

## KWL EC 370 W



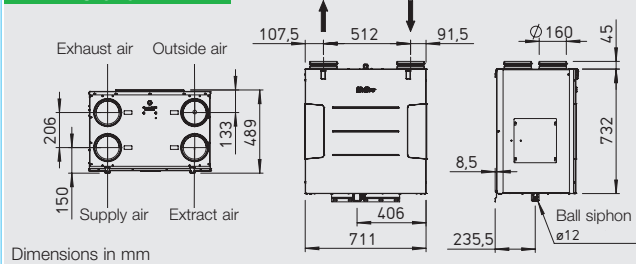
Efficiency class

**A**

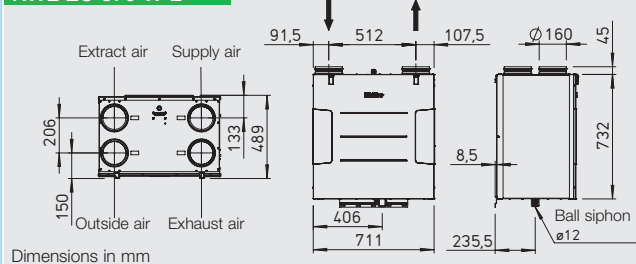
KWL EC 370 W R/L and 370 W ET R/L



## KWL EC 370 W R



## KWL EC 370 W L



Compact unit with heat recovery for central ventilation of houses and apartments. Certified according to passive-house standards. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. Optional with highly efficient polymer- or enthalpy heat exchanger for additional humidity recovery. Energy-saving EC motor with constant air flow regulation.

### ■ Casing

Made from galvanised sheet steel, white powder coated. Interior from high quality expanded polystyrene (EPS) for maximum heat insulation. Easy to install and maintain. The removable front panel allows full accessible.

### ■ Heat exchanger

### ■ Condensation outlet

### ■ Summer operation

See description on page 86.

### ■ Fans

Two silent highly efficient centrifugal fans with energy-saving EC motors and constant flow rate regulation move the supply air and extract air continuously also on change of the pressure in the system. They are maintenance free and easily accessible through the front.

### ■ Ducting

Crossover-free connection of intake-, exhaust-, extract- and supply air ducts with NW 160. Spigots with sealing lips for connection located on top of the unit.

### ■ Air filter

Supply of cleaned outside air using a G4 filter. Superfine pollen filter F7 (always necessary for passive-houses) is also available. Extract air passes through a G4 filter before entering the heat exchanger. A G4 bypass filter is included as standard, optional F7.

### ■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the external pre-heater battery (EHR-R 1,2/160, accessories). It is controlled by the extension module (KWL-EM, accessories). An air filter is to be pre-connected to the pre-heater battery in G4 execution (accessories).

### ■ Helios easyControls

The standard equipment with Helios easyControls allows the simple LAN integration of the KWL-unit into a PC network. The ventilation unit is operated comfortably via the Helios easyControls menu in the web browser, by PC/laptop in the LAN or by Tablet/Smartphone in the WLAN – whether in the home network or on the road via Internet. Functionality, see page 85. EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO<sub>2</sub>, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

### ■ Electrical connection

Fixed connection via a power cord 3 x 1.5 mm<sup>2</sup>, approx. 2 m long with wire end ferrules. Control line for control elements, sensors, ModBus and LAN to be plugged in on the outside of the unit.

### ■ Accessories – functional description (details on right)

KWL EC 370 W is individually expandable with the following accessories:

#### □ Slide switch controller

- Three speed operation via slide switch.
- Three freely definable operating levels within the entire family of performance curves.
- Via the offset function, the extract fan can be operated with ± 20 % difference.
- Control voltage directly at the controller measurable.
- For the realisation of a further operation level, such as night mode, expandable option with clock timer (WSUP/WSUP-S, No. 9990/9577, accessories).
- Light-emitting diode for optical display of the operating conditions, such as filter change, supply air temperature < +5 °C, errors and operation.

#### □ Comfort controller

- Comfort controller with graphic display and user-friendly menu navigation:
- Start-up assistant.
- Selection of speed level (auto/manual, level 1-4).
- Four freely definable operating levels within the entire family of performance curves.
- Setting of weekly program Ventilation/Heating.
- Setting of CO<sub>2</sub>-, VOC- and humidity parameter.
- Display of e.g. filter change,

operating conditions, hours of operation and error messages.

- Lock function.

#### □ KNX/EIB module

Allows the coupling of the ventilation unit with the central building control system via KNX/EIB.

#### □ Room sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO<sub>2</sub>-concentration and the relative humidity.

#### □ Extension module

For the connection of accessories, such as shutters, under-soil heat exchangers for pre-heating of the outdoor air or a heater battery (optional water- or electric heater battery with maximum 2.6 kW, 230 V, 50 Hz).

#### □ Heater battery

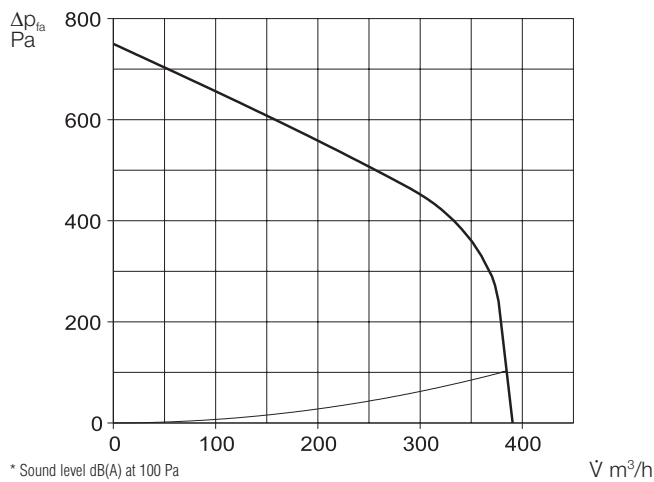
Helios easyControls can regulate via an extension module (KWL-EM, accessories) performance-related an electric (EHR with KWL-LTK, accessories) or water heater battery (WHR with WHSH and KWL-LTK, accessories). Temperature profiles are adjustable in the weekly program. Furthermore is a self-sufficient operation of the water heater battery via an air temperature control system (WHST 300 T38, accessories) possible, regardless of Helios easyControls.

#### ■ Notes

<b>Helios easyControls</b> <b>The innovative KWL®</b> <b>control concept</b>	Page 85
<b>Humidity recovery</b> <b>by enthalpy heat</b> <b>exchanger</b>	Page 84

#### KWL EC 370 W

Frequency*	Hz	total	125	250	500	1k	2k	4k	8k
L <sub>WA</sub> Extract air		dB(A) 56	41	53	52	38	40	33	23
L <sub>WA</sub> Supply air		dB(A) 70	60	64	66	63	64	59	53
L <sub>PA</sub> Case breakout		dB(A) 51	43	44	44	44	43	39	34



#### Slide switch controller

Three speed slide switch incl. operation display, for flush installation. Function see on the left. Control line SL 6/3 (length = 3 m) included in delivery, other lengths (SL 6/..., accessories) available for order.

Dim. mm (W x H x D) 80 x 80 x 37  
**Type KWL-BE** Ref. no. 4265

#### Casing for surface installation

Dim. mm (W x H x D) 83 x 83 x 41  
**Type KWL-APG** Ref. no. 4270



#### Comfort controller

With graphic display, for flush installation. Function see on the left. Up to 8 pcs. can be installed. Control line SL 4/3 (length = 3 m) included in delivery, other lengths (SL 4/..., accessories) available for order.

Dim. mm (W x H x D) 80 x 80 x 37  
**Type KWL-BEC** Ref. no. 4263

#### Casing for surface installation

Dim. mm (W x H x D) 83 x 83 x 41  
**Type KWL-APG** Ref. no. 4270



Technical data	With polymer heat exchanger			With enthalpy heat exchanger		
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
<b>Right-hand version</b>	<b>KWL EC 370 W R</b>	4245	<b>KWL EC 370 W ET R</b>	4246		
<b>Left-hand version</b>	<b>KWL EC 370 W L</b>	4247	<b>KWL EC 370 W ET L</b>	4248		
<b>Air flow volume on step<sup>1)</sup></b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>
Supply/extract air flow vol. $\dot{V}$ m <sup>3</sup> /h	350	200	140	350	200	140
<b>Sound levels dB(A)<sup>2)</sup></b>						
Supply air L <sub>WA</sub> (sound power level)	71	58	52	71	58	52
Extract air L <sub>WA</sub> (sound power level)	56	44	37	56	44	37
Case breakout L <sub>PA</sub> in 1 m	51	41	34	51	41	34
Fan power 2xW <sup>1)</sup>	111	25	14	111	25	14
Standby power consumption	< 1 W					
Voltage/Frequency	1 - 230 V, 50 Hz					
Nom. cur. A - ventilation	2.2					
Summer Bypass	automatic (adjustable)					
Wiring Diagram no.	1044					
Temperature operation range	-20 °C to +40 °C					
Set-up temp.	+5 °C to +40 °C					
Weight approx. kg	52					

<sup>1)</sup> At 0 Pa, speed steps adjustable at will.

<sup>2)</sup> At 100 Pa, sound levels raise with increasing system pressure.

#### KNX/EIB module

Allows the connection of the ventilation unit to a KNX/EIB central building control system. For switchboard installation (1 space unit required).

**Type KWL-KNX** Ref. no. 4275



#### Adapter board

Adapter from ribbon cable to wires or cables. For connection of KNX module and RJ10 control line.

**Type KWL-RJ10 KL** No. 4277

#### Room sensor

Measures CO<sub>2</sub>, mixed gas- (VOC) concentration or relative humidity. Max. of 8 sensors each can be connected, control according to respective highest measured value. Incl. control line SL 4/3 (length = 3 m), other lengths (SL 4/..., accessories) available for order.

Dim. mm (W x H x D) 95 x 97 x 30

**Type KWL-CO<sub>2</sub>** Ref. no. 4272

**Type KWL-FTF** Ref. no. 4273

**Type KWL-VOC** Ref. no. 4274



#### Electric pre-heater battery

Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1200 W. Controllable via extension module (KWL-EM, see below). G4-filter is to pre-connected (LFBR 160 G4).

**EHR-R 1,2/160** Ref. no. 9434

**LFBR 160 G4** Ref. no. 8578



#### Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries. Incl. temperature sensor KWL-LTK and control line KWL-SL 4/3.

Dim. mm (WxHxD) 210x210x100

**Type KWL-EM** Ref. no. 4269



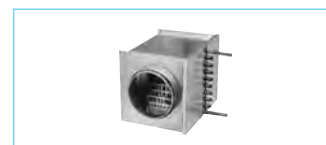
#### Electric heater battery

For additional supply air heating

**EHR-R 2,4/160** Ref. no. 9435

#### Duct temperature sensor

**KWL-LTK** (1 pc. required.) No. 9644



#### Water heater battery

For additional supply air heating.

**Type WHR 160** Ref. no. 9481

#### Duct temperature sensor

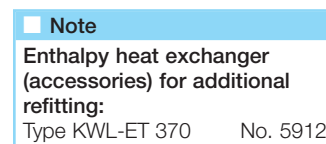
**KWL-LTK** (2 pcs. required.) No. 9644

#### Hydraulic unit

**WHSR HE 24 V (0-10V)** No. 8318

Alternative: **Air temp. control**

**WHST 300 T38** Ref. no. 8817



#### Note

**Enthalpy heat exchanger (accessories) for additional refitting:**

Type KWL-ET 370 No. 5912

#### Replacement air filter

- 2 pcs. G4-Filter

ELF-KWL 370/4/4 No. 9613

- 1 pc. F7-Filter

ELF-KWL 370/7 No. 9614

- 2 pcs. G4-Filter for Bypass

ELF-KWL 370/4/4 BP No. 9617

- 1 pc. F7-Filter for Bypass

ELF-KWL 370/7 BP No. 9618

#### Other accessories Page

KWL® periphery	114 on
- Undersoil heat exch.	118 on
- Insulated duct system	122 on
- Air distribution systems	126 on
- Control lines, a.o.	136 on
Heater battery, -control	426 on
grilles, ducting,	
roof terminations,	487 on
Extract air elements,	
Design valves	500 on