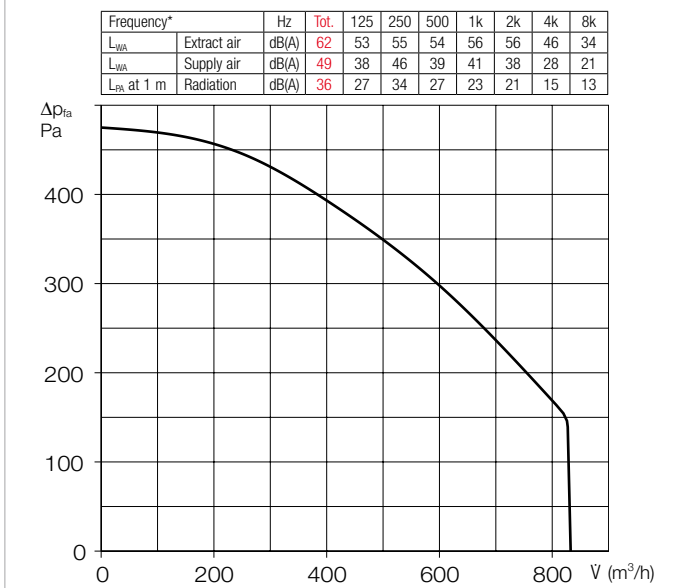
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and demand-oriented air exchange.

□ External post-heating

The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0	
The innovative KWL control concept	112 f.
Moisture recovery through enthalpy heat exchangers	111

Performance curves KWL 890 W CF



*Sound information relates to Vref. according to ErP data sheet.

Slide switch control element

KWL BE ECO Ref. no. 20246

Three-step slide switch including operation indicator, for flush-mounted installation. Function see left.

Dim. mm (W x H x D) 80 x 80 x 37

Casing for surface installation

KWL APG Ref. no. 04270

Dim. mm (W x H x D) 83 x 83 x 41



Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs.

possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dimensions mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

Dim mm (W x H x D) 85 x 85 x 25



Technical data	With aluminium heat exchanger				With enthalpy heat exchanger			
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
	KWL 890 W L CF	40721	KWL 890 W ET L CF	40723				
	KWL 890 W R CF	40722	KWL 890 W ET R CF	40724				
Flow rate at level ¹⁾								
Supply air/extract air V m³/h	810	630	450	270	810	630	450	270
Power consumption fans 2xW ¹⁾	138	84	49	30	121	76	46	29
Voltage/Frequency	1~, 230 V, 50 Hz							
Rated current A – ventilation	1.4							
– postheating	12.1							
– max. total	1.4 (13.6 incl. postheater, accessories)							
Electric postheater kW	3.0 kW (accessories)							
Summer bypass	automatic (adjustable), with heat exchanger cover							
Wiring diagram no.	1433							
Temperature operating range	–20 °C to +40 °C							
Installation temperature	+5 °C to +40 °C (90 % rel. humidity, non-condensing)							
Weight approx. kg	178				174			

¹⁾ At 100 Pa, performance levels adjustable.

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

Control line cables in 5 or 10 meters, suitable for KWL-BE ECO / Touch as well as room sensor.

KNX/EIB module

KNX Connect Ref. no. 40969

For integrating the ventilation unit in a KNX system. For switch cabinet installation (1 space unit required).

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required. Dim. mm (W x H x D) 98 x 98 x 33



Electric postheater, internal

KWL-ENH 890 W No. 40728

Electrical postheater for simple, plug-in unit installation. For postheating the supply air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 3000 W.



Extension module

KWL-EM eC Ref. no. 40155

For controlling external warm water-heating elements.

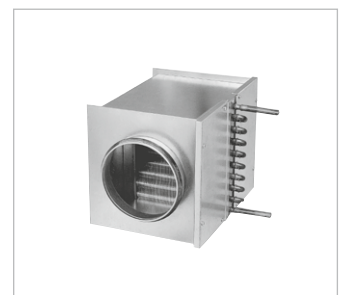
Dim. mm (W x H x D) 210 x 210 x 100



Motion detector

BWM Ref. no. 08323

Motion detector for detecting the presence of persons in the room. Surface-mounted wall installation (cable entry at top or bottom) or installation in flush-mounted box Ø 55 mm (cable entry at back).



Warm water post-heating element

For additional supply air heating.

WHR 250 Ref. no. 09483

Rectangular duct temp. sensor

KWL-LTK eC (2 pc. req.) No. 40156

Hydraulic unit

WHSHE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

Flexible connector

FVR 250 No. 40831

Flexible connector round (uninsulated), with lip seals on both sides, for connection to pipe systems.

Other accessories	Page
KWL peripherals	160 ff.
– Ground heat exchanger	184 ff.
– Insulated duct system	174 f.
– Air distribution systems	176 ff.

Replacement air filters

– Filter Set (G4 + F7)

ELF-KWL 890/4/4/7 No. 40729

Reference

Enthalpy heat exchanger

(accessories) for retrofitting:

KWL-ET 890 No. 40730

Heating element, control	488 ff.
ventilation grilles, ducts,	
roof outlets	132 ff.
extract air elements, design	
ventilation valves	132 ff.