

KWL HBX



Designed specifically for ventilation systems in residential buildings and offices, the Helios HygroBox automatically guarantees a healthy feel-good atmosphere with ideal air humidity throughout the year.

Advantages

- ☐ Constant indoor climate with ideal moisture content.
- ☐ Prevention of expensive damage to furniture, wooden floor coverings and antiques.
- ☐ Alleviation of allergy symptoms and health impacts. Strengthening of the immune system by reducing the lifetime of bacteria and viruses.
- ☐ Reduction of 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 pre-heated 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 guarantees a healthy feel-good atmosphere with ideal moisture content.

Delivery

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

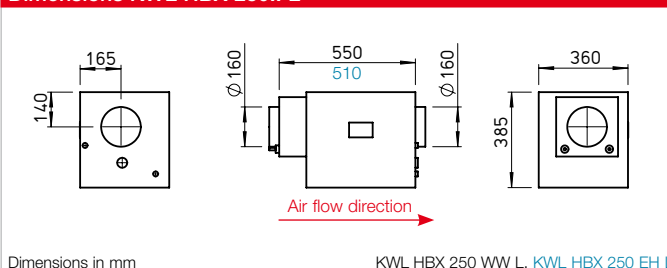
Heating element

- ☐ 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.

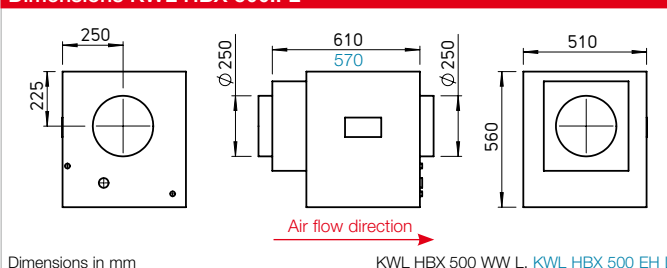
Summer operation

- ☐ 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 remains at a standstill.

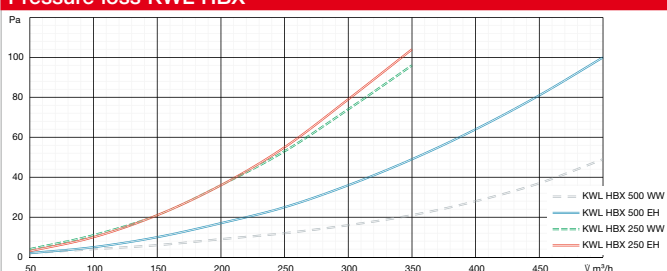
Dimensions KWL HBX 250.. L



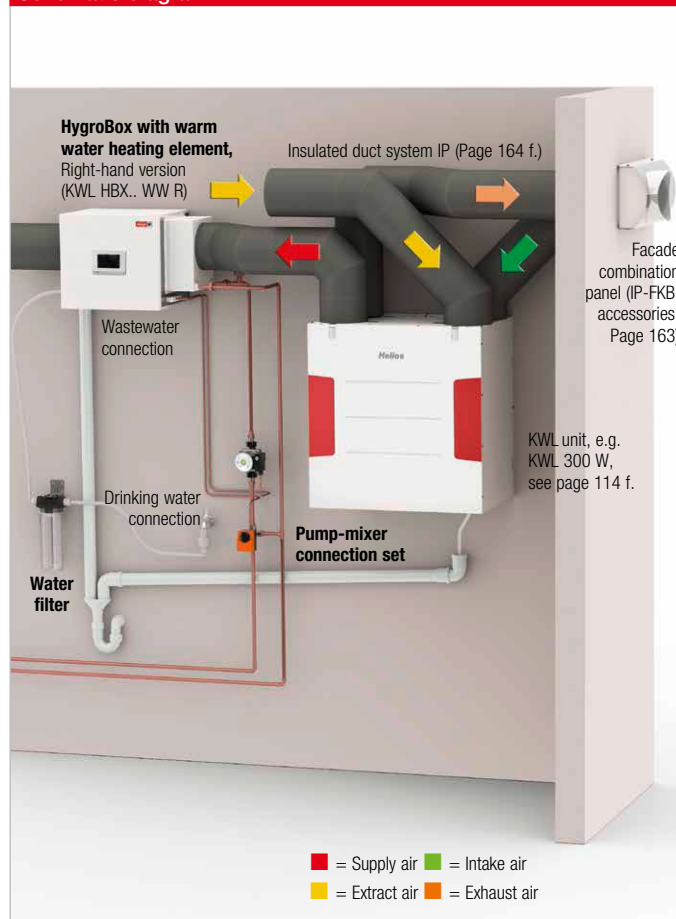
Dimensions KWL HBX 500.. L



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 230 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 all 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.	Type	Ref. no.	Type	Ref. no.
Right-hand version (air outlet right)	KWL HBX 250 EH R	40188	KWL HBX 500 EH R	40192	KWL HBX 250 WW R	40186	KWL HBX 500 WW R	40190
Left-hand version (air outlet left)	KWL HBX 250 EH L	40187	KWL HBX 500 EH L	40191	KWL HBX 250 WW L	40185	KWL HBX 500 WW L	40189
Adjustable relative supply air humidity in %	40-60		40-60		40-60		40-60	
Adjustable supply air temperature °C	15-25		15-25		15-25		15-25	
Air volume flow m³/h	350		500		350		500	
Power consumption max. W	1450		2850		100		100	
Heat output W	1400		2800		2000		4200	
Voltage/Frequency	230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz	
Water connection	3/4"		3/4"		3/4"		3/4"	
Water drain Ø mm	40-50		40-50		40-50		40-50	
Weight (empty weight/operating weight) approx. kg	25		47		25/28		47/53	
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	