

KWL HBX



Specially designed for ventilation systems in residential buildings and offices, the Helios HygroBox automatically maintains a comfortable level of indoor humidity all year round and helps to create a pleasant indoor climate.

Advantages

- ☐ A comfortable indoor climate with balanced indoor humidity.
- ☐ Reduces damage caused by dryness to furniture, wooden flooring and antiques.
- ☐ Can help alleviate allergy symptoms.
- ☐ Reduces fine dust and electrostatic charges.

Special HygroBox features

- ☐ Constant supply air humidity and temperature in all rooms.
- ☐ The principle of natural evaporation prevents excessive humidification.
- ☐ Hygienically safe due to UVC disinfection.
- ☐ Fully automated operation with automatic summer deactivation.
- ☐ Low-maintenance and easy to install.
- ☐ Low operating costs through the use of evaporation energy from the existing heating system.

Functional principle

The HygroBox is an active humidification unit for integration in new or existing KWL ventilation units with heat recovery. The fresh intake air flows through the KWL unit heat exchanger and absorbs the thermal energy from the extract air. This preheated air is then delivered to the HygroBox, where active and automatic humidification takes place according to the principle of natural evaporation. A bladed rotor rotates continuously in a

water bath inside the unit and releases water molecules into the preheated supply air via the wetted blade surface. Regardless of the KWL unit operating level and external weather influences, the HygroBox constantly maintains the preselected relative air humidity and thus helps to create a pleasant, comfortable environment with balanced indoor humidity.

Delivery

Delivered as a plug-in compact unit including water supply hoses and water filter.

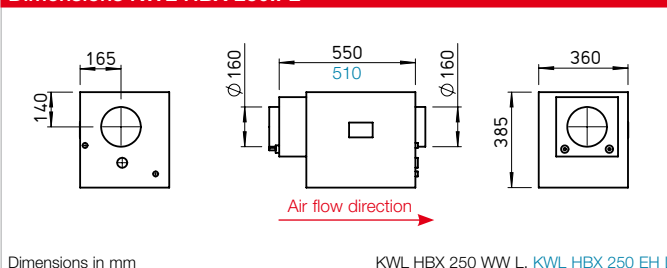
Heating element

- ☐ The HygroBox is equipped with a warm water (WW types) or electric heating element (EH types). This heats the supply air before humidification and thereby guarantees the required evaporation energy and pleasant supply air temperature.
- ☐ With regard to heating systems with low flow temperature (e.g. heat pumps), a low-temperature heating element (type KWL-NHR, accessories, see right page) must be connected downstream of the HygroBox.

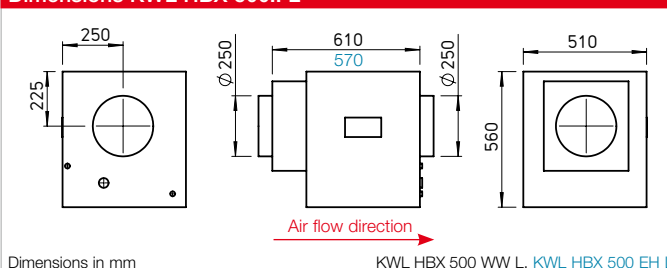
Summer operation

- ☐ The HygroBox automatically switches to standby mode when the moisture content of the intake air is sufficiently high (e.g. in summer). In this state, there is no water in the unit and the rotor remains at a standstill.

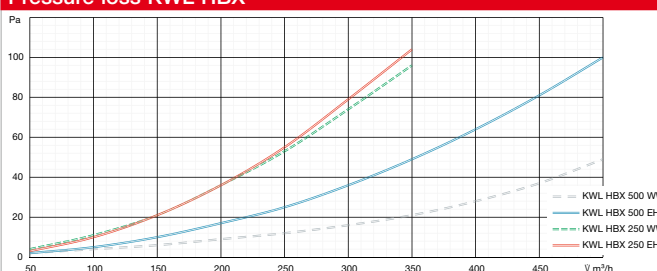
Dimensions KWL HBX 250.. L



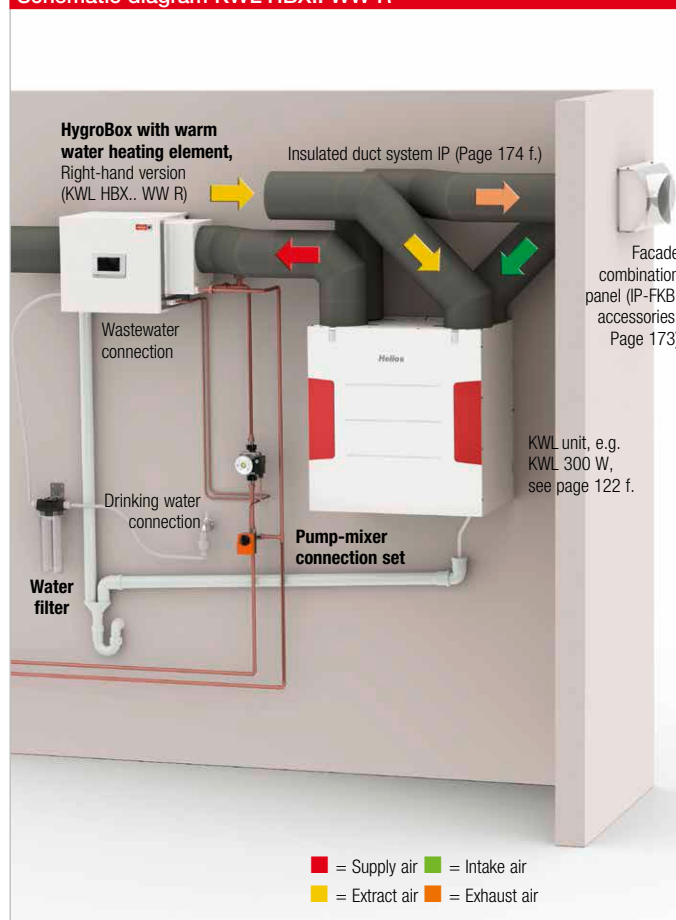
Dimensions KWL HBX 500.. L



Pressure loss KWL HBX



Schematic diagram KWL HBX.. WW R



KWL-NHR



Low-temperature heating element (for KWL HBX.. WW)

Description

- The additional installation of a post-heating element on the HygroBox air outlet is recommended in combination with low-temperature heaters to compensate for the evaporative cooling.
- The external temperature sensor, which is included in the delivery of the post-heating element, must be installed in the supply air duct at a distance of approx. 50 cm behind the post-heating element.

Accessories

Low-temperature post-heating element

- for KWL HBX 250 WW
KWL-NHR 250 Ref. no. 05628
- for KWL HBX 500 WW
KWL-NHR 500 Ref. no. 05633

KWL-PMAS



Pump-mixer connection set (for KWL HBX.. WW)

Description

- For connection of the HygroBox to existing heating circuits.
- Consists of:
 - 1 pc. circulating pump 230 V
 - 2 pc. screw fittings, R 1/2a/15 mm MS (brass)
 - 1 pc. 3-way mixer valve with actuator 24 V (0-10 V), Rp1/2", DN 15.

Accessories

Pump-mixer connection set

- for KWL HBX 250 WW
KWL-PMAS 250 Ref. no. 40193
- for KWL HBX 500 WW
KWL-PMAS 500 Ref. no. 40194

KWL-UVR, KWL-OME



Replacement UVC ducts and osmosis membrane (for all types)

Description

- Helios HygroBoxes are equipped with a constant, automatically monitored UVC disinfection system which effectively kills germs and bacteria.
- In addition, the water in the evaporator tray is automatically changed depending on the water hardness and evaporation performance.
- A reverse osmosis unit protects the unit against limescale deposits.
- The hygienic safety of the HygroBox is documented and certified by experts.

Accessories

Replacement UVC ducts

KWL-UVR Ref. no. 05631

Replacement osmosis membrane

KWL-OME Ref. no. 05632

KWL-WF



Replacement water filter (for all types)

- As a general rule, the water filter in the water supply pipe must be replaced every 6 months. The filter replacement is indicated on the HygroBox display.

Accessories

Replacement water filter
Unit = 1 pc. filter cartridge
(without casing, without hoses)

KWL-WF Ref. no. 05630

Technical data

	With electric heating element		With warm water heating element	
	For KWL units up to 250 m³/h flow rate	For KWL units up to 500 m³/h flow rate	For KWL units up to 250 m³/h flow rate	For KWL units up to 500 m³/h flow rate
	Type	Ref. no.	Type	Ref. no.
Right-hand version (air outlet right)	KWL HBX 250 EH R	40188	KWL HBX 500 EH R	40192
Left-hand version (air outlet left)	KWL HBX 250 EH L	40187	KWL HBX 500 EH L	40191
Adjustable relative supply air humidity in %	40-60		40-60	
Adjustable supply air temperature °C	15-25		15-25	
Air volume flow m³/h	350		500	
Power consumption max. W	1450		2850	
Heat output W	1400		2800	
Voltage/Frequency	230 V~, 50 Hz		230 V~, 50 Hz	
Water connection	3/4"		3/4"	
Water drain Ø mm	40-50		40-50	
Weight (empty weight/operating weight) approx. kg	25		47	
Accessories				
Pump-mixer connection set	—	—	KWL-PMAS 250	KWL-PMAS 500
Ref. no.	—	—	40193	40194
Low-temperature post-heating element	—	—	KWL-NHR 250	KWL-NHR 500
Ref. no.	—	—	05628	05633
UVC ducts	KWL-UVR	KWL-UVR	KWL-UVR	KWL-UVR
Ref. no.	05631	05631	05631	05631
Water filter	KWL-WF	KWL-WF	KWL-WF	KWL-WF
Ref. no.	05630	05630	05630	05630
Osmosis membrane	KWL-OME	KWL-OME	KWL-OME	KWL-OME
Ref. no.	05632	05632	05632	05632