

The new Helios
KWL[®] Generation.
Ventilation systems
with heat recovery
from 60 to 2600 m³/h.



easyControls
by Helios



The professionals choice

KWL® from Helios.

Controlled ventilation.

With heat recovery.



Energy saving for a healthy climate.
The ventilation concept with added value.
All from a single source.
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cleaning kit, attenuators, shutters, air temperature control
system, water heater batteries, etc.

60

A background image of pink flowers, likely Echinacea, with green leaves and stems, filling the entire page.

KWL® from Helios.

**Energy saving for a healthy climate.
Today more important than ever.**

The political measures set for the global climate will affect the construction industry over the next few years. The main aim is to reduce the amount of greenhouse gases by 40 % before the year 2020. In these circumstances the demand for energy efficiency standards, for the establishment and renewal of buildings, increases further.

Improved energy efficiency leads to an airtight building shell.

The higher efficiency requirements become apparent in the European and national legislation. Already the introduction of the Energy Saving Regulation (EnEV) 2009 as well as the renewable Energy HeatAct (EEWärmeG) brought a clear aggravation of the structural standard. Currently an amendment is planned with the EnEV in 2012/2013, which represents a further step towards the attainment of the legally required "Zero-Energy-House" in new and old buildings. Usually the increasing energetic requirements are realised by optimal insulating measures at the building shell – with the consequence that this becomes increasingly airtight.

DIN 1946-6 requires the proof of a ventilation concept.

Due to the tight building shell the EnEV requires the guarantee of "the minimum air renewal necessary for the purpose of health". Hence, for each new building or renovation project a ventilation concept is to be provided in accordance with DIN 1946-6. This is not least in reaction to the frequently insufficient ventilation of flats, the expensive structural damages accompanying this and the health-related burdens. If the proof of a ventilation concept has failed, high costs and lawsuits are unavoidable in the event of damage.

Controlled, mechanical ventilation is essential.

Ventilation concepts for moisture protection and minimum air exchanges in thermal insulated buildings can be fulfilled only by controlled, mechanical ventilation. Opened windows would negate the desired heating cost saving from the energetic point of view. The proportion of ventilation heating losses through opened windows increases to over 50 % of the total heating loss of a energy efficient building.

KWL® from Helios.

Healthy, comfortable climate ... and you feel good. The ventilation concept with added value.

A KWL®-unit from Helios for controlled ventilation with heat recovery guarantees the moisture protection according to DIN 1946-6, completely, permanently and independently of user behaviour. Beyond that the necessary minimum air exchange is automatically ensured round the clock.

Research proves that people living or working in inadequately ventilated buildings suffer from many ailments such as headache and allergies. On average, humans spend 90 % of their lives in closed buildings. Therefore, it is of prime importance to provide healthier indoor air – free from odours and high humidity.

Fresh air for humans and buildings. KWL® guarantees the maintenance of the building fabric and creates a healthy and comfortable climate in otherwise airtight and well insulated buildings around the clock.

Energy savings are achieved by improved insulating measures and through using heat recovery with KWL®. This leads to a further improvement of the energy efficiency. The heating costs are reduced by up to a third through heat recovery and the energy saving EC-fan technology.

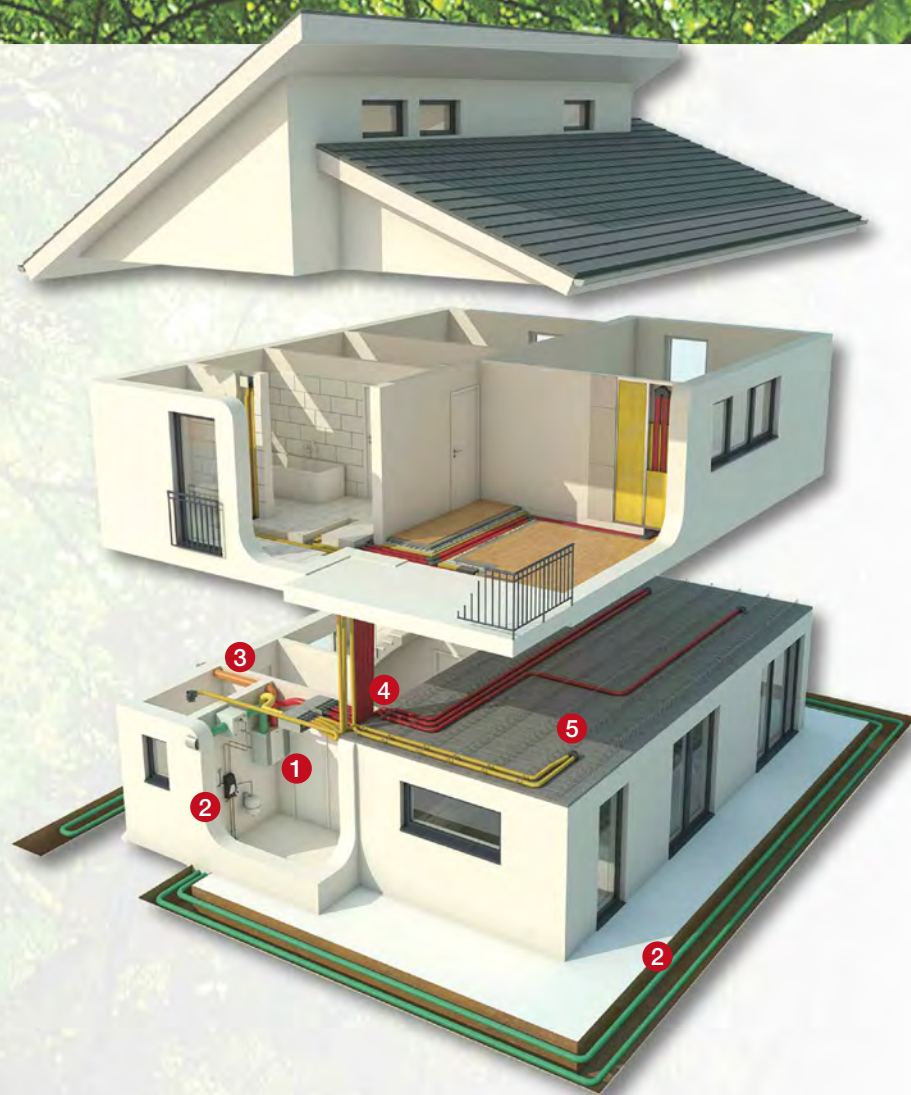
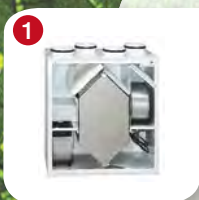
Toxins stay outside, the used air is controlled and efficiently renewed. Taking out the moisture continuously

avoids mildew, protects the building fabric and ensures, in the long term, the real estate value of the property.

KWL® from Helios provides pleasantly tempered, draught-free and clean air round-the-clock. It ensures a balanced, healthy comfort climate throughout the year.



KWL® from Helios.
All from a single source.



- 1 Ventilation unit with heat recovery
- 2 Ground-to-brine or ground-to-air heat exchanger
- 3 Insulated ducting system IsoPipe® for intake and exhaust air ducting

- 4 Air distribution system FlexPipe®plus for the extract and supply air flow
- 5 Accessories like attenuators, air intake and extract elements etc.

KWL® from Helios.

Perfectly tuned to each other.

Apart from the main components what matters most is an integrated concept with a KWL®-unit. Perfectly harmonising all the elements leads to the best results.

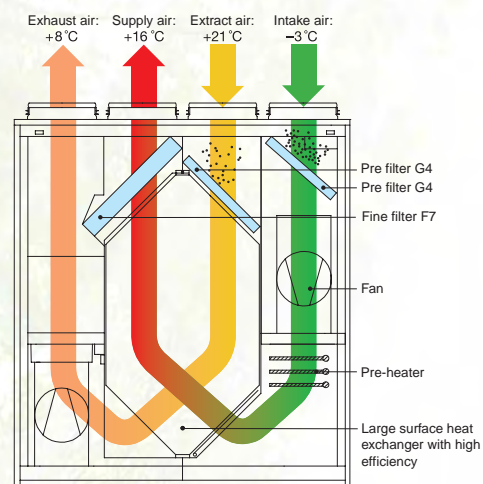
Helios offers an integrated and coordinated KWL®-system solution which thereby guarantees simple planning, safe assembly and the highest efficiency. The program covers KWL®-units with an air flow volume up to 2600 m³/h which are suitable for single- and multi-family houses as well for commercial and industrial applications.

Various services like special KWL®-professional seminars and practice workshops as well as the almost self-explanatory software tool KWLeasyPlan make the layout, planning and installation even easier.

That's the way it works.

Stale air with humidity, toxins and smells are extracted from the kitchen, bathroom and toilets via design valves to the heat exchanger in the ventilation unit. The outside air, which takes up the heat energy of the extract air with a tested efficiency of up to 90 %, flows through this and is hermetically separated at the same time. This process can be optimised by connecting an earth heat exchanger.

The air then flows through supply air valves or air inlets into the living rooms and bedrooms and creates a healthy and comfortable climate around the clock. Transfer elements ensure air circulation within the property. The exhaust air is released outside by passing through a roof or wall outlet.







Functional principle KWL®-heat exchanger

■ = Extract ■ = Intake
■ = Exhaust ■ = Supply

KWL®-planning with a mouse click. KWL easyPlan allows a fast and reliable layout of complete KWL®-systems with Helios system components in conformity with DIN 1946-6 and the creation of bill of quantities. Most conveniently under www.KWLeasyPlan.de, directly in the browser. Including storage and creation of print-ready version of your project.



			Typical applications					
			Living space	One-family house	Multi-family house apartment central	Multi-family house building central	Commerce / Municipal buildings	
Ventilation units	Wall installing, -mounting		KWL EC 60	●				
			KWL EC 200 W		●	●		
			KWL EC 200 W ET		●	●		
			KWL EC 270 W		●	●		
			KWL EC 270 W ET		●	●		
			KWL EC 300 W		●	●		
			KWL EC 300 W ET		●	●		
			KWL EC 370 W		●	●		
			KWL EC 370 W ET		●	●		
			KWL EC 500 W		●	●		●
			KWL EC 500 W ET		●	●		●
	Ceiling mounting		KWL EC 220 D		●	●		
			KWL EC 340 D		●	●		
			KWL EC 700 D				●	●
			KWL EC 1400 D				●	●
			KWL EC 2000 D				●	●
	Floor mounting		KWL EC 800 S				●	●
			KWL EC 1800 S				●	●
			KWL EC 2600 S				●	●
Periphery			HygroBox		●	●		
			Undersoil heat exchanger		●	●		
			IsoPipe®		●	●		
			RenoPipe			●		
			FlexPipe® plus		●	●	●	
			Flat duct		●			

	Application (Rated ventilation) / Maximum ventilation in m³/h																Humidity recovery	Adapted for passive house	Page
	50	100	150	200	250	300	350	400	500	750	1000	1250	1500	1750	2000	2500			
	■																		10
		■	■																14
			■	■													•		14
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Energy saving for a healthy climate.
For low-energy- and passive houses,
multi-storey buildings and commercial use.



The new generation of KWL®-units from Helios

In new look and new performance range. With even better efficiencies, modular unit configuration and the revolutionary control concept Helios easyControls.



The compact wall units

KWL EC 200 to 500 W and the types KWL EC 220, 340 D for space-saving installation in ceilings are now standard equipped with Helios easyControls. Thus they set a new standard with operation of KWL®-units. Thanks to the integrated web server and LAN-connection the ventilation units are ready to be integrated in the PC-network and convenient to control via a user interface in the web browser by laptop or Smartphone – even when on the move.

Central building control system interfaces as well as optional controls and air quality sensors offer additional opportunities. Design of the intelligent, modular unit allows individual configuration according to the project requirements.

The new KWL EC model „S“

for vertical, space-saving floor installation is available for air flow volumes from 800 to 2600 m³/h. Ideal for use as central units with heat recovery in commercial and industrial applications.

Certified according to the passive house standard and including special technology for

constant volume or constant pressure control. Optionally available with integrated PWW-heater battery.

Helios KWL®-additional value

The universal, perfectly tailored Helios KWL®-system solutions guarantee a simple planning, secure installation and highest efficiency. Services like KWL®-special seminars and practice workshops as well as the almost self-explanatory online software tool KWLeasyPlan.de make the layout, planning and installation additionally easier. Request for information.

SELECTION MATRIX



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ENTHALPHY HEAT EXCHANGER



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EASY CONTROLS



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WALL INSTALLING, WALL MOUNTING „W“



KWL EC 60 for flush mounted wall installation in single rooms, optimal renovation solution.

Model „W“

Compact wall units from 200 to 500 m³/h. KWL EC 270, 370 W with passive-house certificate. All models are equipped with easyControls, and optional enthalpy heat exchanger.

10^{on}

CEILING MOUNTING „D“



Model „D“

Extremely flat ventilation unit from 200 to 2000 m³/h for space-saving ceiling installation. With highly efficient heat exchanger, EC-technology and passive house certificate. KWL EC 220, 340 D equipped with easyControls.

24^{on}

VERTICAL MOUNTING „S“



Model „S“

With air flow rates from 800 to 2600 m³/h, for vertical floor installation. Ideal for use as central units with heat recovery in commercial and industrial applications. With highly efficient heat exchanger, EC-technology and passive house certificate.

34^{on}

PERIPHERY



Ideally coordinated accessories such as underfloor heat exchanger and the active humidification unit HygroBox for extension of the functions of the KWL®-entire system. Innovative air distribution systems for all types of installation and application. Design ventilation valves etc.

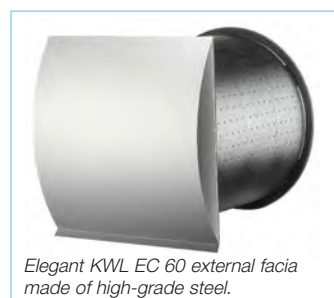
40^{on}

Compact wall unit with heat recovery for ventilation of single rooms.

KWL EC 60 is the proven solution for comfortable indoor climate and energy saving in single rooms. Ideal to bring existing buildings up to modern standards in the course of a renovation and to EnEV standard. KWL EC 60 supplies small and larger single rooms. For a medium-sized flat the installation of several units is recommended.

Installed in no time – ideal for renovation

KWL EC 60 is the optimal renovation solution, also for additional installation. The access to the outside air is simply made by a core drilling in the outer wall in which the wall sleeve is inserted. This can be done simply during the facade renovation. Two protection cover plates close the openings.



The installation of the elegantly designed external fascia which is made from high grade-steel takes place with the final plastering works. During the interior work the unit is inserted into the wall sleeve and connected electrically. Only the elegant fascia is seen inside the room. Therefore the KWL EC 60 blends in everywhere beautifully and the fascia shields the view of the fan interior completely.

Aluminium plate heat exchanger with efficiency of more than 70 %

Expensive heating energy is saved with KWL EC 60 and its efficient large heat transfer area aluminium plate heat exchanger with efficiency of more than 70 %.

ECgreenVent® by Helios

Efficient energy-saving ventilation units with EC-technology including the Helios KWL EC 60 are given the GreenTec label. KWL EC 60 allows the demand ventilation with heat recovery of individual rooms; several units can be controlled independently. Regulating is not necessary.

Operating mode of the KWL EC 60 ventilation with heat recovery

Two highly efficient fans with energy-saving EC-motors move the supply and extract air. Smells and stale room air are extracted outside, fresh and preheated air is supplied into the room. The heat of the extracted air is recovered by the large heat transfer area aluminium plate heat exchanger and transferred through the plates to the incoming fresh external air, so both air flows remain separated.

KWL EC 60



■ Ordering and delivery

Coordinated with the assembly steps the following elements are packed separately and have to be ordered individually:

- **First fix set**, consisting of wall sleeve (length 349 mm), two protection cover plates and external fascia made from high-grade steel.

KWL 60 RS Ref.-No. 0708

- **Ventilation unit, optionally in Eco- or Pro-execution. See description on the right.**

■ Similarities

■ Heat exchanger

- Large heat transfer area aluminium plate heat exchanger with efficiency of more than 70 %.

■ Fans

Two highly efficient fans with energy-saving EC-motors move the supply and extract air with minimum power consumption.

■ Condensation spigot

Condensation is led directly to the outside via the external fascia.

■ Air filter

- Two efficient air filters from micro structured electrostatically charged material of the class G4 in the supply and extract air stream guarantee the best air purity. A pollen filter (class F7) is available for the supply air as an accessory.

■ KWL EC 60 Eco

The energy saving solution with favourable price/performance ratio for all applications.

- **Ventilation unit Eco**, consisting of indoor fascia from high quality polymer with integrated 3-speed controller.

KWL EC 60 Eco Ref.-No. 9950

■ Speed control

Three-speed operation via controller, integrated in the indoor fascia (can be positioned alternatively on top or bottom by 180° turn of fascia). Disconnection via on/off switch on site.

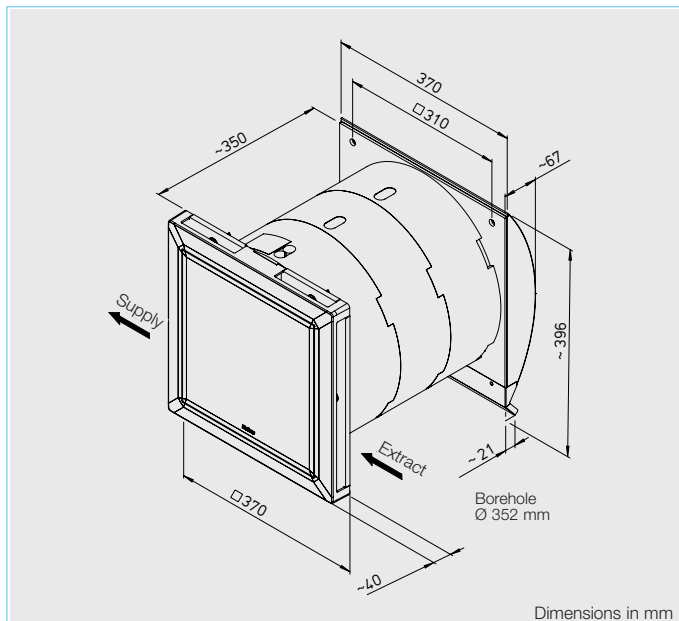
■ Electrical connection

Via plug-in connector (incl. in delivery).

Technical data

Ventilation unit ¹⁾	KWL EC 60 Eco ¹⁾	Ref.-No. 9950
Air flow volume on speed step	③	②
Supply/Extract V m³/h	60	30
		①
		17
Sound level dB(A)		
Case breakout L _{PA} in 3 m	30	22
		18
Power fan 2xW	4	2
		1
Noise protection D _{NE} dB(A)		39-41
Voltage/Frequency		230 V, 1 ph., 50 Hz
Nominal current A		0.05
Protection to IP		X4
Electric supply		NYM-J 3 x 1.5 mm²
Wiring diagram no.		949
Temperature operating range		- 20 °C to + 40 °C
Weight approx. kg		12

¹⁾ The necessary first fix set (KWL 60 RS, Ref.-No. 0708) is to be ordered additionally (see details above).



Dimensions in mm

KWL EC 60 Pro / Pro FF
Fulfil even highest demands in comfort, with many useful functions.

□ **Ventilation unit Pro**, consisting of indoor facia from high quality polymer and comfort controller (KWL-BCU, 1 pc incl. in delivery). See details on the right.
KWL EC 60 Pro No. 9951

□ **Ventilation unit Pro FF**, like KWL EC 60 Pro, however with additional integrated humidity sensor for ventilation as needed. Adjustable humidity level.
KWL EC 60 Pro FF No. 9957

Power control

The comfort controller with graphic display and user-friendly menu navigation (included in delivery) makes the following functions possible:

- Four-speed manual operation or with digital timer.
- Control via intelligent CO₂- and humidity sensors (accessories, in each case up to 4 controllers can be installed).

- Supply/extract air operation separately adjustable.
- Boost ventilation, intensive ventilation.
- Display of required filter change, operating state, operating hours, error messages.
- Several units can be controlled with one comfort controller.
- Several comfort controllers can be connected to one unit.

Shutters

Two shutters seal airtight to the outside when the unit is off (holiday or downtimes), one shutter seals individually with supply or extract air operation.

Electrical connection

Via plug-in connector (incl. in delivery).

Ordering and delivery

Coordinated with the assembly steps the following elements are packed separately and have to be ordered individually:

First fix set,

as described on the left page.
KWL 60 RS No. 0708

□ **Ventilation unit, available in Eco or Pro. See description on the below.**

Similar accessories

Extension sleeve

length 111 mm, can be shortened to any length, with partition element. For wall thickness > 349 mm.

KWL 60 WV Ref.-No. 0884

Compensation ring

from high grade steel for outside wall, length 100 mm, with partition element. For wall thickness from 249 to 349 mm.

KWL 60 DR Ref.-No. 0888

Safety guard (w/o fig.)

from high grade steel (2 pieces), for installation to outside facia, as protection against dirt deposits.

KWL 60 SG Ref.-No. 9978

Accessories for Pro..

Comfort controller (additional)

Display and function as described on the left. One piece KWL-BCU included in delivery. Up to 4 controllers can be connected. 3 m connecting cable included in delivery. Dim. mm (WxHxD) for flush mounting 81 x 81 x 20

KWL-BCU No. 9955

Dim. mm (WxHxD) for surface mounting 84 x 84 x 51

KWL-BCA No. 9956

CO₂-sensor

Measures CO₂ concentration and transfers data to the ventilation unit to arrange for an optimal CO₂ level in all 4 speeds. 3 m connecting cable included in delivery. Up to 4 sensors can be plugged in. In this case, the sensor with the highest measurement is used for setting the unit.

Dim. mm (WxHxD) 95 x 97 x 30

KWL EC-CO₂ Ref.-No. 9988

Connecting cable

For distances > 3 m, with 2 RJ 12 plugs. For connection between controller and KWL EC 60 Pro and/or between several ventilation units.

KWL-SL6/3 (length 3 m) No.9987

KWL-SL6/10 (length 10 m) No.9944

KWL-SL6/20 (length 20 m) No.9959

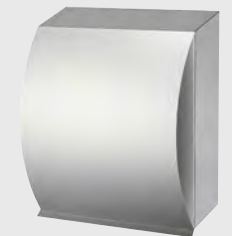
Replacement air filters

– 2 pcs G4-filters

ELF-KWL 60/4/4 No. 9445

– 2 pcs F7-filters

ELF-KWL 60/7/7²⁾ No. 9446



Technical data				
Ventilation unit¹⁾	KWL EC 60 Pro¹⁾	Ref.-No. 9951		
Incl. humidity sensor	KWL EC 60 Pro FF¹⁾	Ref.-No. 9957		
Air flow volume on speed step	4	3	2	1
Supply/Extract V m³/h	60	45	30	17
Sound level dB(A)				
Case breakout L _{PA} in 3 m	30	29	22	18
Power fan 2xW	4	3	2	1
Noise protection D _{NI} dB(A)	39-41			
Voltage/Frequency	230 V, 1 ph., 50 Hz			
Nominal current A	0.06			
Protection to IP	X4			
Electric supply	NYM-J 3 x 1.5 mm²			
Wiring diagram no.	950			
Temperature operating range	– 20 °C to + 40 °C			
Weight approx. kg	12.5			

¹⁾ The necessary first fix set (KWL 60 RS, Ref.-No. 0708) is to be ordered additionally (see details above).

²⁾ Allow a volume reduction of about 10 % when using a F7 filter.

Wye junction board

To connect further units or controllers and accessory components which are not included in delivery (each 1 piece required).

KWL-ALA Ref.-No. 9960

Heat and humidity recovery for a comfortable climate.

KWL®-units with combined heat and humidity recovery by enthalpy exchanger provide for a comfortable, healthy room climate, without additional energy consumption and without use of an atmospheric humidifier.

Ideal room climate provides a healthy environment

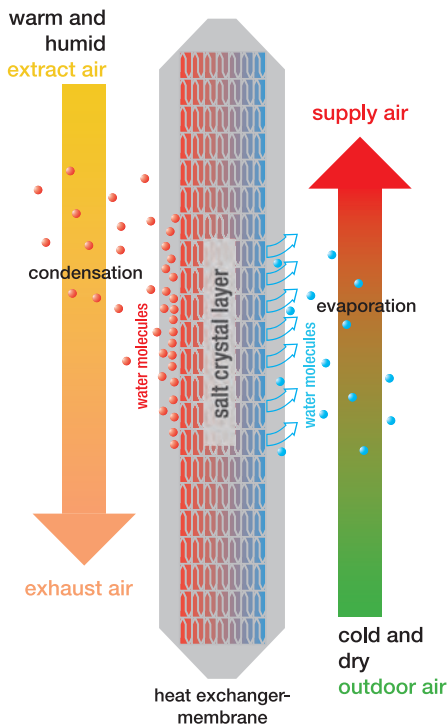
In living quarters the relative room humidity should lie between 30 – 60 %. With too low humidity mucous membranes, dry dust and electrostatic charges increase. These effects become apparent, in the cold season, if the outside air has a high saturation level so that when warming, the relative air humidity decreases inside the room. For example: With -5° outside temperature and 21° inside the room the humidity of originally 100 % drops to less than 17%.

In this range it becomes uncomfortable.

Ventilation units with enthalpy heat exchanger recover, in addition to the heat, up to 65 % of humidity from the extract air. This is used to warm the outside air, which flows into the living and reception rooms with a comfortable, healthy moisture content.



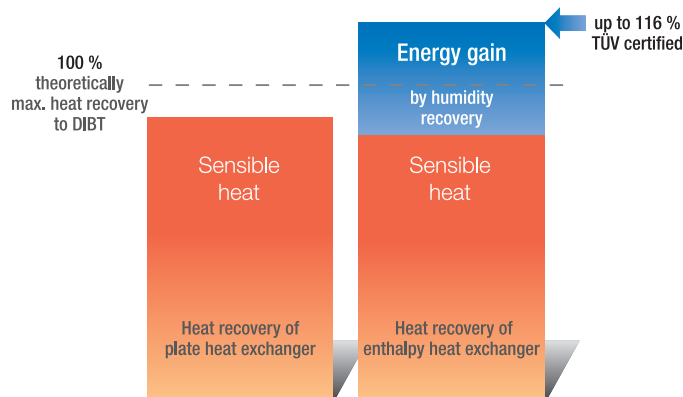
Ventilation units with enthalpy heat exchanger from Helios achieve TÜV-approved efficiencies to DIBt of up to 116 % in the design sizes KWL EC 200 W to 500 W.



Operating mode of enthalpy heat exchanger

The water molecules of the extracted room air condense on contact with surfaces of the enthalpy heat exchanger. They move the water in a similar way to plants, through the membrane. At the membrane surface of the supply airside the water molecules are absorbed by dry outside air. A salt-crystalline layer on the membrane of the enthalpy heat ex-

changer guarantees hygiene and efficiency with the humidity transmission process. It ensures the water retains its molecular configuration to enter the supply air flow. Extract and supply air flows are hermetically separated from each other, so that an overall transfer of organic particles or odours is excluded.



Ventilation units with enthalpy heat exchanger offer convincing advantages:

- Energy saving heat recovery and humidity recovery in the cold season.
- Humidity recovery from the extract air up to 65 %, depending on the interior air humidity.
- Additional humidifiers are unnecessary.

Helios KWL®-systems with enthalpy combine the advantages of heat recovery with those of a healthy interior air humidity in an optimal way. The energy stored in the molecules help retain an improved energetic total balance of the heat recovery in comparison to heat exchangers without enthalpy. Enthalpy heat exchangers from Helios thereby achieve heat recovery efficiencies of more than 100 %.

New: KWL® control concept Helios easyControls

Helios easyControls revolutionises with integrated web server and LAN connection the ease of use of KWL®-units. The models equipped with easyControls as standard (see product pages) can be easily and fast integrated into the PC network and operated via the convenient interface in any web browser. Whether with PC or laptop, tablet or smartphone. At any time, in any room.

■ Highlights

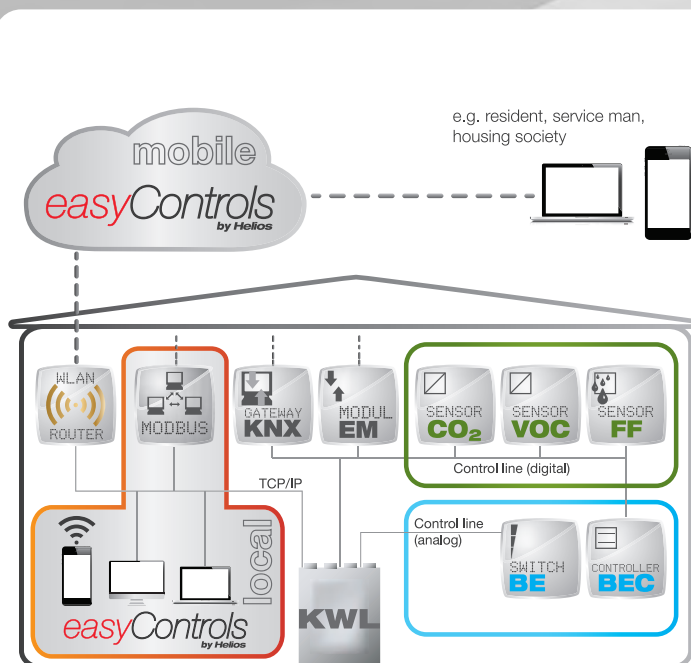
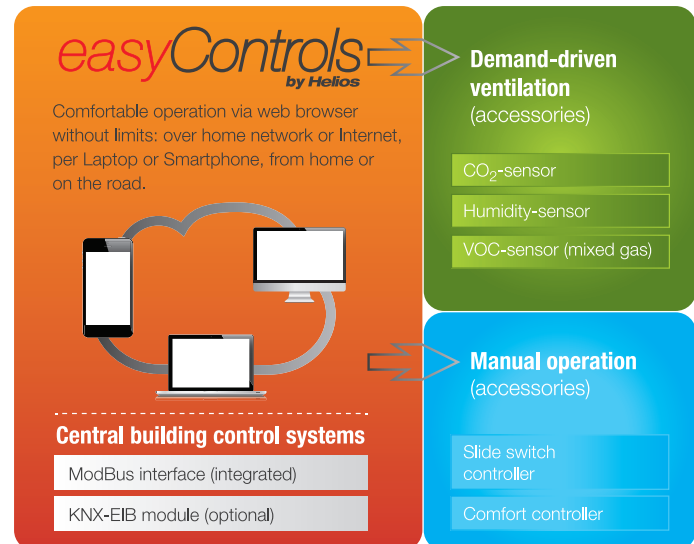
□ Web browser operation whether from home or on the road, in the home network or via the Internet, from any terminals.

□ Including building control interface (integrated Modbus, KNX optional).

■ Options

□ Automatic, demand responsive operation using CO₂-, mixed gas- (VOC) or humidity sensor.

□ Manual operation via comfort controller with graphic display or step switch.



■ Basic functions of the local Helios easyControls web server

- Start-up assistant
- Selection/setting of speed step
- Setting of clock timer Ventilation/Heating
- Activation of intensive-/whisper-/vacation mode
- Selection of access rights
- Locking controllers
- Setting of CO₂-, VOC- and humidity control
- Software-Updates (via Internet)
- Display of filter change, Operating conditions/hours, error messages etc.

■ Additional features of the Helios easyControls web portal (on the road via the Internet)

- Password-protected access to the KWL ventilation system (e.g. via Smartphone or laptop)
- Graphic temperature analysis
- Remote maintenance (housing society or craftsman)
- Storage of the last three configurations
- Error message per e-Mail
- Error history
- Support by Helios service via Remote Access Control

■ Location-independent access

EasyControls provides direct access on the KWL-unit regardless of where you are. Whether from home or on the road via the Internet, active connection presumed. Authorised users, service engineers or housing societies can comfortably change unit settings or query status information via the Helios easyControls web portal at any time.

■ Central building control systems

The KWL-unit simply can be integrated into a network of the central building control system over the standard Modbus interface (TCP/IP) or an optionally available KNX module.

■ Simply configured and quickly taken into operation

During the operation the advantages of the comfortable interface for the system configuration and start-up are demonstrated. Even without a PC network: simply connect the KWL-unit via

LAN cable to the laptop and open the menu of easyControls in the browser.

■ Always up-to-date

With Helios easyControls the ventilation unit updates itself simply and quickly over the Internet with the latest software.

■ Demand-driven and energy-saving

Using easyControls and optionally connected CO₂-, mixing gas- (VOC) or humidity sensor the KWL-unit provides automatically for an optimum living space climate and extracts the air pollution which originate, e.g., while cooking or showering reliably. This saves energy.

■ Manual operation

If no PC network available or is a manual access preferred, easyControls can be controlled via a comfort control with graphic display or a step switch.



KWL EC 200 W



(Fig.: KWL EC 200 W R with pollen filter class F7 (accessory) and pre-heater battery KWL-EVH 200 W (accessory))



Compact unit with heat recovery for central ventilation of houses and apartments. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. Optionally with highly efficient polymer- or enthalpy heat exchangers for additional humidity recovery. With energy-saving EC-motors.

■ Casing

Made from galvanised steel, white powder coated, double walled, heat and noise insulated (12 mm) on all sides. Easy to install and maintain. The removable front panel allows full access.

■ Heat exchanger

- Due to its large surface area the exchanger provides an exceptionally high efficiency of up to 90 %.
- Types "ET" are equipped with highly efficient enthalpy exchangers for additional humidity recovery. TÜV tested DIBt efficiency of up to 116 %.

■ Fans

Two silent and energy saving centrifugal fans with energy saving EC-motors move the supply air and extract air. They are maintenance free and easy to remove for cleaning.

■ Ducting

Crossover-free connection of intake-, exhaust-, extract- and supply air ducts with NW 125. Spigots with sealing lips for connection located on top of the unit.

■ Condensation outlet

The condensation outlet is located at the bottom of the unit. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Supply of cleaned outside air using a G4 filter. Additionally a F7 pollen filter is available. Extract air passes through a G4 filter before entering the heat exchanger.

■ Summer operation

Comes with automatic bypass function and exchanger cover plate as standard.

■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the optional built-in electric pre-heater battery (KWL-EVH 200 W, 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 13.

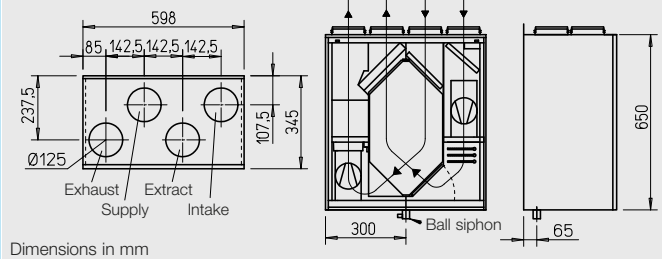
EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

■ Electrical connection

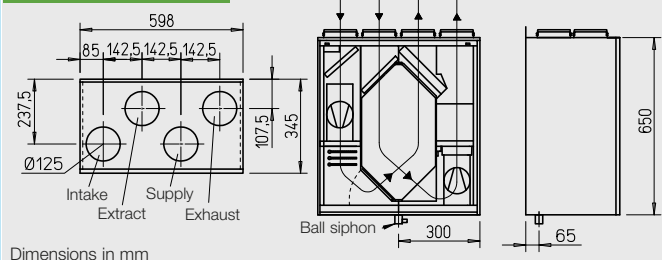
Fixed connection via a power cord 3 x 1.5 mm², approx. 2 m long with wire end ferrules. Control line for control elements,

KWL EC 200 W R



Dimensions in mm

KWL EC 200 W L



Dimensions in mm

sensors, ModBus and LAN to be plugged in on the outside of the unit.

■ Accessories – functional description (details see on the right)

KWL EC 200 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 CO₂, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchangers for preheating 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 WSH 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

Helios easyControls the innovative KWL®-control concept

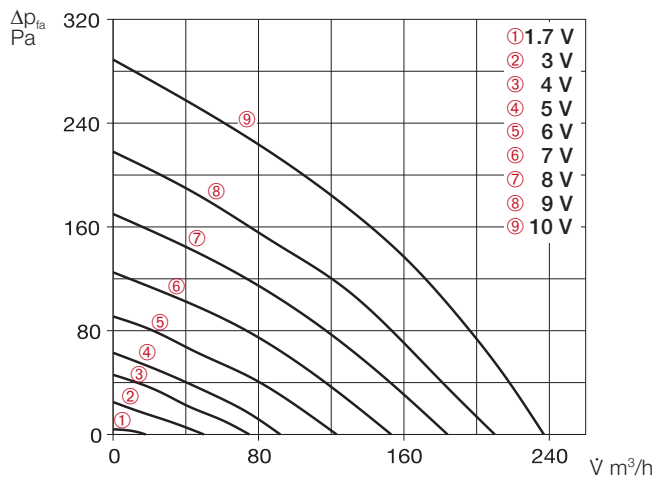
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 200 W

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	45	36	33	32	37	30	25	17
L _{WA} Supply	dB(A)	45	36	33	32	37	30	25	17
L _{PA} Exhaust	dB(A)	43	37	37	38	40	36	28	19



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
KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
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
KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
KWL-APG Ref.-No. 4270



Technical data	With polymer heat exchanger			With enthalpy heat exchanger		
	Type	Ref.-No.		Type	Ref.-No.	
Right-hand version	KWL EC 200 W R	4220		KWL EC 200 W ET R	4221	
Left-hand version	KWL EC 200 W L	4222		KWL EC 200 W ET L	4223	
Air flow rate on speed step ²⁾	9 ... 1			9 ... 1		
Supply-/Extract air flow vol. V m³/h	235 ... 18			235 ... 18		
Sound level in dB(A) ³⁾						
Supply L _{WA} (sound power level)	45 ... 28			45 ... 28		
Extract L _{WA} (sound power level)	45 ... 28			45 ... 28		
Case breakout L _{PA} in 1 m	43 ... < 25			43 ... < 25		
Power fan 2xW ²⁾	49 ... 6			49 ... 6		
Standby-losses	< 1 W					
Voltage/Frequency	1 ~ 230 V, 50 Hz					
Max. Amps A	1.0					
– ventilation						
– pre-heater	4.4					
– max. total	1.0 (5.4 incl. pre-heater, accessories)					
Elektric pre-heater kW	1.0 kW (accessories)					
Summer Bypass	automatic (adjustable), with heat exchanger cover					
Wiring diagram no.	1042					
Temperature operation range	– 20 °C to + 40 °C					
Temperature installation location	+ 5 to + 40 °C					
Weight approx. kg	41					

¹⁾ Allow a volume reduction of about 10 % when using a F7 filter.

²⁾ At 0 Pa, speed steps adjustable at will.

³⁾ 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).

KWL-KNX Ref.-No. 4275



CO₂-, VOC-, humidity sensor

Measures CO₂-, 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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Elektric pre-heater battery

Electric pre-heating for simple, plug-in device installation. Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1000 W.

KWL-EVH 200 W Ref.-No. 4224



Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269



Elektric heater battery

For additional supply air heating.

EHR-R 1,2/125 Ref.-No. 9433

Duct temperature sensor

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

Water heater battery

For additional supply air heating.

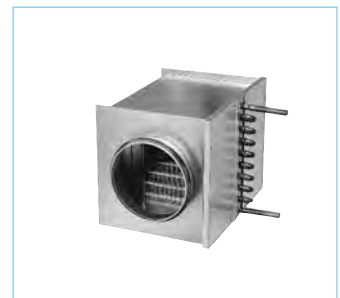
WHR 125 Ref.-No. 9480

Duct temperture sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819



Air temperature control

WHST 300 T38 Ref.-No. 8817

Replacement air filters

– 2 pcs G4-filter

ELF-KWL 200/4/4 No. 0021

– 1 pc F7-filter

ELF-KWL 200/7¹⁾ No. 0038

Note

Enthalpy heat exchanger (accessories) for additional refitting:

KWL-ET 200 No. 0896

Other accessories

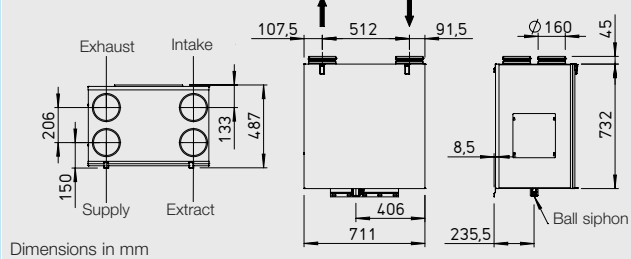
Other accessories	Page
KWL®-periphery	40 on
– Undersoil heat exchanger	44 on
– Insulated duct system	48 on
– Air distribution systems	50 on
– Control lines, et al.	60 on
Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves	

Helios main catalogue

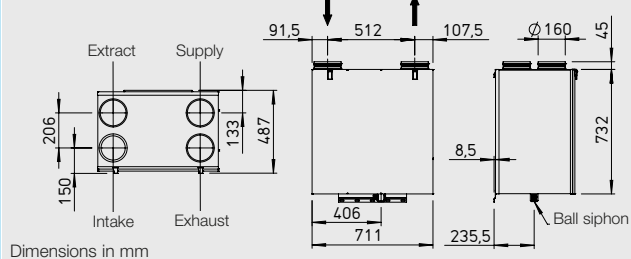
KWL EC 270 W



KWL EC 270 W R



KWL EC 270 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 access.

■ Heat exchanger

■ Condensation outlet

■ Summer operation

See description on page 14.

■ 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 (KWL-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 13.

EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -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 mm², approx. 2 m long with wire end ferrules. Control line for controls, sensors, ModBus and LAN to be plugged in on the outside of the unit.

■ Accessories – function description (details see on the right)

KWL EC 270 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 $\pm 20\%$ 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 $< +5\text{ }^{\circ}\text{C}$, 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 CO₂-, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchanger for preheating 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 WSH 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

Helios easyControls the innovative KWL®-control concept

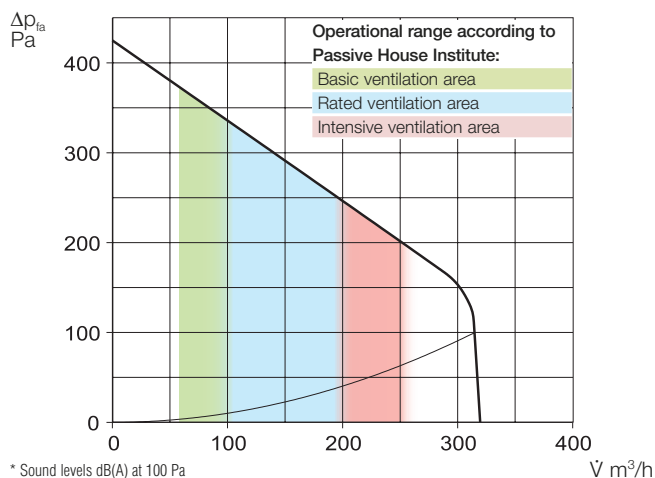
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 270 W

Frequency*	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	49	29	43	46	36	38	33	22
L _{WA} Supply	dB(A)	63	49	56	59	57	54	48	41
L _{PA} Exhaust	dB(A)	43	30	35	41	36	33	29	25



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

KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

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

KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

KWL-APG Ref.-No. 4270



Technical data	With polymer heat exchanger			With enthalpy heat exchanger		
	Type	Ref.-No.		Type	Ref.-No.	
Right-hand version	KWL EC 270 W R	4228		KWL EC 270 W ET R	4229	
Left-hand version	KWL EC 270 W L	4230		KWL EC 270 W ET L	4231	
Air flow rate on speed step¹⁾	3	2	1	3	2	1
Supply-/Extract air flow vol. V m³/h	285	170	110	285	170	110
Sound levels dB(A)²⁾						
Supply L _{WA} (sound power level)	63	52	46	63	52	46
Extract L _{WA} (sound power level)	49	38	32	49	38	32
Case breakout L _{PA} in 1 m	43	32	27	43	32	27
Power fan 2xW ¹⁾	68	19	10	68	19	10
Standby-losses	< 1 W					
Voltage/Frequency	1 ~ 230 V, 50 Hz					
Max. Amps A – ventilation	1.0					
Summer Bypass	automatic (adjustable)					
Wiring diagram no.	1044					
Temperature operation range	–20 °C to +40 °C					
Temperature installation location	+5 to +40 °C					
Weight approx. kg	49					

¹⁾ At 0 Pa, speed steps adjustable at will.

²⁾ 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).

KWL-KNX Ref.-No. 4275



CO₂-, VOC-, humidity sensor

Measures CO₂-, 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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

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 undersoil heat exchangers, pre-heater- or heater batteries and external shutters.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269



Elektric 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.

WHR 160 Ref.-No. 9481

Duct temperature sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819

Air temperature control

WHST 300 T38 Ref.-No. 8817



Note

Enthalpy heat exchanger (accessories) for additional refitting:

KWL-ET 270 No. 5912

Replacement air filters

– 2 pcs G4-filters

ELF-KWL 270/4/4 No. 9613

– 1 pc F7-filter

ELF-KWL 270/7 No. 9614

– 2 pcs G4-filters for bypass

ELF-KWL 270/4/4 BP No. 9617

– 1 pc F7-filter for bypass

ELF-KWL 270/7 BP No. 9618

Other accessories

Other accessories	Page
KWL®-periphery	40 on
– Undersoil heat exchanger	44 on
– Insulated duct system	48 on
– Air distribution systems	50 on
– Control lines, et al.	60 on
Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves	

Helios main catalogue

KWL EC 300 W



(Fig.: KWL EC 300 W R with pollen filter class F7 (accessory) and pre-heater battery KWL-EVH 300 W (accessory))

Compact unit with heat recovery for central ventilation of houses and apartments. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. Optionally with highly efficient polymer- or enthalpy heat exchangers for additional humidity recovery. With energy-saving EC-motors.

■ Casing

Made from galvanised steel, white powder coated, double walled, heat and noise insulated (12 mm) on all sides. Easy to install and maintain. The removable front panel allows full access.

■ Heat exchanger

- Due to its large surface area the exchanger provides an exceptionally high efficiency of up to 90 %.
- Types "ET" are equipped with highly efficient enthalpy exchangers for additional humidity recovery. TÜV tested DIBt efficiency of up to 116 %.

■ Fans

Two silent and energy-saving centrifugal fans with energy saving EC-motors move the supply air and extract air. They are maintenance free and easy to remove for cleaning.

■ Ducting

Crossover-free connection of intake-, exhaust-, extract- and supply air ducts with NW 125. Spigots with sealing lips for connection located on top of the unit.

■ Condensation outlet

The condensation outlet is located at the bottom of the unit. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Supply of cleaned outside air using a G4 filter. Additionally a F7 pollen filter is available. Extract air passes through a G4 filter before entering the heat exchanger.

■ Summer operation

Comes with automatic bypass function and exchanger cover plate as standard.

■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the optional built-in electric pre-heater battery (KWL-EVH 300 W, 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 13.

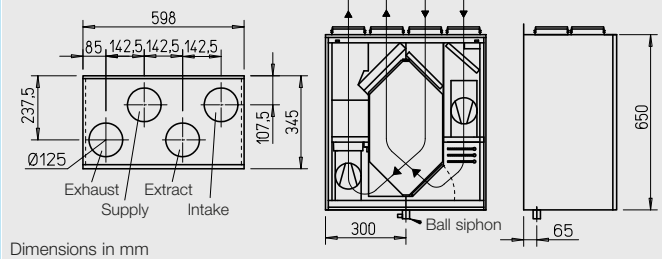
EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

■ Electrical connection

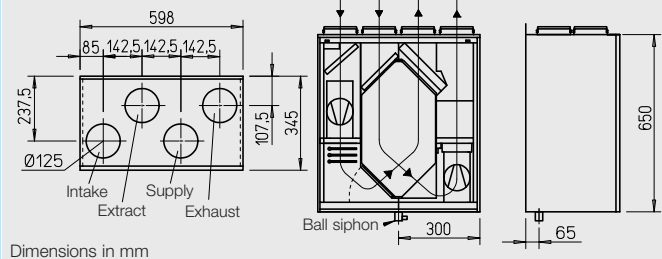
Fixed connection via a power cord 3 x 1.5 mm², approx. 2 m long with wire end ferrules. Control line for control elements,

KWL EC 300 W R



Dimensions in mm

KWL EC 300 W L



Dimensions in mm

sensors, ModBus and LAN to be plugged in on the outside of the unit.

■ Accessories – functional description (details see on the right)

KWL EC 300 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 CO₂, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchangers for preheating 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 WSH 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

Helios easyControls the innovative KWL®-control concept

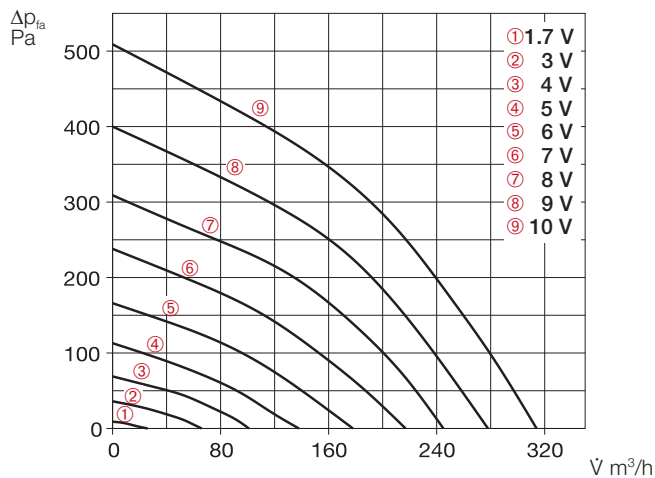
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 300 W

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	51	43	40	42	38	37	30	20
L _{WA} Supply	dB(A)	51	44	41	41	37	37	29	18
L _{PA} Exhaust	dB(A)	45	40	40	42	42	41	34	24



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
KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
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
KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
KWL-APG Ref.-No. 4270



Technical data	With polymer heat exchanger			With enthalpy heat exchanger		
	Type	Ref.-No.		Type	Ref.-No.	
Right-hand version	KWL EC 300 W R	4232		KWL EC 300 W ET R	4233	
Left-hand version	KWL EC 300 W L	4234		KWL EC 300 W ET L	4235	
Air flow rate on speed step ²⁾	9	...	1	9	...	1
Supply-/Extract air flow vol. V m³/h	315	...	25	315	...	25
Sound levels dB(A) ³⁾						
Supply L _{WA} (Sound power level)	51	...	27	51	...	27
Extract L _{WA} (Sound power level)	51	...	26	51	...	26
Case breakout L _{PA} in 1 m	45	...	< 25	45	...	< 25
Power fan 2xW ²⁾	100	...	6	100	...	6
Standby-losses	< 1 W					
Voltage/Frequency	1 ~ 230 V, 50 Hz					
Max. Amps A	— ventilation 1.3					
	— pre-heater 4.4					
	— max. total 1.3 (5.7 incl. pre-heater, accessories)					
Electric pre-heater kW	1.0 kW (accessories)					
Summer Bypass	automatic (adjustable), with heat exchanger cover					
Wiring diagram no.	1042					
Temperature operation range	-20 °C to +40 °C					
Temperature installation location	+5 to +40 °C					
Weight approx. kg	42					

¹⁾ Allow a volume reduction of about 10 % when using a F7 filter.

²⁾ At 0 Pa, speed steps adjustable at will.

³⁾ 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).

KWL-KNX Ref.-No. 4275



CO₂-, VOC-, humidity sensor

Measures CO₂-, 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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Elektric pre-heater battery

Electric pre-heating for simple, plug-in device installation. Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1000 W.

KWL-EVH 300 W Ref.-No. 4224



Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269



Elektric heater battery

For additional supply air heating.

EHR-R 1,2/125 Ref.-No. 9433

Duct temperature sensor

KWL-LTK (1 pc required) No. 9644

Water heater battery

For additional supply air heating.

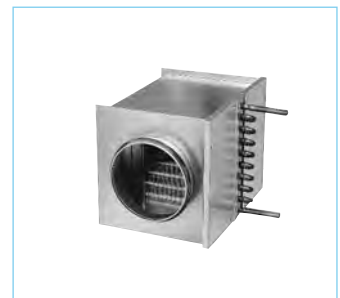
WHR 125 Ref.-No. 9480

Duct temperature sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHSH 1100 24V(0-10V) No. 8819



Air temperature control

WHST 300 T38 Ref.-No. 8817

Replacement air filters

– 2 pcs G4-filter

ELF-KWL 300/4/4 No. 0021

– 1 pc F7-filter

ELF-KWL 300/7¹⁾ No. 0038

– 2 pcs G4-filter, 1 pc F7-Filter

ELF-KWL 300/4/4/7 No. 0020

Note

Enthalpy heat exchanger (accessories) for additional refitting:

KWL-ET 300 No. 0896

Other accessories

	Page
KWL®-periphery	40 on
– Undersoil heat exchanger	44 on
– Insulated duct system	48 on
– Air distribution systems	50 on
– Control lines, et al.	60 on
Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves	

Helios main catalogue

KWL EC 370 W



CERTIFIED COMPONENT
Passive House Institute

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 access.

■ Heat exchanger

■ Condensation outlet

■ Summer operation

See description on page 14.

■ 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 (KWL-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).

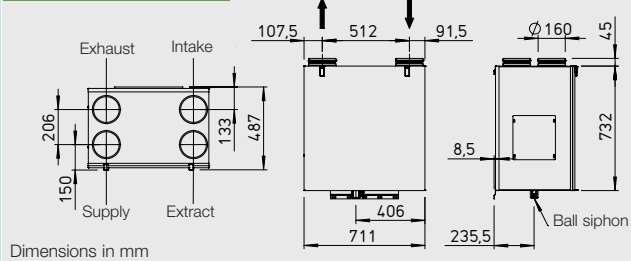
■ Helios easyControls

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 13.

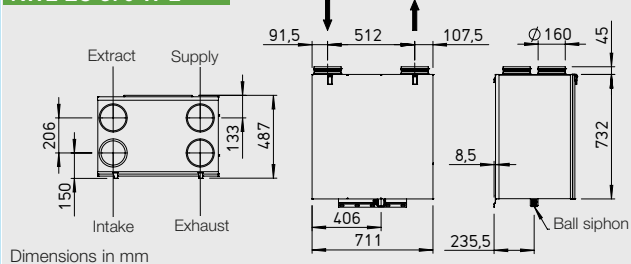
EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

KWL EC 370 W R



KWL EC 370 W L



■ Electrical connection

Fixed connection via a power cord 3 x 1.5 mm², approx. 2 m long with wire end ferrules. Control line for controls, sensors, ModBus and LAN to be plugged in on the outside of the unit.

■ Accessories – function description (details see on the 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 $\pm 20\%$ 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 $< +5\text{ °C}$, 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 CO₂-, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchanger for preheating 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 WSH 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

Helios easyControls the innovative KWL®-control concept

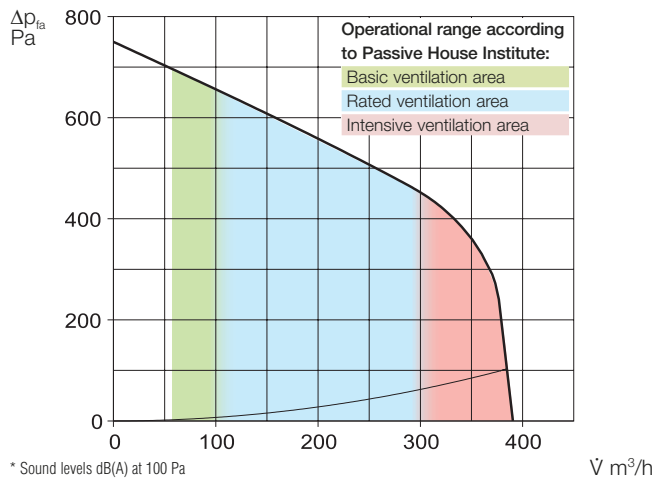
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 370 W

Frequency *	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	56	41	53	52	38	40	33	23
L _{WA} Supply	dB(A)	70	60	64	66	63	64	59	53
L _{PA} Exhaust	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
KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

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
KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

KWL-APG Ref.-No. 4270



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).

KWL-KNX Ref.-No. 4275



CO₂-, VOC-, humidity sensor

Measures CO₂-, 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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

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 undersoil heat exchangers, pre-heater- or heater batteries and external shutters.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269



Elektric 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.

WHR 160 Ref.-No. 9481

Duct temperature sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819

Air temperature control

WHST 300 T38 Ref.-No. 8817



Technical data	With polymer heat exchanger Type Ref.-No.			With enthalpy heat exchanger Type Ref.-No.		
Right-hand version	KWL EC 370 W R 4245			KWL EC 370 W ET R 4246		
Left-hand version	KWL EC 370 W L 4247			KWL EC 370 W ET L 4248		
Air flow rate on speed step ¹⁾	3	2	1	3	2	1
Supply-/Extract air flow vol. V m³/h	350	200	140	350	200	140
Sound levels dB(A) ²⁾						
Supply L _{WA} (sound power level)	71	58	52	71	58	52
Extract L _{WA} (sound power level)	56	44	37	56	44	37
Case breakout L _{PA} in 1 m	51	41	34	51	41	34
Power fans 2xW ¹⁾	111	25	14	111	25	14
Standby-losses	< 1 W					
Voltage/Frequency	1 ~ 230 V, 50 Hz					
Max. Amps A – ventilation	2.2					
Summer Bypass	automatic (adjustable)					
Wiring diagram no.	1044					
Temperature operation range	-20 °C to +40 °C					
Temperature installation location	+5 to +40 °C					
Weight approx. kg	52					

¹⁾ At 0 Pa, speed steps adjustable at will.

²⁾ At 100 Pa, sound levels raise with increasing system pressure.

Note

Enthalpy heat exchanger (accessories) for additional refitting:

Type KWL-ET 370 No. 5912

Replacement air filters

– 2 pcs G4-filters

ELF-KWL 270/4/4 No. 9613

– 1 pc F7-filter

ELF-KWL 270/7 No. 9614

– 2 pcs G4-filters for bypass

ELF-KWL 270/4/4 BP No. 9617

– 1 pc F7-filter for bypass

ELF-KWL 270/7 BP No. 9618

Other accessories Page

KWL®-periphery	40 on
– Undersoil heat exchanger	44 on
– Insulated duct system	48 on
– Air distribution systems	50 on
– Control lines, et al.	60 on
Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves	

Helios main catalogue

KWL EC 500 W



(Fig.: KWL EC 500 W R with pollen filter class F7 (accessory) and pre-heater battery KWL-EVH 500 W (accessory))

Compact unit with heat recovery for central ventilation of houses and apartments. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. Optionally with highly efficient polymer- or enthalpy heat exchangers for additional humidity recovery. With energy-saving EC-motors. Generally approved by DIBt, Z-51.3-226.

■ Casing

Made from galvanised steel, white powder coated, double walled, heat and noise insulated (12 mm) on all sides. Easy to install and maintain. The removable front panel allows full access.

■ Heat exchanger

□ Due to its large surface area the exchanger provides an exceptionally high efficiency of up to 90 %.

□ Types "ET" are equipped with highly efficient enthalpy exchangers for additional humidity recovery. TÜV tested DIBt efficiency of up to 116 %.

■ Fans

Two silent and energy-saving centrifugal fans with energy saving EC-motors move the supply air and extract air. They are maintenance free and easy to remove for cleaning.

■ 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.

■ Condensation outlet

The condensation outlet is located at the bottom of the unit. Ball

siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Supply of cleaned outside air using a G4 filter. Additionally a F7 pollen filter is available. Extract air passes through a G4 filter before entering the heat exchanger.

■ Summer operation

Comes with automatic bypass function and exchanger cover plate as standard.

■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the optional built-in electric pre-heater battery (KWL-EVH 500 W, accessories).

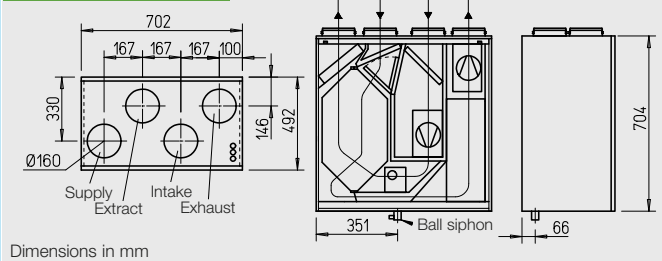
■ Helios easyControls

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 13.

EasyControls is prepared for:

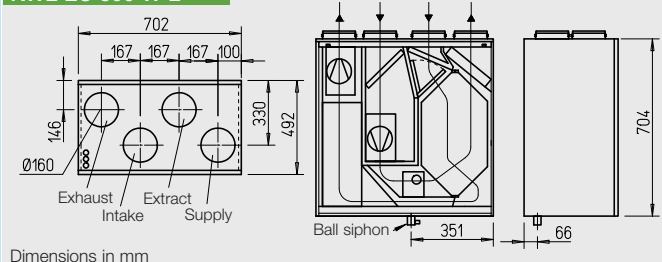
- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

KWL EC 500 W R



Dimensions in mm

KWL EC 500 W L



Dimensions in mm

■ Electrical connection

Fixed connection via a power cord 3 x 1.5 mm², 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 see on the right)

KWL EC 500 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 CO₂, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchangers for preheating 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 WSHS 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

Helios easyControls the innovative KWL®-control concept

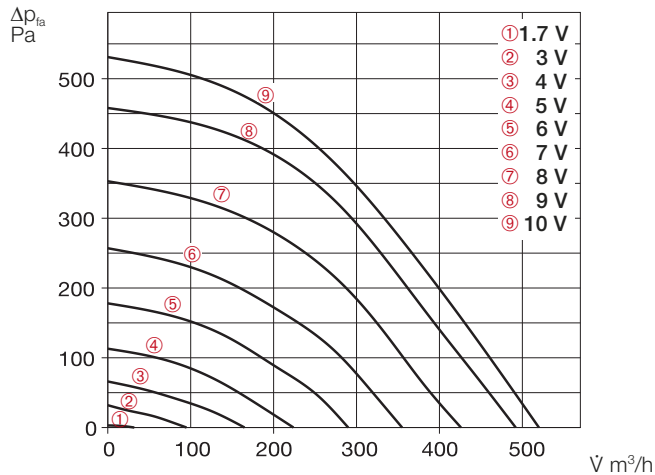
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 500 W

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	54	44	45	39	41	40	33	26
L _{WA} Supply	dB(A)	56	49	44	46	40	43	33	20
L _{PA} Exhaust	dB(A)	47	40	47	44	43	41	37	26



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
KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
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
KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
KWL-APG Ref.-No. 4270



Technical data	With polymer heat exchanger			With enthalpy heat exchanger		
	Type	Ref.-No.		Type	Ref.-No.	
Right-hand version	KWL EC 500 W R	4258		KWL EC 500 W ET R	4259	
Left-hand version	KWL EC 500 W L	4260		KWL EC 500 W ET L	4261	
Air flow rate on speed step⁴⁾	9	...	1	9	...	1
Supply-/Extract air flow vol. V m³/h	520	...	35	520	...	35
Sound levels dB(A)⁵⁾						
SupplyL _{WA} (sound power level)	56	...	27	56	...	27
ExtractL _{WA} (sound power level)	54	...	28	54	...	28
Case breakout L _{PA} in 1 m	47	...	< 25	47	...	< 25
Power fans 2xW ⁴⁾	172	...	7	172	...	7
Standby-losses	< 1 W					
Voltage/Frequency	1 ~ 230 V, 50 Hz					
Max. Amps A	— ventilation 1.8					
	— pre-heater 4.4					
	— max. total 1.8 (6.2 incl. pre-heater, accessories)					
Electric pre-heater kW	1.0 kW (accessories)					
Summer Bypass	automatic (adjustable), with heat exchanger cover					
Wiring diagram no.	1045					
Temperature operation range	-20 °C to +40 °C					
Temperature installation location	+5 to +40 °C					
Weight approx. kg	66					

¹⁾ For duct diameter 160 mm.

²⁾ For duct diameter 180 mm.

³⁾ Allow a volume reduction of about 10 % when using a F7 filter.

⁴⁾ At 0 Pa, speed steps adjustable at will.

⁵⁾ 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).

KWL-KNX Ref.-No. 4275



CO₂-, VOC-, humidity sensor

Measures CO₂-, 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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Elektric pre-heater battery

Electric pre-heating for simple, plug-in device installation. Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1000 W.

KWL-EVH 500 W Ref.-No. 4262



Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269



Elektric 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.

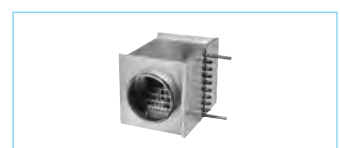
WHR 160 Ref.-No. 9481

Duct temperature sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819



Air temperature control

WHST 300 T38 Ref.-No. 8817

Duct connector

Connector with sealing to connect unit to ducting.

RVBD 160¹⁾ No. 9641

RVBD 180/160²⁾ No. 9589

Replacement air filters

– 2 pcs G4-filter

ELF-KWL 500/4/4 No. 0039

– 1 pc F7-filter

ELF-KWL 500/7³⁾ No. 0042

Note

Enthalpy heat exchanger (accessories) for additional refitting:

Type KWL-ET 500 No. 0897

Other accessories

KWL®-periphery 40 on

– Undersoil heat 44 on

exchanger

– Insulated duct system 48 on

– Air distribution systems 50 on

– Control lines, et al. 60 on

Heater battery, -control, grilles,

ducting, roof terminations, extract

air elements, design valves

Helios main catalogue

KWL EC 220 D



Extremely flat ceiling units with heat recovery for central ventilation of multi-storey buildings and small single-family houses. Certified according to passive-house standards. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. With highly efficient polymer heat exchanger and energy-saving EC-motors.

■ Casing

Made from galvanised steel, white powder coated, double walled, heat and noise insulated (20 mm) on all sides. Easy to install and maintain. The removable side panel allows full access.

■ Heat exchanger

Due to its large surface area the polymer exchanger provides an exceptionally high efficiency of up to 90 %.

■ Fans

Two silent and energy-saving centrifugal fans with energy saving EC-motors move the supply air and extract air. They are maintenance free and easy to remove for cleaning.

■ Ducting

Crossover-free connection of intake-, exhaust-, extract- and supply air ducts with NW 125. Spigots for connection located on each side of the unit.

■ Condensation outlet

Condensation outlet is located on the left/right depending on the version. Ball siphon included in delivery. To be connected to the drain trap by installer.

■ Air filter

Supply of cleaned outside air using a G4 filter. Additionally a F7 pollen filter is available. Extract air passes through a G4 filter before entering the heat exchanger.

■ Summer operation

Comes with automatic bypass function and exchanger cover plate as standard.

■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the optional built-in electric pre-heater battery (KWL-EVH 220 D, 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 13.

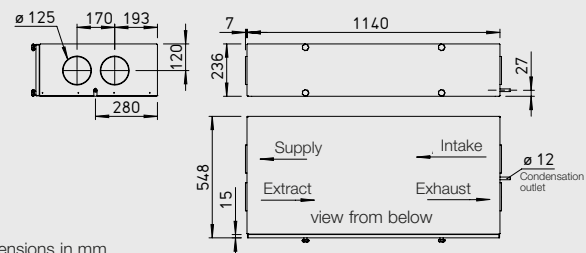
EasyControls is prepared for:

- Manual control elements (KWL-BE, -BEC, accessories).
- Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
- Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

■ Electrical connection

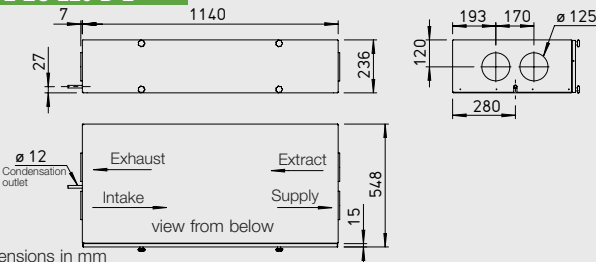
Fixed connection via a power cord 3 x 1.5 mm², approx. 2 m long with wire end ferrules. Con-

KWL EC 220 D R



Dimensions in mm

KWL EC 220 D L



Dimensions in mm

trol line for control elements, sensors, ModBus and LAN to be plugged in on the outside of the unit.

■ Accessories – functional description (details see on the right)

KWL EC 220 D 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 CO₂-, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchangers for preheating 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

Helios easyControls the innovative KWL®-control concept

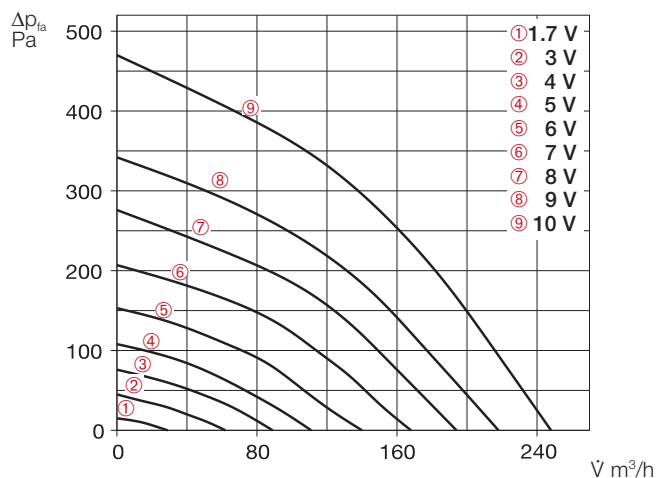
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Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 220 D

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	56	29	42	50	42	37	26	16
L _{WA} Supply	dB(A)	77	46	55	72	67	62	57	44
L _{PA} Exhaust	dB(A)	58	32	51	59	54	47	40	28


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
KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
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
KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51
KWL-APG Ref.-No. 4270



Technical data	KWL EC 220 D R/L	For ceiling installation	
Right-hand version	KWL EC 220 D R	Ref.-No. 4226	
Left-hand version	KWL EC 220 D L	Ref.-No. 4227	
Air flow rate on speed step ¹⁾			
Supply-/Extract air flow vol. V m³/h	245	...	65
Sound levels dB(A) ²⁾			
Supply L _{WA} (sound power level)	77	...	33
Extract L _{WA} (sound power level)	56	...	28
Case breakout L _{PA} in 1 m	58	...	< 25
Power fans 2xW ¹⁾	50	...	5
Standby-losses	< 1 W		
Voltage/Frequency	1 ~ 230 V, 50 Hz		
Max. Amps A – ventilation	1.2		
– pre-heater	4.4		
– max. total	1.2 (5.6 incl. pre-heater, accessories)		
Electric pre-heater kW	1.0 kW (accessories)		
Summer Bypass	automatic (adjustable), with heat exchanger cover		
Wiring diagram no.	1043		
Temperature operation range	–20 °C to +40 °C		
Temperature installation location	+5 to +40 °C		
Weight approx. kg	50		

¹⁾ At 0 Pa, speed steps adjustable at will.

²⁾ 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).

KWL-KNX Ref.-No. 4275


CO₂-, VOC-, humidity sensor

Measures CO₂-, 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.

KWL-CO₂ Ref.-No. 4272
KWL-FTF Ref.-No. 4273
KWL-VOC Ref.-No. 4274


Electric pre-heater battery

Electric pre-heating for simple, plug-in device installation. Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1000 W.

KWL-EVH 220 D Ref.-No. 9632


Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries.

Dim. mm (WxHxD) 210x210x100
KWL-EM Ref.-No. 4269


Elektric heater battery

For additional supply air heating.

EHR-R 1,2/125 Ref.-No. 9433

Duct temperature sensor

KWL-LTK (1 pc required) No. 9644

Water heater battery

For additional supply air heating.

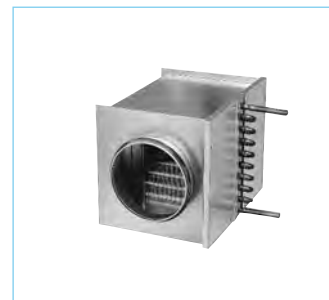
WHR 125 Ref.-No. 9480

Duct temperature sensor

KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819


Air temperature control

WHST 300 T38 Ref.-No. 8817

Replacement air filters

– 2 pcs G4-filter
 ELF-KWL 220 D/4/4 No. 9638
 – 1 pc F7-filter
 ELF-KWL 220 D/7 No. 9639

Duct connector

Connector with sealing to connect unit to ducting with ø 125 mm.

RVBD 125 No. 9640

Other accessories

Page
 KWL®-periphery 40 on
 – Undersoil heat exchanger 44 on
 – Insulated duct system 48 on
 – Air distribution systems 50 on
 – Control lines, et al. 60 on
 Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves
Helios main catalogue

KWL EC 340 D



Extremely flat ceiling units with heat recovery for central ventilation of multi-storey buildings and small single-family houses. Equipped with Helios easyControls, the innovative control concept for easiest network connection and web browser operation. With highly efficient polymer heat exchanger and energy-saving EC-motors.

■ Casing

Made from galvanised steel, white powder coated, double walled, heat and noise insulated (20 mm) on all sides. Easy to install and maintain. The removable side panel allows full access.

■ Heat exchanger

Due to its large surface area the polymer exchanger provides an exceptionally high efficiency of up to 90 %.

■ Fans

Two silent and energy-saving centrifugal fans with energy saving EC-motors move the supply air and extract air. They are maintenance free and easy to remove for cleaning.

■ Ducting

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

■ Condensation outlet

Condensation outlet is located on the left/right depending on the version. Ball siphon included in delivery. To be connected to the drain trap by installer.

■ Air filter

Supply of cleaned outside air using a G4 filter. Additionally a F7 pollen filter is available. Extract air passes through a G4 filter before entering the heat exchanger.

■ Summer operation

Comes with automatic bypass function and exchanger cover plate as standard.

■ Frost protection of heat exchanger

The standard frost monitoring automatically regulates the supply air flow and the optional built-in electric pre-heater battery (KWL-EVH 340 D, accessories).

■ Helios easyControls

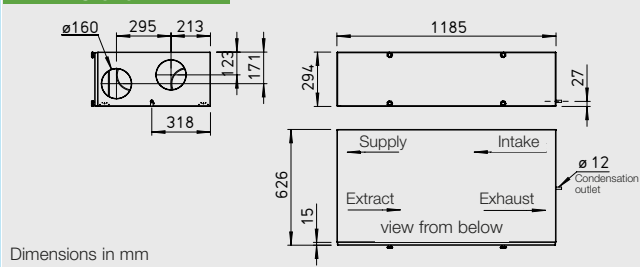
The standard equipment with Helios easyControls allows the simple LAN integration of the KWL-unit into a PC network. The ventilation unit is operated comfortably via the Helios easyControls menu in the web browser, by PC/laptop in the LAN or by Tablet/Smartphone in the WLAN – whether in the home net or on the road via Internet. Functionality, see page 13.

- EasyControls is prepared for:
 - Manual control elements (KWL-BE, -BEC, accessories).
 - Air quality sensors for automatic, demand-driven ventilation (KWL-CO₂, -FTF, -VOC, accessories).
 - Connection to central building control systems via integrated Modbus interface or optional KNX module (KWL-KNX, accessories).

■ Electrical connection

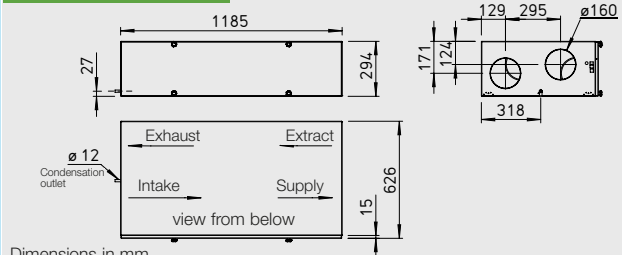
Fixed connection via a power cord 3 x 1.5 mm², approx. 2 m long with wire end ferrules. Con-

KWL EC 340 D R



Dimensions in mm

KWL EC 340 D L



Dimensions in mm

trol line for control elements, sensors, ModBus and LAN to be plugged in on the outside of the unit

■ Accessories – functional description (details see on the right)

KWL EC 340 D 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 realization 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 CO₂-, 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.

□ Air quality sensor

For the automatic operation and optimal air exchange are sensors available which measure the mixed gas, CO₂-concentration and the relative humidity.

□ Extension module

For the connection of accessories, such as shutters, undersoil heat exchangers for preheating 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

Helios easyControls the innovative KWL®-control concept

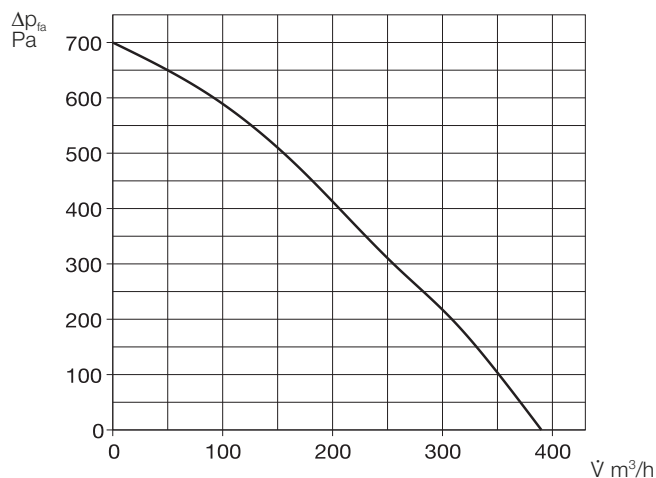
Page 13

Humidity recovery by enthalpy heat exchanger

Page 12

KWL EC 340 D

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	58	50	53	51	50	46	35	20
L _{WA} Supply	dB(A)	78	70	72	74	70	65	55	40
L _{PA} Exhaust	dB(A)	62	50	53	55	58	54	50	40


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

KWL-BE Ref.-No. 4265

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

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

KWL-BEC Ref.-No. 4263

Casing for surface installation

Dim. mm (W x H x D) 80 x 80 x 51

KWL-APG Ref.-No. 4270


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).

KWL-KNX Ref.-No. 4275


CO₂-, VOC-, humidity sensor

Measures CO₂-, 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.

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274


Electric pre-heater battery

Electric pre-heating for simple, plug-in device installation. Allows the pre-heating of the intake air at very low outside temperatures (heat exchanger frost protection). Mandatory for passive houses. Power: 1000 W.

KWL-EVH 340 D Ref.-No. 4241


Extension module

For controlling external shutters, undersoil heat exchangers and/or heater batteries.

Dim. mm (WxHxD) 210x210x100

KWL-EM Ref.-No. 4269


Elektrik 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.

WHR 160 Ref.-No. 9481

Duct temperature sensor

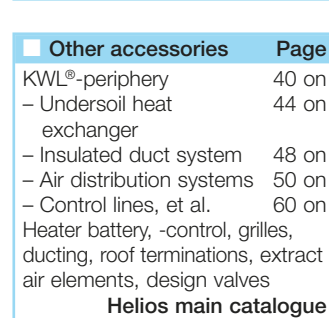
KWL-LTK (2 pcs required) No. 9644

Hydraulic unit

WHS 1100 24V(0-10V) No. 8819


Air temperature control

WHST 300 T38 Ref.-No. 8817



Technical data	KWL EC 340 D R/L	For ceiling installation	
Right-hand version	KWL EC 340 D R	Ref.-No. 4237	
Left-hand version	KWL EC 340 D L	Ref.-No. 4238	
Air flow rate on speed step¹⁾	9	...	1
Supply-/Extract air flow vol. V m³/h	380	...	100
Sound levels dB(A)²⁾			
Supply L _{WA} (sound power level)	78	...	27
Extract L _{WA} (sound power level)	58	...	26
case breakout L _{PA} in 1 m	62	...	< 25
Power fans 2xW ¹⁾	80	...	12
Standby-losses	< 1 W		
Voltage/Frequency	1 ~ 230 V, 50 Hz		
Max. Amps A – ventilation	2.4		
– pre-heater	4.4		
– max. total	2.4 (6.6 incl. pre-heater, accessories)		
Electric pre-heater kW	1.0 kW (accessories)		
Summer Bypass	automatic (adjustable), with heat exchanger cover		
Wiring diagram no.	1043		
Temperatur operation range	–20 °C to +40 °C		
Temperature installation location	+5 to +40 °C		
Weight approx. kg	70		

¹⁾ At 0 Pa, speed steps adjustable at will.

²⁾ At 100 Pa, sound levels raise with increasing system pressure.

Replacement air filters

– 2 pcs G4-filter

ELF-KWL 340 D/4/4 No. 4239

– 1 pc F7-filter

ELF-KWL 340 D/7 No. 4240

Duct connector

Connector with sealing to connect unit to ducting with ø 160 mm.

RVBD 160 No. 9641

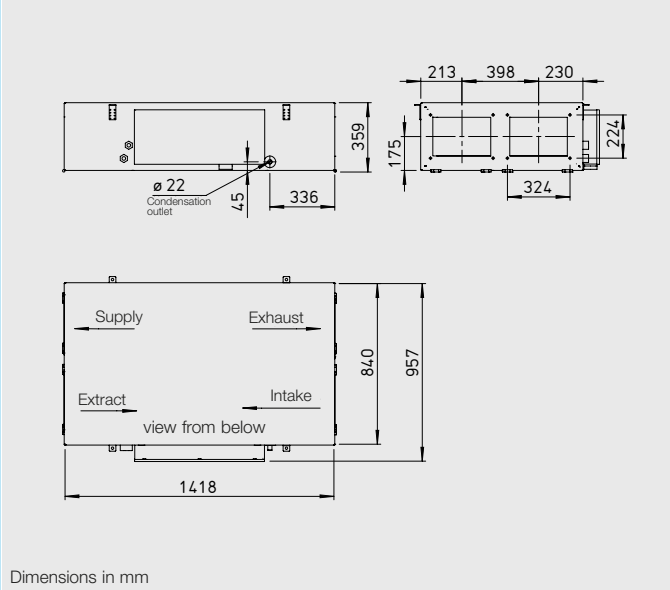
Other accessories

	Page
KWL®-periphery	40 on
– Undersoil heat exchanger	44 on
– Insulated duct system	48 on
– Air distribution systems	50 on
– Control lines, et al.	60 on
Heater battery, -control, grilles, ducting, roof terminations, extract air elements, design valves	
Helios main catalogue	

KWL EC 700 D



KWL EC 700 D



Extremely flat ventilation unit with heat recovery for compact and space saving ceiling installation. With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. In different comfort- and equipment versions.

■ Casing

Made from galvanised sheet steel. Heat and noise insulated with 30 mm thick mineral wool. Inspection openings for filter change at the underside of the unit which can be opened without tools. Ceiling installation is carried out with vibration absorbing mounting elements (included in delivery).

■ Heat exchanger

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ Fans

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ Ducting

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 250 mm.

■ Condensation outlet

A separate condensation collector below the heat exchanger makes maintenance work easier. Condensation outlet is located next to terminal box. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ Summer operation

Comes with automatic bypass function for maximum comfort as standard.

■ Frost protection of heat exchanger

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ Speed control

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
 - Freely definable operating levels within the performance curve values.
 - Choice between constant air flow volume or constant pressure regulation.
 - Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
 - Initial start-up (automatic determination of the system performance curve).
 - Control of external shutters.
 - Connection of a fire alarm contact.
 - Weekly or daily program.
 - Pressure monitoring of filter pollution.
 - Display of required filter change, operating state, error messages.
 - Different access levels.
- Alternatively the ventilation unit can be controlled via ModBus (RS 485).

■ Electrical connection

Easily accessible terminal box located on the side of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the underside of the unit.

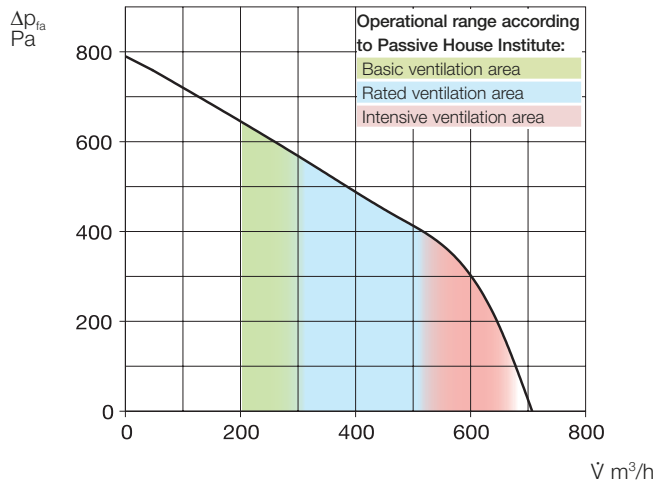
■ Heater battery

(KWL EC.. Pro WW)

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHSH 1100 24V (0-10V), accessories) is recommended.

KWL EC 700 D

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	53	46	49	47	41	40	34	23
L _{WA} Supply	dB(A)	68	54	65	63	59	53	48	39



■ Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



■ Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes. **WHSH 1100 24V(0-10V)** No. 8819



■ Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached.

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

KWL-CO₂	Ref.-No. 4272
KWL-FTF	Ref.-No. 4273
KWL-VOC	Ref.-No. 4274

Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 250 mm (incl. 4 screws).

KWL-ÜS 700 D	Ref.-No. 4206
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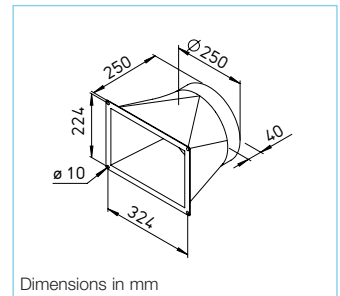
Flexible sleeve

To reduce vibration transmission, incl. 2 worm drive clips.

FM 250	Ref.-No. 1672
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Flange ring from galvanised sheet steel for duct connection.

FR 250	Ref.-No. 1203
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Dimensions in mm

Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 250	Ref.-No. 2576
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■ Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements, **Helios main catalogue**

■ Replacement air filters

– 1 pc M5-filter (F5)	
ELF-KWL 700 D/5	No. 4189
– 1 pc F7-filter	
ELF-KWL 700 D/7	No. 4191

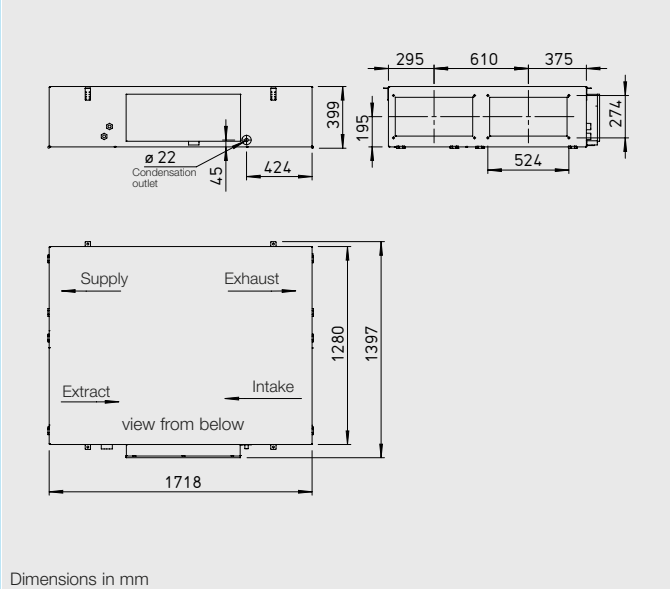
Technical data	KWL EC 700 D			KWL EC 700 D		
	Type	Ref.-No.		Type	Ref.-No.	
For ceiling installation	KWL EC 700 D Pro	4171		KWL EC 700 D Pro WW	4172	
Air flow volume on speed step¹⁾ Supply-/Extract air flow vol. V m³/h approx.	③	②	①	③	②	①
	510	330	210	510	330	210
Sound levels dB(A)²⁾ Supply L _{WA} (sound power level)	68	64	55	68	64	55
Extract L _{WA} (sound power level)	53	47	37	53	47	37
Power fan 2 x W	110	60	38	110	60	38
Voltage/Frequency	230 V ~, 50 Hz			230 V ~, 50 Hz		
Max. Amps A – ventilation	2.6			2.6		
– pre-heater	12.2			12.2		
– max. total	14.8			14.8		
Heat power/heater battery kW	–			2.3 (at 60/40 °C) / 2.1 (at 50/40 °C) / 1.3 (at 40/30 °C)		
Electric pre-heater kW	2.2			2.2		
Summer Bypass	automatic			automatic		
Wiring Diagram no.	1006			1006		
Temperature operation range	–20 °C to +40 °C			–20 °C to +40 °C		
Weight approx. kg	110			115		

¹⁾ Figures relate to the operational range defined to PHI (Passive House Institute). ²⁾ at 100 Pa.

KWL EC 1400 D



KWL EC 1400 D



Extremely flat ventilation unit with heat recovery for compact and space saving ceiling installation. With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. In different comfort- and equipment versions.

■ Casing

Made from galvanised sheet steel. Heat and noise insulated with 30 mm thick mineral wool. Inspection openings for filter change at the underside of the unit which can be opened without tools. Ceiling installation is carried out with vibration absorbing mounting elements (included in delivery).

■ Heat exchanger

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ Fans

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ Ducting

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 315 mm.

■ Condensation outlet

A separate condensation collector below the heat exchanger makes maintenance work easier. Condensation outlet is located next to terminal box. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ Summer operation

Comes with automatic bypass function for maximum comfort as standard.

■ Frost protection of heat exchanger

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ Speed control

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
 - Freely definable operating levels within the performance curve values.
 - Choice between constant air flow volume or constant pressure regulation.
 - Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
 - Initial start-up (automatic determination of the system performance curve).
 - Control of external shutters.
 - Connection of a fire alarm contact.
 - Weekly or daily program.
 - Pressure monitoring of filter pollution.
 - Display of required filter change, operating state, error messages.
 - Different access levels.
- Alternatively the ventilation unit can be controlled via ModBus (RS 485).

■ Electrical connection

Easily accessible terminal box located on the side of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the underside of the unit.

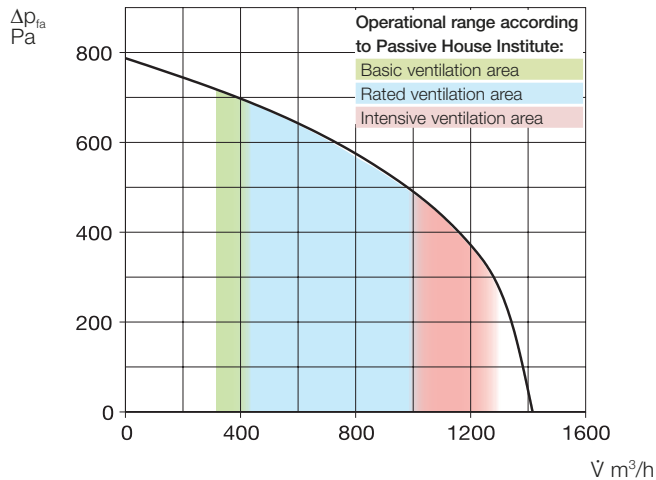
■ Heater battery

(KWL EC.. Pro WW)

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHS 1100 24V (0-10V), accessories) is recommended.

KWL EC 1400 D

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	60	51	53	53	50	51	49	45
L _{WA} Supply	dB(A)	80	63	68	71	71	75	71	70



■ Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



■ Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes. **WHSH 1100 24V(0-10V)** No. 8819



■ Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached. Dim. mm (W x H x D) 95 x 97 x 30

KWL-CO₂	Ref.-No. 4272
KWL-FTF	Ref.-No. 4273
KWL-VOC	Ref.-No. 4274



Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 315 mm (incl. 4 screws).

KWL-ÜS 1400 D	No. 4207
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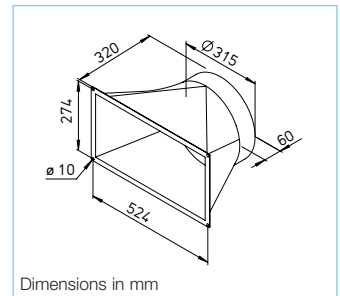
Flexible sleeve

To reduce vibration transmission, incl. 2 worm drive clips.

FM 315	Ref.-No. 1674
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Flange ring from galvanised sheet steel for duct connection.

FR 315	Ref.-No. 1204
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Dimensions in mm

Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 315	Ref.-No. 2578
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■ Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements, **Helios main catalogue**

■ Replacement air filters

– 1 pc M5-filter (F5)	
ELF-KWL 1400 D/5	No. 4193
– 1 pc F7-filter	
ELF-KWL 1400 D/7	No. 4195

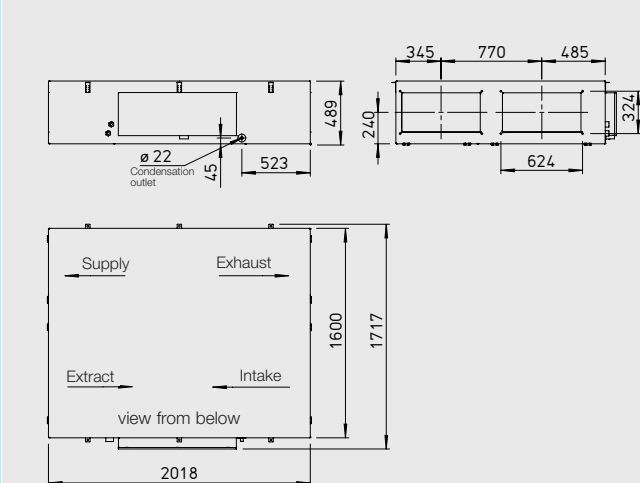
Technical data						
	KWL EC 1400 D			KWL EC 1400 D With water heater battery		
	Type	Ref.-No.		Type	Ref.-No.	
For ceiling installation	KWL EC 1400 D Pro	4173		KWL EC 1400 D Pro WW	4174	
Air flow volume on speed step ¹⁾	③	②	①	③	②	①
Supply-/Extract air flow vol. V m³/h approx	1000	650	400	1000	650	400
Sound levels dB(A) ²⁾						
SupplyL _{WA} (sound power level)	80	71	60	80	71	60
Extract L _{WA} (sound power level)	60	51	39	60	51	39
Power fans 2 x W	225	140	80	225	140	80
Voltage/Frequency	3 N ~ 400 V, 50 Hz			3 N ~ 400 V, 50 Hz		
Max. Amps A – ventilation	6.2 / – / –			6.2 / – / –		
– pre-heater	– / 6.5 / 6.5			– / 6.5 / 6.5		
– max. total	6.2 / 6.5 / 6.5			6.2 / 6.5 / 6.5		
Heat power/heater battery kW	–			4.7 (at 60/40 °C) / 4.2 (at 50/40 °C) / 2.7 (at 40/30 °C)		
Electric pre-heater kW	4.5			4.5		
Summer Bypass	automatic			automatic		
Wiring diagram no.	1007			1007		
Temperature operation range	– 20 °C to + 40 °C			– 20 °C to + 40 °C		
Weight approx. kg	185			190		

¹⁾ Figures relate to the operational range defined by PHI (Passive House Institute). ²⁾ at 100 Pa.

KWL EC 2000 D



KWL EC 2000 D



Dimensions in mm



Extremely flat ventilation unit with heat recovery for compact and space saving ceiling installation. With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. In different comfort- and equipment versions.

■ Casing

Made from galvanised sheet steel. Heat and noise insulated with 30 mm thick mineral wool. Inspection openings for filter change at the underside of the unit which can be opened without tools. Ceiling installation is carried out with vibration absorbing mounting elements (included in delivery).

■ Heat exchanger

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ Fans

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ Ducting

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 400 mm.

■ Condensation outlet

A separate condensation collector below the heat exchanger makes maintenance work easier. Condensation outlet is located next to terminal box. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ Air filter

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ Summer operation

Comes with automatic bypass function for maximum comfort as standard.

■ Frost protection of heat exchanger

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ Speed control

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
 - Freely definable operating levels within the performance curve values.
 - Choice between constant air flow volume or constant pressure regulation.
 - Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
 - Initial start-up (automatic determination of the system performance curve).
 - Control of external shutters.
 - Connection of a fire alarm contact.
 - Weekly or daily program.
 - Pressure monitoring of filter pollution.
 - Display of required filter change, operating state, error messages.
 - Different access levels.
- Alternatively the ventilation unit can be controlled via ModBus (RS 485).

■ Electrical connection

Easily accessible terminal box located on the side of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the underside of the unit.

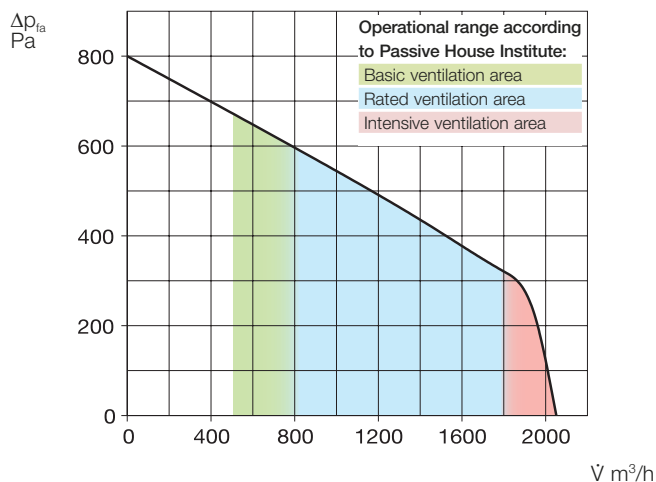
■ Heater battery

(KWL EC.. Pro WW)

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHS 1100 24V (0-10V), accessories) is recommended.

KWL EC 2000 D

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	59	56	52	48	49	47	45	40
L _{WA} Supply	dB(A)	77	66	68	67	72	69	69	64



Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes.

WHSH 1100 24V(0-10V) No. 8819



Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached.

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

KWL-CO₂	Ref.-No. 4272
KWL-FTF	Ref.-No. 4273
KWL-VOC	Ref.-No. 4274



Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 400 mm (incl. 4 screws).

KWL-ÜS 2000 D No. 4208

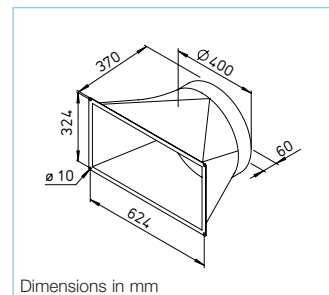
Flexible sleeve

To reduce vibration transmission, incl. 2 worm clips

FM 400 Ref.-No. 1676

Flange ring from galvanised sheet steel for duct connection.

FR 400 Ref.-No. 1206



Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 400 Ref.-No. 2580



Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements,

Helios main catalogue

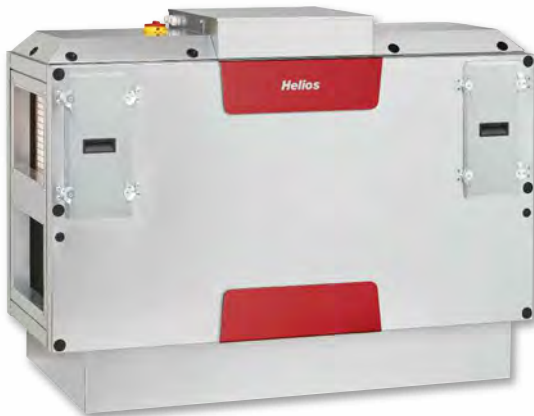
Replacement air filters

– 1 pc M5-filter (F5)	
ELF-KWL 2000 D/5	No. 4197
– 1 pc F7-filter	
ELF-KWL 2000 D/7	No. 4204

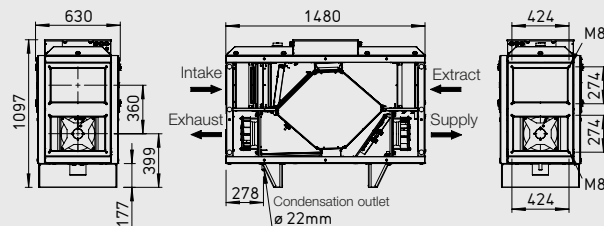
Technical data						
	KWL EC 2000 D			KWL EC 2000 D With water heater battery		
	Type	Ref.-No.		Type	Ref.-No.	
For ceiling installation	KWL EC 2000 D Pro	4175		KWL EC 2000 D Pro WW	4176	
Air flow volume on speed step ¹⁾	③	②	①	③	②	①
Supply-/Extract air flow vol. V m³/h approx.	1800	1150	720	1800	1150	720
Sound levels dB(A) ²⁾						
Supply L _{WA} (sound power level)	77	67	57	77	67	57
Extract L _{WA} (sound power level)	59	50	40	59	50	40
Power fan 2 x W	395	245	150	395	245	150
Voltage/Frequency	3 N ~ 400 V, 50 Hz			3 N ~ 400 V, 50 Hz		
Max. Amps A – ventilation	6.2 / – / –			6.2 / – / –		
– pre-heater	10.1 / 10.1 / 10.1			10.1 / 10.1 / 10.1		
– max. total	16.3 / 10.1 / 10.1			16.3 / 10.1 / 10.1		
Heat power/heater battery kW	–			8.1 (at 60/40 °C) / 7.3 (at 50/40 °C) / 4.6 (at 40/30 °C)		
Electric pre-heater kW	7.0			7.0		
Summer Bypass	automatic			automatic		
Wiring Diagram no.	1008			1008		
Temperature operation range	– 20 °C to + 40 °C			– 20 °C to + 40 °C		
Weight approx. kg	265			270		

¹⁾ Figures relate to the operational range defined to PHI (Passive House Institute). ²⁾ at 100 Pa.

KWL EC 800 S



KWL EC 800 S



Dimensions in mm



Central ventilation units with heat recovery for compact and space-saving floor installation (vertical). With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. Optional with built-in water heater battery.

■ **Casing**

Made from galvanised sheet steel. Heat and noise insulated with 50 mm thick mineral wool. Inspection openings for filter change at the two side doors which can be opened optionally without tool or using a socket wrench. Both sides panels are completely removable for free access of all elements. The unit is suitable for the vertical floor installation in the interior. Anti vibration mounts can be placed below (on site) to prevent the direct transmission of vibration and structure-borne noise on parts of the building.

■ **Heat exchanger**

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ **Fans**

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ **Ducting**

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 250 mm. The unit can be installed either way round, so that intake- and exhaust air as well as extract- and supply air connections can be left or right.

■ **Condensation outlet**

The unit is equipped with a condensate tray made from high quality steel. The condensation outlet is located at the bottom. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ **Air filter**

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ **Summer operation**

Comes with automatic bypass function for maximum comfort as standard.

■ **Frost protection of heat exchanger**

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ **Speed control**

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
- Freely definable operating levels within the performance curve values.
- Choice between constant air flow volume or constant pressure regulation.
- Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
- Central building control system via ModBus (RS 485).
- Initial start-up (automatic determination of the system performance curve).
- Control of external shutters.
- Connection of a fire alarm contact.
- Weekly or daily program.
- Pressure monitoring of filter pollution.
- Display of required filter change, operating state, error messages.
- Different access levels.

■ **Electrical connection**

Easily accessible terminal box located on top of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the top of the unit.

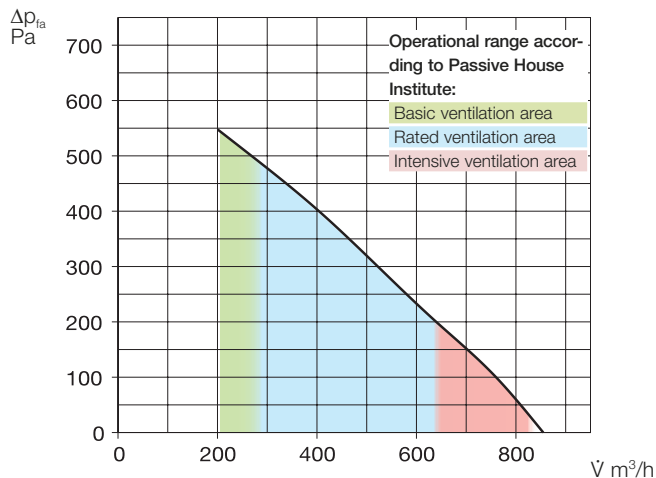
■ **Heater battery**

(KWL EC.. Pro WW)

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHS 1100 24V (0-10V), accessories) is recommended.

KWL EC 800 S

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	70	65	68	54	49	43	35	34
L _{WA} Supply	dB(A)	78	76	73	67	63	63	55	55
L _{PA} Exhaust	dB(A)	54	50	50	42	42	41	31	25



■ Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



■ Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes.

WHSH 1100 24V(0-10V) No. 8819



■ Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached.

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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 250 mm (incl. 4 screws).

KWL-ÜS 800 S No. 8339

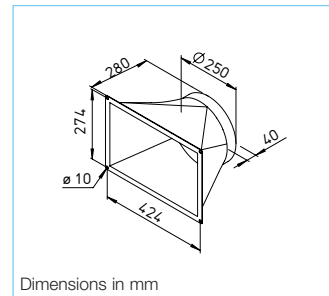
Flexible sleeve

To reduce vibration transmission, incl. 2 worm clips.

FM 250 Ref.-No. 1672

Flange ring from galvanised sheet steel for duct connection.

FR 250 Ref.-No. 1203



Dimensions in mm

Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 250 Ref.-No. 2576



■ Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements,

Helios main catalogue

■ Replacement air filters

– 1 pc M5-filter (F5)

ELF-KWL 800 S/5 No. 8333

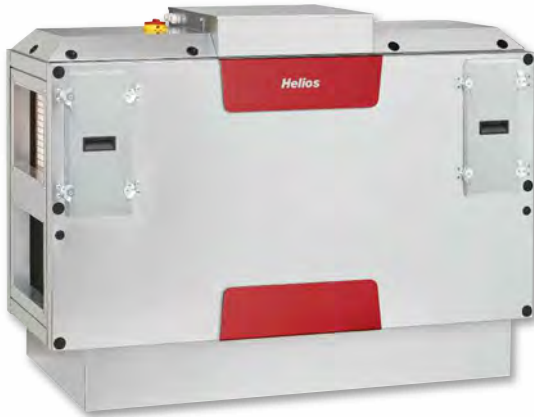
– 1 pc F7-filter

ELF-KWL 800 S/7 No. 8334

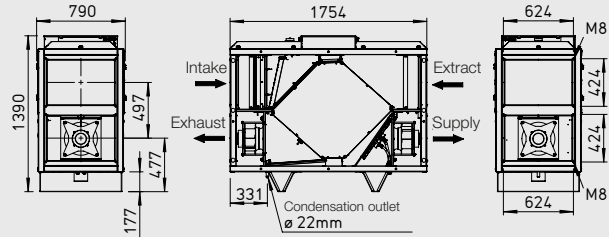
Technical data						
	KWL EC 800 S Type Ref.-No.			KWL EC 800 S Type Ref.-No.		
For floor installation	KWL EC 800 S Pro 8327			KWL EC 800 S Pro WW 8328		
Air flow volume on speed step ¹⁾ Supply-/Extract air flow vol. Vm³/h approx.	③ 600	② 490	① 325	③ 600	② 490	① 325
Sound levels dB(A) at 620 m³/h and 195 Pa Supply L _{WA} (Sound power level) Extract L _{WA} (Sound power level) Case breakout L _{PA} in 1 m	78 70 54			78 70 54		
Power fan 2 x W	140	94	65	140	94	65
Standby-losses	< 1 W			< 1 W		
Voltage / Frequency	1 ~ 230 V, 50 Hz			1 ~ 230 V, 50 Hz		
Max. Amps A – ventilation	2.5			2.5		
– pre-heater	11			11		
– max. total	13.5			13.5		
Electric pre-heater kW	2.5			2.5		
Heat power / heater battery kW				2.8 (at 60/40 °C) / 2.6 (at 50/40 °C) / 1.6 (at 40/30 °C)		
Summer Bypass	automatic (adjustable), with heat exchanger cover			automatic (adjustable), with heat exchanger cover		
Wiring Diagram no.	1006			1006		
Temperature operation range	–20 °C to +40 °C			–20 °C to +40 °C		
Temperature installation location	+5 °C to +40 °C			+5 °C to +40 °C		
Weight approx. kg	172			175		

¹⁾ Figures relate to the operational range defined to PHI (Passive House Institute).

KWL EC 1800 S



KWL EC 1800 S



Dimensions in mm



Central ventilation units with heat recovery for compact and space-saving floor installation (vertical). With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. Optional with built-in water heater battery.

■ **Casing**

Made from galvanised sheet steel. Heat and noise insulated with 50 mm thick mineral wool. Inspection openings for filter change at the two side doors which can be opened optionally without tool or using a socket wrench. Both sides panels are completely removable for free access of all elements. The unit is suitable for the vertical floor installation in the interior. Anti vibration mounts can be placed below (on site) to prevent the direct transmission of vibration and structure-borne noise on parts of the building.

■ **Heat exchanger**

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ **Fans**

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ **Ducting**

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 400 mm. The unit can be installed either way round, so that intake- and exhaust air as well as extract- and supply air connections can be left or right.

■ **Condensation outlet**

The unit is equipped with a condensate tray made from high quality steel. The condensation outlet is located at the bottom. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ **Air filter**

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ **Summer operation**

Comes with automatic bypass function for maximum comfort as standard.

■ **Frost protection of heat exchanger**

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ **Speed control**

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
- Freely definable operating levels within the performance curve values.
- Choice between constant air flow volume or constant pressure regulation.
- Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
- Central building control system via ModBus (RS 485).
- Initial start-up (automatic determination of the system performance curve).
- Control of external shutters.
- Connection of a fire alarm contact.
- Weekly or daily program.
- Pressure monitoring of filter pollution.
- Display of required filter change, operating state, error messages.
- Different access levels.

■ **Electrical connection**

Easily accessible terminal box located on top of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the top of the unit.

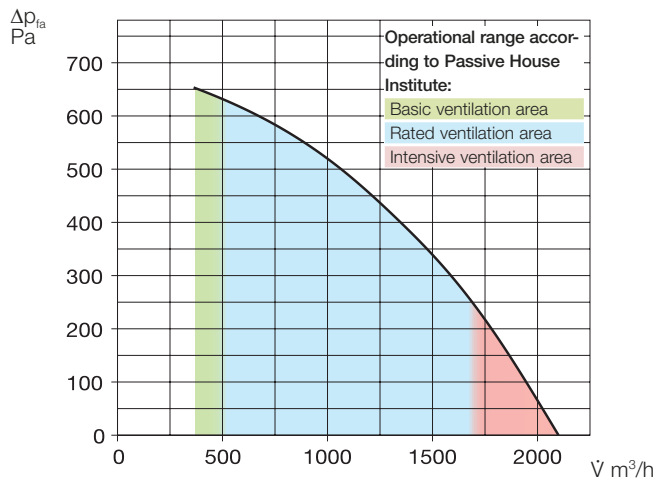
■ **Heater battery**

(KWL EC.. Pro WW)

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHSH 1100 24V (0-10V), accessories) is recommended.

KWL EC 1800 S

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract	dB(A)	61	54	58	51	52	49	38	14
L _{WA} Supply	dB(A)	72	61	66	63	65	64	56	56
L _{PA} Exhaust	dB(A)	52	35	47	43	47	47	37	28



■ Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



■ Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes.

WWSH 1100 24V(0-10V) No. 8199



■ Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached.

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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 400 mm (incl. 4 screws).

KWL-ÜS 1800 S No. 8340

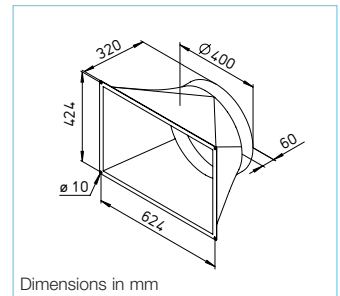
Flexible sleeve

To reduce vibration transmission, incl. 2 worm clips.

FM 400 Ref.-No. 1676

Flange ring from galvanised sheet steel for duct connection.

FR 400 Ref.-No. 1206



Dimensions in mm

Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 400 Ref.-No. 2580



■ Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements,

Helios main catalogue

■ Replacement air filters

– 1 pc M5-filter (F5)	
ELF-KWL 1800 S/5	No. 8335
– 1 pc F7-filter	
ELF-KWL 1800 S/7	No. 8336

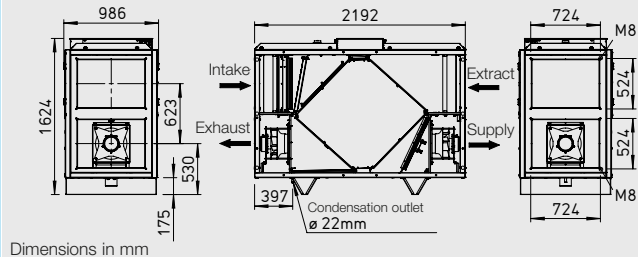
Technical data						
	KWL EC 1800 S Type Ref.-No.			KWL EC 1800 S Type Ref.-No.		
For floor installation	KWL EC 1800 S Pro 8329			KWL EC 1800 S Pro WW 8330		
Air flow volume on speed step ¹⁾ Supply-/Extract air flow vol. V m³/h approx.	③ 1400	② 1070	① 810	③ 1400	② 1070	① 810
Sound levels dB(A) at 1400 m³/h and 245 Pa						
Supply L _{WA} (Sound power level)	72			72		
Extract L _{WA} (Sound power level)	61			61		
Case breakout L _{PA} in 1 m	52			52		
Power fan 2 x W	315	225	165	315	225	165
Standby-losses	< 1 W			< 1 W		
Voltage / Frequency	3 N – 400 V, 50 Hz			3 N – 400 V, 50 Hz		
Max. Amps A– ventilation	5.0 / 0.0 / 0.0			5.0 / 0.0 / 0.0		
– pre-heater	6.5 / 6.5 / 6.5			6.5 / 6.5 / 6.5		
– max. total	11.5 / 6.5 / 6.5			11.5 / 6.5 / 6.5		
Electric pre-heater kW	4.5			4.5		
Heat power / heater battery kW				5.2 (at 60/40 °C) / 4.9 (at 50/40 °C) / 3 (at 40/30 °C)		
Summer Bypass	automatic (adjustable), with heat exchanger cover			automatic (adjustable), with heat exchanger cover		
Wiring Diagram no.	1007			1007		
Temperature operation range	–20 °C to +40 °C			–20 °C to +40 °C		
Temperature installation location	+5 °C to +40 °C			+5 °C to +40 °C		
Weight approx. kg	290			295		

¹⁾ Figures relate to the operational range defined to PHI (Passive House Institute).

KWL EC 2600 S



KWL EC 2600 S



Central ventilation units with heat recovery for compact and space-saving floor installation (vertical). With wide range of application in apartments, commercial and industrial applications. Certified according to passive-house standards. With highly efficient aluminium heat exchanger and energy-saving EC-motors. Optional with built-in water heater battery.

■ **Casing**

Made from galvanised sheet steel. Heat and noise insulated with 50 mm thick mineral wool. Inspection openings for filter change at the two side doors which can be opened optionally without tool or using a socket wrench. Both sides panels are completely removable for free access of all elements. The unit is suitable for the vertical floor installation in the interior. Anti vibration mounts can be placed below (on site) to prevent the direct transmission of vibration and structure-borne noise on parts of the building.

■ **Heat exchanger**

Large surface cross counterflow heat exchanger from aluminium with an efficiency up to 90 %. Easy to remove.

■ **Fans**

Two silent highly efficient EC-fans with backward curved impellers ensure highest efficiency. The special control system make a constant air flow volume or constant pressure regulation possible.

■ **Ducting**

Installation-friendly connection of the ducting for intake, exhaust, extract and supply air using ducts with nominal diameter of 560 mm. The unit can be installed either way round, so that intake- and exhaust air as well as extract- and supply air connections can be left or right.

■ **Condensation outlet**

The unit is equipped with a condensate tray made from high quality steel. The condensation outlet is located at the bottom. Ball siphon included in delivery. To be connected to drain pipe by installer.

■ **Air filter**

Standard equipment: Supply of cleaned outside air using a F7 filter. Extract air passes through a F5 filter before entering the heat exchanger. All filters are pressure monitored and are easy to remove.

■ **Summer operation**

Comes with automatic bypass function for maximum comfort as standard.

■ **Frost protection of heat exchanger**

A electric pre-heater battery heats the intake air when the temperature is too low. This prevents ice from building up in the heat exchanger and ensures optimal heat recovery during the complete heating period.

■ **Speed control**

The comfort controller for surface mounting with touchscreen (included in delivery) and user-friendly menu navigation makes the following functions possible:

- Operation directly via touchscreen.
- Freely definable operating levels within the performance curve values.
- Choice between constant air flow volume or constant pressure regulation.
- Demand-driven ventilation using CO₂-, VOC (mixed gas) or humidity sensor.
- Central building control system via ModBus (RS 485).
- Initial start-up (automatic determination of the system performance curve).
- Control of external shutters.
- Connection of a fire alarm contact.
- Weekly or daily program.
- Pressure monitoring of filter pollution.
- Display of required filter change, operating state, error messages.
- Different access levels.

■ **Electrical connection**

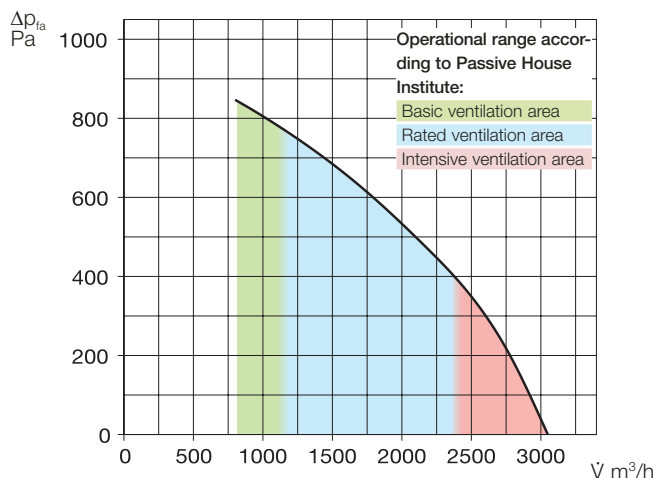
Easily accessible terminal box located on top of the casing. Isolator switch, lockable via padlock, for maintenance work can be operated from the top of the unit.

■ **Heater battery (KWL EC.. Pro WW)**

The integrated water heater battery provides a comfortable and energy-efficient heating of the supply air. The target temperature simply is set at the controller. For the control of the water heater battery the use of the hydraulic unit (WHSH 1100 24V (0-10V), accessories) is recommended.

KWL EC 2600 S

Frequency	Hz	Total	125	250	500	1k	2k	4k	8k
L _{WA} Extract		dB(A)	62	52	58	56	54	49	43
L _{WA} Supply		dB(A)	77	67	69	69	72	67	60
L _{PA} Exhaust		dB(A)	52	37	48	46	43	36	23



■ Comfort controller for surface mounting

Functions as described on the left are selected comfortably over the innovative surface mounted controller which is included in delivery. User-friendly operation over self-describing graphic elements with plain text directly at the touch-screen. Control line SL 6/5 (length = 5 m) included in delivery, other lengths (SL 6/..., accessories) available for order.



■ Accessories for type .. WW Pro hydraulic unit

Controls the flow of the water heater battery by means of three point valve actuator 24 V (0-10 V) and in this way the thermal output which is conveyed to the air. Delivery as complete unit, including flow-/return temperature display, circulation pump and flexible connecting pipes.

WHSH 1100 24V(0-10V) No. 8199



■ Accessories for all types CO₂-VOC-/humidity sensor

Measures CO₂-, mixed gas (VOC) concentration or relative humidity and controls the ventilation unit according to setpoint. Max. one sensor can be attached.

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

KWL-CO₂ Ref.-No. 4272

KWL-FTF Ref.-No. 4273

KWL-VOC Ref.-No. 4274



Adapter piece – symmetrical

Adapter piece from rectangular unit flange to circular ducting with 560 mm (incl. 4 screws).

KWL-ÜS 2600 S No. 8341

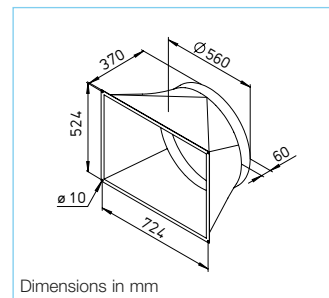
Flexible sleeve

To reduce vibration transmission, incl. 2 worm clips.

FM 560 Ref.-No. 1679

Flange ring from galvanised sheet steel for duct connection.

FR 560 Ref.-No. 1209



Dimensions in mm

Back draught shutter, motorised

Prevents inflow of cold air when unit stopped. Automatic operation when fan is in use. Comes with built-on spring release motor (installed outside the airflow). To be installed in any position. Closing pressure adjustable according to fan power and mounting position.

RVM 560 Ref.-No. 2583



■ Other accessories Pages

KWL®-periphery	40 on
– Air distribution systems	50 on
– Further overview, Control lines	60 on

Accessories-Details

Grilles, ducting, duct components, roof terminations, extract air elements,

Helios main catalogue

■ Replacement air filters

– 1 pc M5-filter (F5)

ELF-KWL 2600 S/5 No. 8337

– 1 pc F7-filter

ELF-KWL 2600 S/7 No. 8338

Technical data						
	KWL EC 2600 S TypeRef.-No.			KWL EC 2600 S TypeRef.-No.		
For floor installation	KWL EC 2600 S Pro8331			KWL EC 2600 S Pro WW8332		
Air flow volume on speed step ¹⁾ Supply-/Extract air flow vol. Vm³/h approx.	③ 2065	② 1450	① 840	③ 2065	② 1450	① 840
Sound levels dB(A)at 2100 m³/h and 275 Pa Supply L _{WA} (sound power level) Extract L _{WA} (sound power level) Case breakout L _{PA} in 1 m						
		77			77	
		62			62	
		52			52	
Power fan 2 x W	450	295	175	450	295	175
Standby-losses	< 1 W			< 1 W		
Voltage / Frequency	3 N ~ 400 V, 50 Hz			3 N ~ 400 V, 50 Hz		
Max. Amps A – ventilation	2.5 / 2.5 / 2.5			2.5 / 2.5 / 2.5		
– pre-heater	10.0 / 10.0 / 10.0			10.0 / 10.0 / 10.0		
– max. total	12.5 / 12.5 / 12.5			12.5 / 12.5 / 12.5		
Electric pre-heater kW	6.9			6.9		
Heat power / heater battery kW				9.3 (at 60/40 °C) / 8.5 (at 50/40 °C) / 5.3 (at 40/30 °C)		
Summer Bypass	automatic (adjustable), with heat exchanger cover			automatic (adjustable), with heat exchanger cover		
Wiring Diagram no.	1008			1008		
Temperature operation range	–20 °C to +40 °C			–20 °C to +40 °C		
Temperature installation location	+5 °C to +40 °C			+5 °C to +40 °C		
Weight approx. kg	490			500		

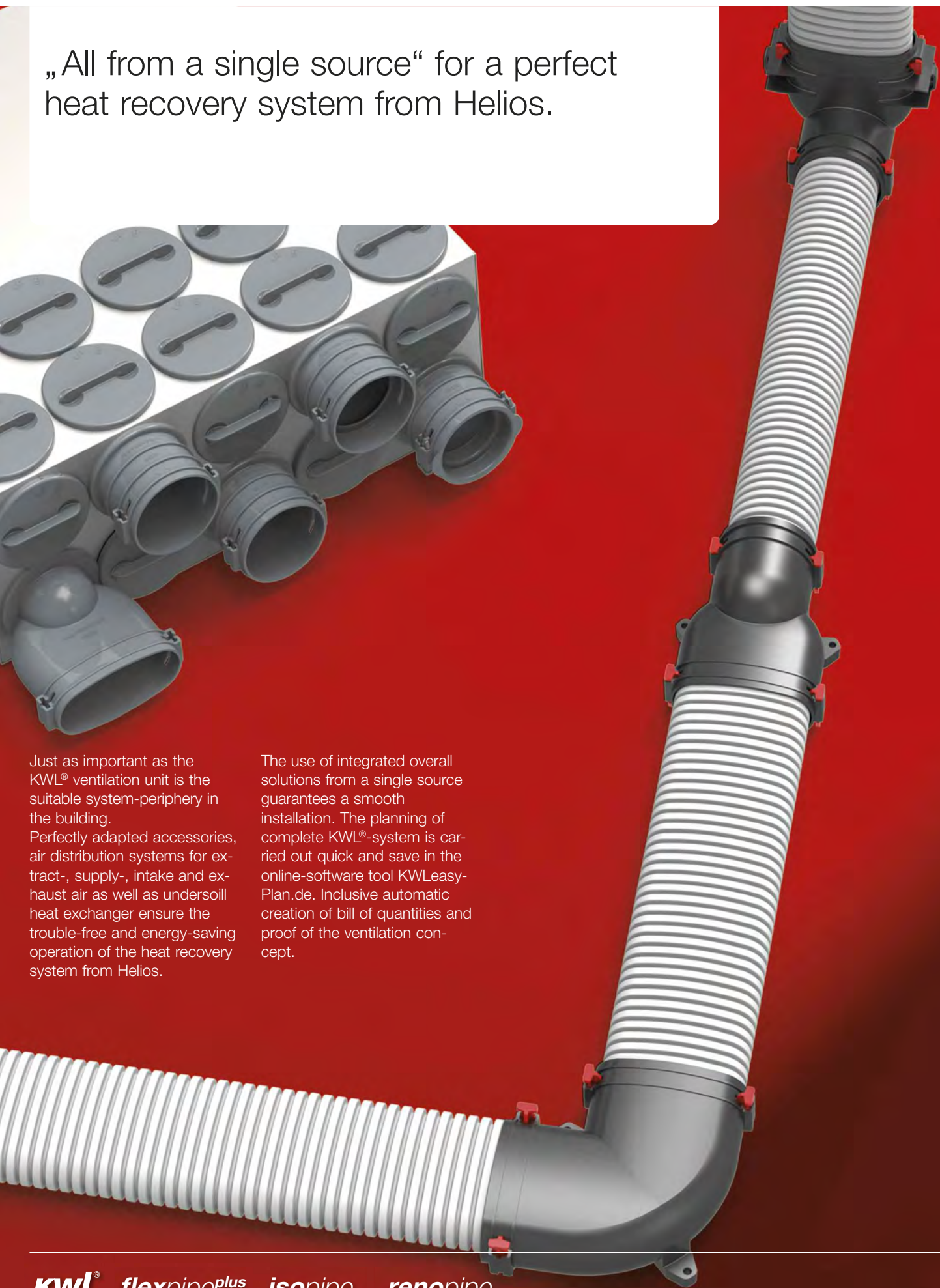
¹⁾ Figures relate to the operational range defined to PHI (Passive House Institute).

„All from a single source“ for a perfect heat recovery system from Helios.



Just as important as the KWL® ventilation unit is the suitable system-periphery in the building. Perfectly adapted accessories, air distribution systems for extract-, supply-, intake and exhaust air as well as undersoil heat exchanger ensure the trouble-free and energy-saving operation of the heat recovery system from Helios.

The use of integrated overall solutions from a single source guarantees a smooth installation. The planning of complete KWL®-system is carried out quick and save in the online-software tool KWLeasy-Plan.de. Inclusive automatic creation of bill of quantities and proof of the ventilation concept.



kwl® *flexpipe^{plus}* *isopipe* *renopipe*

HYGROBOX AND UNDERSOIL HEAT EXCHANGER



Optional ground-to-brine or ground-to-earth heat exchanger increases the efficiency of the ventilation units with heat recovery. This saves even more energy in the winter and provides pleasant cooling on hot days.

The HygroBox ensures as active humidification unit for a healthy indoor climate throughout the year and avoids expensive damage to furniture, floor surfaces, etc.

42^{on}

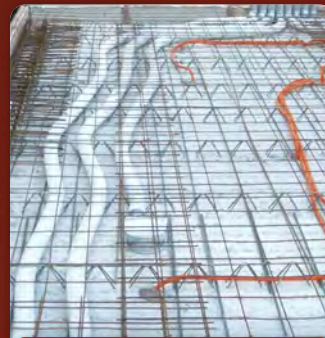
INSULATED DUCTING SYSTEM IsoPipe®



IsoPipe® is the practical alternative to the spiral duct installation with additional thermal insulation. Already completely insulated IsoPipe® is perfect for intake- and exhaust air duct to the KWL® as well as for the supply- and extract air pipe in lofts, basements or cool areas. The insulated ducting system avoids condensation build-up and saves enormously assembly time.

48^{on}

AIR DISTRIBUTION SYSTEMS FlexPipe®, RenoPipe, etc.



For every type of installation the suitable solution. FlexPipe®*plus* combines the proven round pipe concept with oval components. In any form, for even more flexibility in planning and installation. RenoPipe is the perfect solution for the energetic renovation and is simply installed surface mounted to ceiling or wall. There are also flat duct systems made of galvanised sheet steel or plastic available in flat construction and rigid construction.

50^{on}

ACCESSORIES



Multiple award-winning design valves, which unobtrusively integrate themselves into every room ambiance. Extract air elements, valves and overflow elements. Most diverse shutters, attenuators, air temperature control systems, heater batteries etc.

Versatile accessories complete the overall system solution from Helios in the range of central ventilation with heat recovery in a perfect way and guarantees the perfect functioning of the entire system.

60^{on}

KWL HB..



(Figure: KWL HB.. WW L)

Especially developed for ventilation systems in residential buildings and offices. The Helios HygroBox, designed to achieve automatically a healthy climate with ideal humidity throughout the year.

Advantages

- Constant room climate with ideal humidity level.
- Avoidance of expensive damage to furniture, wooden floor surfaces and antiques.
- Relief of allergy complaints and physical loads. Strengthening of the body's defences by a shortening of the life span of bacteria and viruses.
- Reduction of fine dust and electrostatic loadings.

Special HygroBox characteristics

- Constant supply air humidity and temperature in all rooms.
- Principle of the natural evaporation prevents excessive humidity.
- Hygienic harmless by UVC disinfection.
- Fully automatic mode with automatic summer switch-off.
- Low-maintenance and easy installable.
- Low operating cost by use of the evaporation energy from the existing heating system.

Functional principle

The HygroBox is an active humidification unit for the integration into new or existing KWL®-ventilation systems with heat recovery. The fresh outside air is fed through the heat exchanger of the KWL®-unit and takes up the heat energy from the extracted air. The preheated air is supplied afterwards to the HygroBox, in which an active and automatic humidification takes place ac-

cording to the natural evaporation principle. A rotor fitted with lamellas turns inside the unit continuously in a water bath and passes water molecules over the moistened lamella surface on to the warmed supply air. Regardless of the operating level of the KWL®-system as well as of outside influences of the weather the HygroBox keeps the preselected relative air humidity consistently and provides in such a way for a healthy climate with ideal humidity level.

Delivery

Compact unit, ready to plug in, including water hose and water filter.

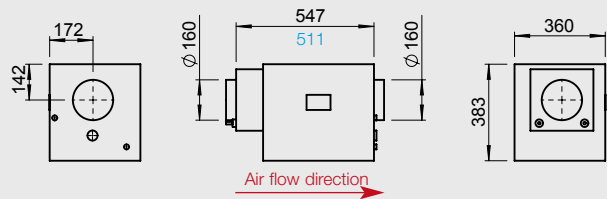
Heater battery

- The HygroBox is equipped with a water (type WW) or electric heater battery (type EH). The supply air is warmed up before humidification and provides in such a way for the required evaporation energy and pleasant temperature of the supply air.
- With heating systems with low flow water temperature (e.g., warm pumps) a low temperature heater battery (KWL-NHR.., accessories, see on the right) is to be connected at the outlet side of the HygroBox.

Summer operation

- With sufficiently high humidity level of the outside air (e.g. in the summer) the HygroBox switches automatically into the standby mode. In this condition no water is in the unit and the rotor stands still.

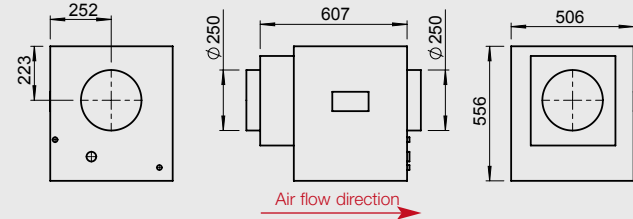
KWL HB 250.. L



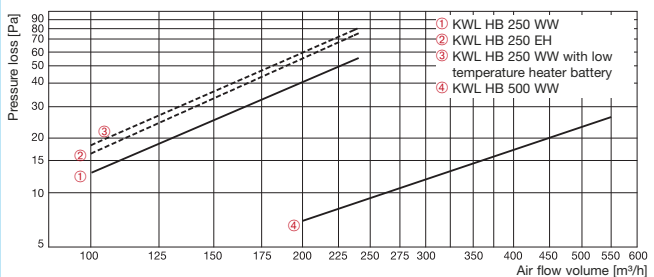
Dimensions in mm

Type KWL HB 250 WW L, Type KWL HB 250 EH L

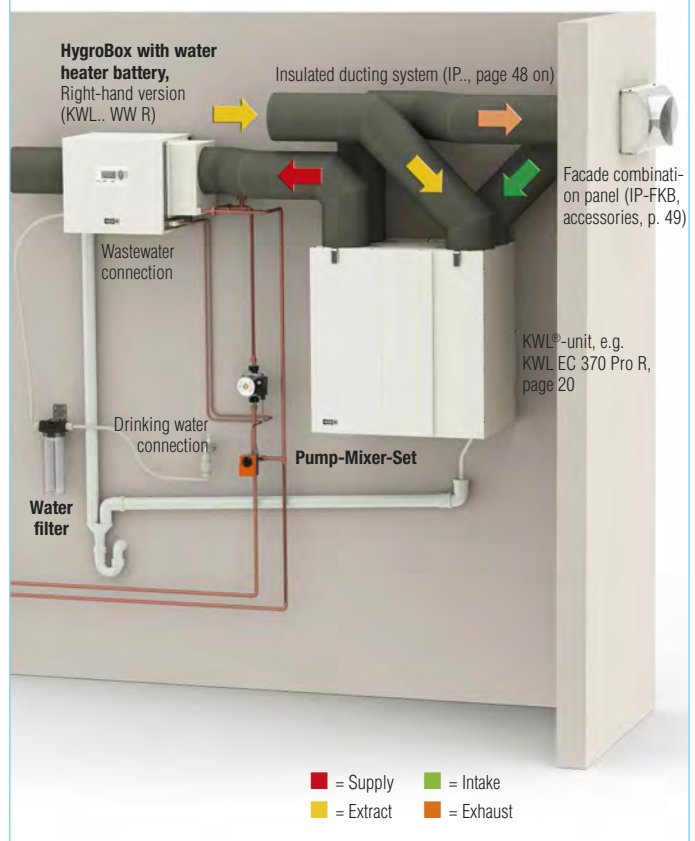
KWL HB 500 WW L



Dimensions in mm



Assembly scheme KWL HB.. WW R





Low temperature heater battery
(for KWL-HB.. WW)

Description

- In connection with low-temperature heater batteries the additional installation of a heater battery at the air outlet of the Hygro-Box is recommended in order to compensate the evaporation cooling.
- The external temperature sensor of the heater battery (included in delivery) is to be installed in a distance of approx. 50 cm after the heater battery in the supply air duct.

Accessories

Low temperature heater battery
– for KWL 250 WW..

KWL-NHR 250 Ref.-No. 5628

– for KWL 500 WW..

KWL-NHR 500 Ref.-No. 5633



Pump-Mixer-Set
(for KWL-HB.. WW)

Description

- For connection of HygroBox to existing heating circuits.
- Consisting of:
 - 1 pc circulation pump 230 V
 - 2 pcs screw joints, R 1/2a/15 mm MS (brass)
 - 1 pc three-way-mixing valve with servo motor 230 V, Rp1/2“, DN 15, operating time 120 seconds

Accessories

Pump-Mixer-Set
– for KWL 250 WW..

KWL-PMA 250 Ref.-No. 5629

– for KWL 500 WW..

KWL-PMA 500 Ref.-No. 5634



Spare-UVC-tube and -osmosis-membrane
(for all types)

Description

- Helios HygroBox units are equipped with a continuous, automatically monitored UVC disinfection, which kills effectively all germs and bacteria.
- Additionally, the water in the evaporator tub is changed automatically dependent on water hardness and evaporation performance.
- The hygienic safety of the HygroBox is documented through an expert opinion and certified.

Accessories

Spare-UVC-tube

KWL-UVR Ref.-No. 5631

Spare-osmosis-membrane

KWL-OME Ref.-No. 5632



Spare-water-filter
(for all types)

- The water filter in water supply line is to be exchanged generally every 6 months. The filter change is indicated by a suitable note on the display of the HygroBox.

Accessories

Spare-water-filter

KWL-WF Ref.-No. 5630

Note

„KWL®-HygroBox. 50-21:
The formula for a healthy
climate.“

Please ask for separate flyer.
Ref.-No. 86981

Technical data

	With electric heater battery For KWL®-units up to 250 m³/h		With water heater battery For KWL®-units up to 250 m³/h		For KWL®-units up to 500 m³/h	
	Type	Ref.-No.	Type	Ref.-No.	Type	Ref.-No.
Right-hand version (air intake on the right)	KWL HB 250 EH R	0963	KWL HB 250 WW R	0923	KWL HB 500 WW R	0981
Left-hand version (air intake on the left)	KWL HB 250 EH L	0962	KWL HB 250 WW L	0922	KWL HB 500 WW L	0980
Adjustable relative supply air humidity in %	40-60		40-60		40-60	
Adjustable supply air temperature °C	15-25		15-25		15-25	
Air flow volume m³/h	250		250		500	
Power consumption max. W	1400		100		100	
Heat power W	1300		2000		4200	
Voltage/Frequency	230 V, 1 ph., 50 Hz		230 V, 1 ph., 50 Hz		230 V, 1 ph., 50 Hz	
Water connection	3/4"		3/4"		3/4"	
Water drain ø mm	40-50		40-50		40-50	
Weight (net weight/operating weight) approx. kg	25/28		25/28		46/61	
Accessories						
Pump-Mixer-Set	—		KWL-PMA 250		KWL-PMA 500	
Ref.-No.	—		5629		5634	
Low temperature heater battery	—		KWL-NHR 250		KWL-NHR 500	
Ref.-No.	—		5628		5633	
UVE-tube	KWL-UVR		KWL-UVR		KWL-UVR	
Ref.-No.	5631		5631		5631	
Water filter	KWL-WF		KWL-WF		KWL-WF	
Ref.-No.	5630		5630		5630	
Osmosis membrane	KWL-OME		KWL-OME		KWL-OME	
Ref.-No.	5632		5632		5632	

SEWT-kit



The ground-to brine heat exchanger substantially increases the efficiency of the ventilation units.

SEWT saves even more energy and reduces costs of heating to a minimum. The optimal add-on for ventilation systems with heat recovery.

Advantages

- Provides additional pre-heating during winter.
- Pleasant cooling on hot days.
- Comes as a complete kit with perfectly fitting components.

Operation

SEWT uses the fact that the temperature below the ground is relatively constant over the year. The undersoil collector hose is laid 1.2 m deep. The hydraulic unit circulates the brine-liquid according to the temperature outside. The brine-liquid serves as heat transfer medium and delivers the heat to the supply air via the heat exchanger unit.

Effects:

- During winter SEWT achieves a pre-heating of the cool outside air up to 14 K. This results in the intake air flowing into the ventilation unit with usually more than 0 °C and therefore prevents the heat exchanger from icing up. The benefits are a higher heat recovery factor and a higher supply air temperature. An additional heater battery is only needed on extremely cold days.
- On hot summer days the SEWT causes a reduction in temperature.
- During transition periods the circulation of the brine-liquid is provided by the hydraulic unit as a function of the outside temperature. Therefore the outside air always arrives at the ventilation unit energetically optimised. Saving energy and always provides comfortable room climate.

Information on planning

- To ensure the highest possible heat transfer, the undersoil collector hose should be laid in at least 1.2 m depth as there is a constant temperature of about 8-12 °C throughout the year. The soil temperature increases the deeper the ducts are laid and becomes constant.
- To increase the heat exchange the hose should be laid directly under the soil in a sandbed. Furthermore, a minimum space of 0.5 m from one hose to the other should be observed for two parallel tubes.
- Alternatively to laying the hose horizontally in a zigzag arrangement under the soil a vertical bore hole can be used.

Delivery

- According to the installation order on the building site and to ensure an optimised transport the SEWT is delivered as kit. The SEWT-kit ensures full functionality and perfect fitting accuracy. It consists of three delivery-sets as described on the right page.

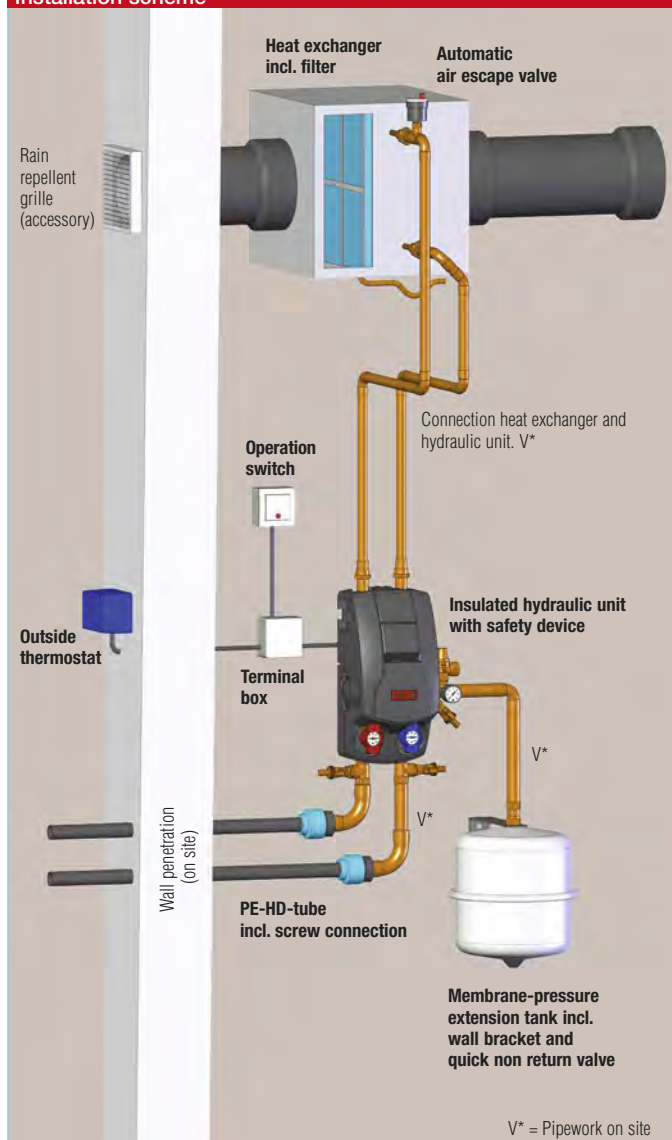
SEWT-Kit

Ref.-No. 2564

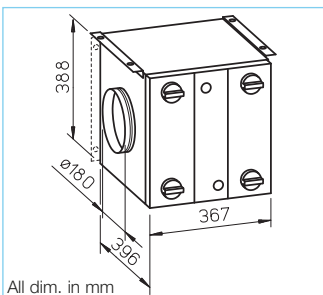
Basic scheme for the installation

The ducting should be done with Helios IsoPipe® to avoid condensation creation. Additionally insulated spiral ducting can be used alternatively.

Installation scheme



SEWT-W



Brine-to-air heat exchanger

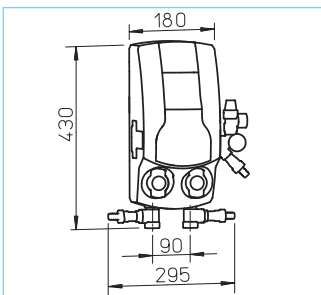
■ Specification

- ☐ Highly efficient brine-to-air heat exchanger with fins made from aluminium to ensure the best transfer to the intake air. Connection pipes made of copper Ø 12 mm.
- ☐ Double walled, completely insulated casing (20 mm insulation) made of steel, powder coated in grey. With mounting brackets for wall- and ceiling installation.
- ☐ Ø 180 mm spigots with twin-seal rubber gaskets.
- ☐ With integrated G 3 filter. Prevents dust, insects etc. from accessing the duct system.
- ☐ Easy accessible panel can be opened without tools and allows simple access to the filter.
- ☐ Air flow direction is variable as the filter can easily be placed for both directions.
- ☐ Condensation outlet incl. condensation trap, Ø 1/2".

■ Accessory

Replacement air filters (SU = 3 pcs)
ELF-SEWT-F Ref.-No. 2568

SEWT-H



Hydraulic unit and control unit

■ Specification

- ☐ Complete hydraulic-set with all components needed to connect the brine-to-air heat exchanger unit. Delivered as standard with control unit for automatic and manual operation.

■ Delivery

- ☐ Brine-pump unit (230 V), completely premounted in a foamed housing incl. safety device.
- ☐ Automatic protection against reverse flow.
- ☐ Temperature gauges for flow and return.
- ☐ Pressure expansion tank – 12 litres, connection 3/4", incl. wall bracket and stop valve for maintenance.

- ☐ Thermostat module with 2 setpoints for automatic control of the closed brine loop in summer/ winter operation.

- ☐ Control unit to change from automatic (thermostat operation) a manual operation of the closed brine loop. (incl. separate terminal box - without figure).



Technical data thermostat

Current	16 A (4 A ind.)
Voltage	230 V, 50/60 Hz
Protection to	IP 54
Wiring diagram no.	SS-906
Temperature range (adjustable)	2 x 0 – 40 °C

Technical data brine pump

Current max.	0.2 A
Voltage	230 V, 50 Hz
Power, 3 steps	25, 35, 45 W
Protection to	IP 44

SEWT-E

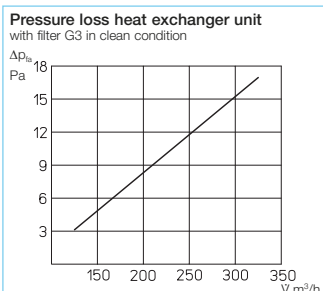


Undersoil hose set with screw connections and ethylene glycol

■ Specification

- ☐ Flexible PE-HD undersoil hose (PE-HD = polyethylene high pressure hose), wall thickness 2.9 mm, outer-Ø 32 mm. Delivered as bundle with 100 running mtrs.
- ☐ Especially designed for undersoil laying.
- ☐ Screw connection set made from high class polymer (PP) to connect the undersoil hose to the hydraulic unit.
- ☐ Screw connection set (32-1") with active sealing system.
- ☐ 20 l canister with ethylene glycol, free of amine und nitrite. Adequate for one complete filling of the system with a 25 % glycol-water mix.

Technical data SEWT-W



■ Notes

The SEWT-kit with the advantage of the package price ensures full functionality and perfect fitting accuracy:

Type SEWT-kit	Ref.-No. 2564
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The single parts of the SEWT-kit can also be ordered separately:

Type SEWT-E	Ref.-No. 2567
SEWT-W	2565
SEWT-H	2566

LEWT-kit



The undersoil air heat exchanger LEWT substantially increases the efficiency of the ventilation units with heat recovery.

Advantages

- Provides additional pre-heating during winter without any further energy requirements.
- Prevents the heat exchanger from icing up.
- Pleasant cooling on hot days.
- Additional heating of the supply air is only necessary when outside temperature is very low.
- Comes as a complete kit with perfectly fitting components.

Functional principle

LEWT uses the fact that the temperature below the ground is relatively constant all year. The outside air is not taken in directly but passes through the under-soil collector duct installed in approx. 1.2 to 1.5 m deep; the total length should be at least 40 m.

Effects:

- During winter LEWT achieves a pre-heating of the cool outside air up to 14 K. This results in the intake air flowing into the ventilation unit at more than 0 °C usually and therefore prevents the heat exchanger from icing up. The benefits are a higher heat recovery factor and a higher supply air temperature. The heater battery is only needed on very cold days.
- On hot summer days the SEWT causes a reduction in temperature.
- During transition periods the intake is by either the air passing through the undersoil collector or the direct intake opening depending on the outside temperature detected by the sensor. The electric bypass shutter controls the air intake automatically. The outside air reaches the ventilation unit energetically optimised which additionally

saves energy and provides a comfortable climate within the rooms.

Delivery

- According to the installation order on the building site and to ensure an optimised transport the LEWT is delivered as a kit. It consists of three delivery sets as described on the right hand page.
- The single components perfectly fit together as a sophisticated system. This ensures easy, quick and precise mounting with a high installation reliability.

LEWT-kit

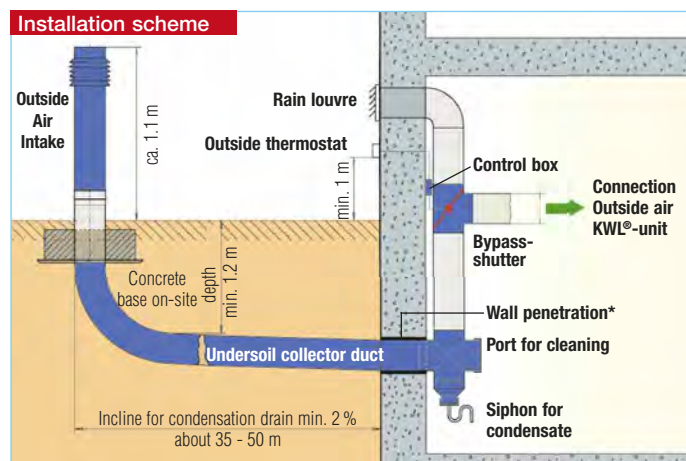
Ref.-No. 2977

Information on planning

- To ensure the highest possible heat transfer, the undersoil air collector duct should be laid in at least 1.2 m depth as there is a constant temperature of about 8 °C throughout the year. The soil temperature increases the deeper the ducts are laid and becomes constant.
- When installing it is important to consider that the condensation drain requires an incline of at least 2 %.
- To increase the heat exchange the duct should be laid directly under the soil in a sandbed. Furthermore, a space of 1 m from one duct to the other should be maintained when laying two ducts parallel.
- To keep the downstream pressure loss minimised a bending radius of at least 1 m is recommended.

Basic scheme for the laying: Buildings with basements

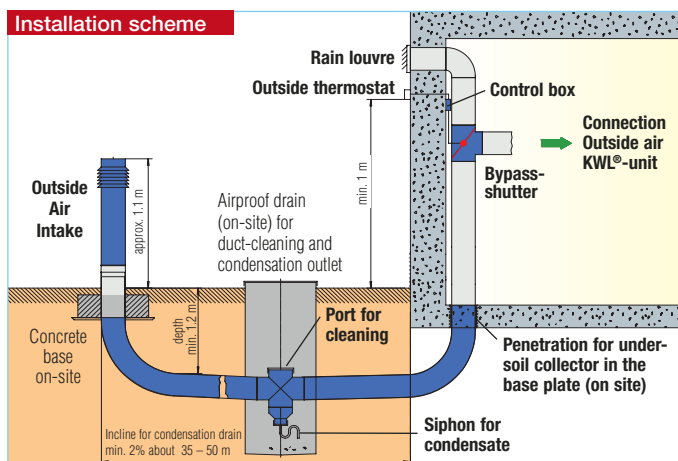
The undersoil collector reaches the building subsurface through a wall penetration.



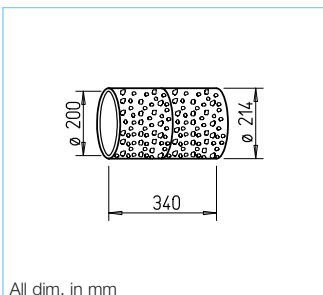
* not suitable for water pressure

Basic scheme for the laying: Buildings without basements

The undersoil collector reaches the building subsurface through the base plate. For revision purposes a drain is required by customer.



LEWT-E+M



Undersoil collector duct and wall penetration LEWT-E+M

Description

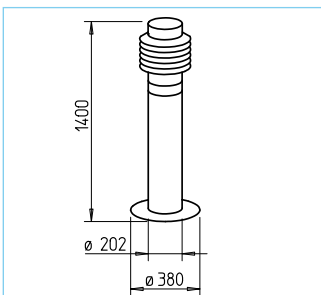
- ☐ Flexible undersoil collector duct, ribbed on the outside, smooth inner surface to ensure a very low air resistance, Ø 200 mm.
- ☐ Co-extruded compound duct made from physiological and to-xological harmless polyethylene (PE-HD). Developed specifically for undersoil laying.
- ☐ Antibacterial and antistatic material with smooth surface.
- ☐ Easy to clean.
- ☐ 100 % odourless, quality-assured PE-HD exclude transmission of pollutants and evaporations.
- ☐ The material PE-HD achieves a 2-times higher conductivity than PP with comparable wall thicknesses / duct cross sections. Even at 2.5 x better heat conduction performance a rises compared to PVC.
- ☐ Supplied as set with 2 x 25 running meters including wall duct DN 200 from polyethylene (bonding surface), profile seals, connector and seals.

- ☐ Undersoil collector, wall penetration and seals comply with IP 67, assuming accurate installation.

Additional connector with two seals.

LEWT-MU Ref.-No. 2971

LEWT-A



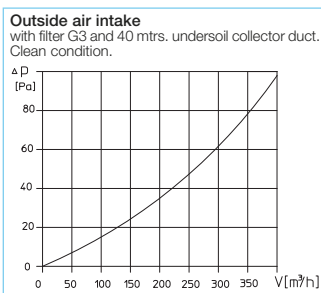
Outside-air-intake LEWT-A with filter

Description

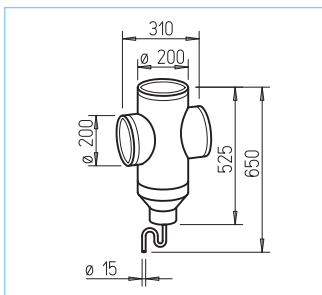
- ☐ Outside-air-intake in modern and timeless stainless-steel design.
- ☐ Fixation with support or bordering plate in dry construction or by setting in concrete.
- ☐ With integrated cone air filter, class G3. Prevents dust and insects from accessing the duct system.
- ☐ Cone filter can easily be released by hand for cleaning and changing.
- ☐ The connection between the outside-air-intake and undersoil-duct is done by just clipping.
- ☐ All parts are made of stainless steel.

Accessories

Replacement air filter (SU = 3 pcs)
ELF-LEWT-A Ref.-No. 2975



LEWT-S+F



Controller and duct form parts LEWT-S+F

Description

- ☐ Automatic controlling of the outside air intake via the undersoil collector duct or directly via the outside area as per the detected outside temperature.
- ☐ Temperature range for direct intake can be adjusted individually.
- ☐ Manual selection of the operation mode is possible.
- Contents**
 - ☐ Bypass shutter NW 200 with servo motor 230 V; for vertical mounting above the cross piece.
 - ☐ Cross piece for connection with the wall penetration. Including port for cleaning, condensation collector, siphon and cover.
 - ☐ Rain enclosure RAG (without pic.) suitable as coverage of the direct air intake. Prevents rain and insects from entering.

- ☐ Control knob and thermostat for automatic and manual control of the bypass shutter. To be mounted in a weather-protected place on the north-side of the building at 1 mtr. height. Dimensions in mm W 200 x H 90 x D 70



- ☐ Control box with double switch. Modes:
 - Thermostat mode, automatic
 - Undersoil heat, manual
 - Outside air, manual
 Dimensions in mm W 110 x H 180 x D 100



Technical data thermostat

Current	16 A (4 A ind.)
Voltage	230 V, 50/60 Hz
Protection to	IP 54
Wiring diagram no.	SS-798.1
Temperature range(adjustable)	2 x 0 – 40 °C

Technical data servo motor

Voltage	230 V, 50/60 Hz
Power	1.5 W
Protection to	IP 54

Notes

The single parts of the LEWT-kit can also be ordered separately:

Type	Ref.-No.
LEWT-E+M	2991
LEWT-S+F	2990
LEWT-A	2992

Insulated ducting system IsoPipe®



The innovative alternative to spiral ducting that must be insulated additionally to avoid condensation.

The insulated duct system IsoPipe®

- avoids condensation build-up,
- is provided with a smooth, sound absorbing inner surface and is easy to clean,
- saves assembly time,
- is the perfect solution for intake and extract ducting.

■ Laying

- All IsoPipe® parts, bends, wall and roof outlets are designed to fit together perfectly and fit into each other easily. IsoPipe® is mounted quickly: it saves up to 70 % assembly time compared to a spiral ducting installation with additional insulation.

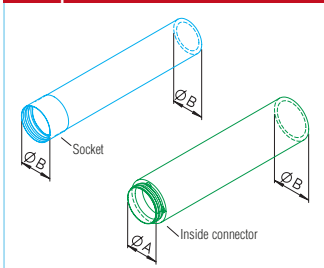
■ Specification

All parts are completely insulated and are made of water-vapour-tight and antistatic EPE. Heavy inflammable to class B1. Suitable for air flow temperatures from –25 to +80 °C. $\lambda = 0.04 \text{ W/mK}$, $d = 16 \text{ mm}$.

■ Laying-conception and installation

- IsoPipe® is especially applicable for intake and exhaust ducting in basements and cold surroundings.
- Suitable for air flow volumes up to 500 m³/h.
- IsoPipe® is impact resistant, very lightweight and can easily be shortened to the required length with a knife.

IsoPipe® duct



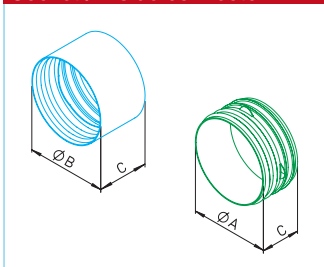
IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.- No.	Dim. in mm		Type	Ref.- No.	Dim. in mm		Type	Ref.- No.	Dim. in mm	
Duct with socket	IP 125/2000 ¹⁾	9406	—	157	—	—	—	—	—	—	—	—
Duct with inside connector	—	—	—	—	IP 160/2000 ²⁾	9447	160	192	IP 180/2000 ³⁾	9448	180	212

¹⁾ SU = 8 x 2 m

²⁾ SU = 6 x 2 m

³⁾ SU = 4 x 2 m

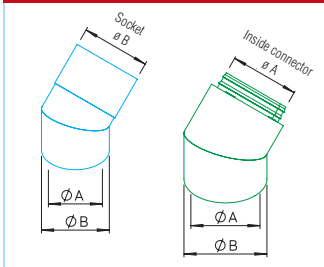
Socket / Inside connector



IsoPipe®	ø 125 mm					ø 160 mm					ø 180 mm				
	Type	Ref.- No.	ø A	ø B	C	Type	Ref.- No.	ø A	ø B	C	Type	Ref.- No.	ø A	ø B	C
Socket	IP-MU 125	9394	—	157	104	—	—	—	—	—	—	—	—	—	—
Inside connector	—	—	—	—	—	IP-IV 160	9453	160	—	80	IP-IV 180	9454	180	—	80

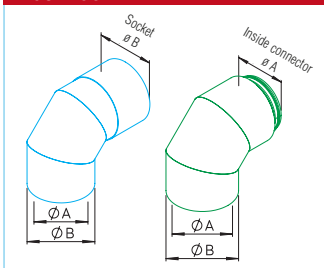
From polymers.

Elbow 45°



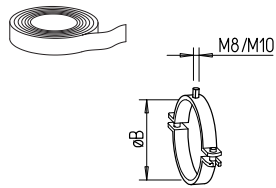
IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.- No.	ø A	ø B	Type	Ref.- No.	ø A	ø B	Type	Ref.- No.	ø A	ø B
Elbow 45° with socket	IP-B 125/45	9399	125	157	—	—	—	—	—	—	—	—
Elbow 45° w. inside connector	—	—	—	—	IP-B 160/45	9449	160	192	IP-B 180/45	9450	180	212

Elbow 90°

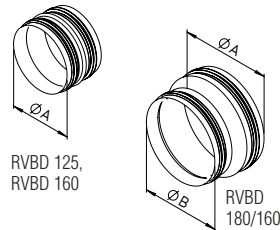


IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.- No.	ø A	ø B	Type	Ref.- No.	ø A	ø B	Type	Ref.- No.	ø A	ø B
Elbow 90° with socket	IP-B 125/90	9398	125	157	—	—	—	—	—	—	—	—
Elbow 90° w. inside connector	—	—	—	—	IP-B 160/90	9451	160	192	IP-B 180/90	9452	180	212

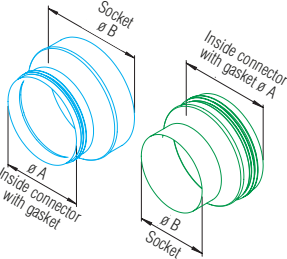
Sticky tape / Casing clamp



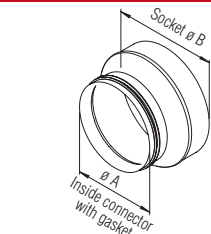
Duct piece to unit connection



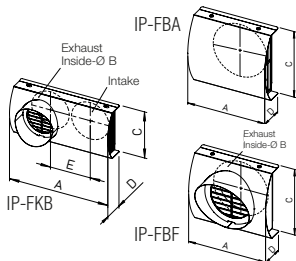
Duct piece to distribution box



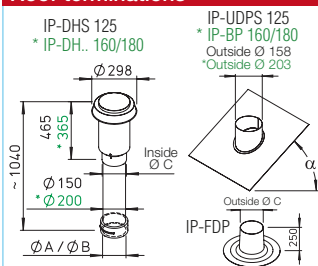
Duct piece to KWL®-HygroBox and undersoil heat exchanger



Facade panels



Roof terminations



IsoPipe®	ø 125 mm			ø 160 mm			ø 180 mm		
	Type	Ref.-No.	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø B
Sticky tape insulated, 50 x 3 mm, 15 lfd. m	IP-KLB	9643		IP-KLB	9643		IP-KLB	9643	
Casing clamp	IP-S 125	9395	157	IP-S 160	9392	192	IP-S 180	9421	212

IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B
Connector with seal to connect to KWL®-unit												
– with socket nom. dia. 125	RVBD 125	9640	125	—	—	—	—	—	—	—	—	—
– with socket nom. dia. 160	—	—	—	—	RVBD 160	9641	160	—	RVBD 180/160	9589	180	160

All duct pieces made from galvanised steel.

IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B
Duct piece to connect to distribution box												
– with spigot nom. dia. 125	Direct duct connection				IP-ARZ 125/160	9458	160	125	—	—	—	—
– with spigot nom. dia. 160	IP-ARZ 160/125	9358	125	160	Direct duct connection				IP-ARZ 160/180	9459	180	160
– with spigot nom. dia. 180	IP-ARZ 180/125	9360	125	180	IP-ARZ 180/160	9455	160	180	Direct duct connection			

All duct pieces made from galvanised steel.

IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B	Type	Ref.-No.	Dim. in mm ø A	Dim. in mm ø B
Duct piece to connect to KWL®-HygroBox												
KWL HB 250, spigot nom. dia. 160	IP-ARZ 160/125	9358	125	160	Direct duct connection				—	—	—	—
KWL HB 500, spigot nom. dia. 250	—	—	—	—	IP-ARZ 250/160	9590	160	250	IP-ARZ 250/180	9591	180	250
to undersoil heat exchanger												
– LEWT, spigot nom. dia. 200	IP-ARZ 200/125	9359	125	200	IP-ARZ 200/160	9456	160	200	IP-ARZ 200/180	9457	180	200
– SEWT, spigot nom. dia. 180	IP-ARZ 180/125	9360	125	180	IP-ARZ 180/160	9455	160	180	Direct duct connection			

All duct pieces made from galvanised steel.

IsoPipe®	ø 125 mm					ø 160 mm					ø 180 mm				
	Type	Ref.-No.	Dim. in mm A	Dim. in mm ø B	Dim. in mm C	Type	Ref.-No.	Dim. in mm A	Dim. in mm ø B	Dim. in mm C	Type	Ref.-No.	Dim. in mm A	Dim. in mm ø B	Dim. in mm C
Facade combination panel*	IP-FKB 125	2689	420	157	200	IP-FKB 160	2694	480	192	240	IP-FKB 180	2695	520	212	290
Separate facade panels															
– for intake air	IP-FBA 125	3125	230	—	200	IP-FBA 160	3127	265	—	240	IP-FBA 180	3130	285	—	260
– for exhaust air	IP-FBF 125	3126	230	157	200	IP-FBF 160	3128	265	192	240	IP-FBF 180	3131	285	212	260

All facade panels made of high-grade steel.

* Outside air alternatively right, left or below.

IsoPipe®	ø 125 mm				ø 160 mm				ø 180 mm			
	Type	Ref.-No.	Dim. in mm ø B	Dim. in mm ø C	Type	Ref.-No.	Dim. in mm ø B	Dim. in mm ø C	Type	Ref.-No.	Dim. in mm ø B	Dim. in mm ø C
Roof termination, consisting of outlet and plate*												
– Roof outlet black	IP-DHS 125	3541	157	160	IP-DHS 160	3542	192	210	IP-DHS 180	3542	180	210
– inclusive ducting red	—	—	—	—	IP-DHR 160	3543	192	210	IP-DHR 180	3543	180	210
– Weathering plate for pitched roofs, with leaded sheet	IP-UDPS 125	3546	α 25°–45°		IP-BP 160/25	9384	α 20°–30°		IP-BP 180/25	9384	α 20°–30°	
	—	—	—	—	IP-BP 160/35	9385	α 30°–40°		IP-BP 180/35	9385	α 30°–40°	
	—	—	—	—	IP-BP 160/45	9386	α 40°–50°		IP-BP 180/45	9386	α 40°–50°	
– Weathering plate f. flat roof	IP-FDP 125	3544	—	158	IP-FDP 160	3545	—	203	IP-FDP 180	3545	—	203

* Please order roof outlets and roof pantiles each separately.

Air distribution system RenoPipe



The clever solution especially developed for energy-saving renovation: RenoPipe combines the ventilation ducts and aesthetic covers in one unit.

- Fast, easy installation even in inhabited buildings.
- Mounting does not require reworking using dry construction techniques.
- The material need is reduced to a minimum.
- Economically by few components and no need of extracted air outlets.

■ Mounting

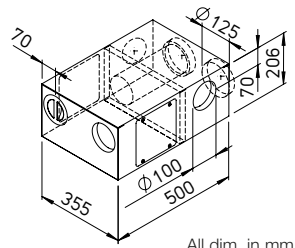
- The RenoPipe fittings can be easily, individually shortened with a precision saw.
- Surface mounting to the ceiling or wall; simply click the long connectors into the fixing clamps included in the contents of delivery.

- Free-cutting the ducts can level out the ceiling and wall surfaces, mitre cuts are unnecessary for accurately formed parts. Length, transverse and level adjustments can guarantee the perfect sit.

■ Features and advantages

- Components made from highly compressed EPS in white, which can be painted over.
- Fast surface mounting, without time-consuming cover suspensions and dry construction works.
- **Air distribution system, mounting**
 - The used air of the kitchen and bathrooms is collected directly in the sound insulated combination distribution box. No need of extracted air outlets and separate attenuators.
 - Rubber lip-seals provide airtight connection of the complete RenoPipe-System.

Combination distributor



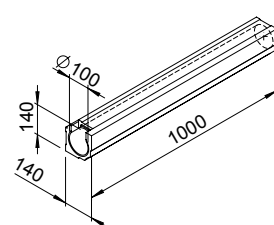
All dim. in mm

RenoPipe combination distribution box, supply air right

Compact distributor from galvanised sheet steel with sound absorbing lining inside. Features: Extract air collector, supply air distributor with sound attenuation function. Unit connection 2 DN 125, 2 x DN 100 for extraction, 2 x DN 100 for supply air. Includes inspection opening and cover plate.

RP-KVK 3-100/125 R No. 3048

Duct section



Duct SU = 4 pcs*

Duct piece with smooth, square profile. Inside diameter DN 100, length 1 m.

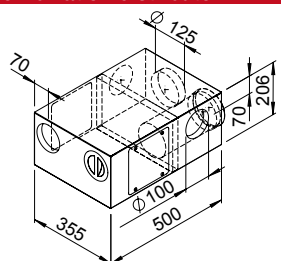
RP-K Ref.-No. 3061

Duct with stucco profile

SU = 4 pcs*
Like above, but with visually attractive stucco profile.

RP-SK Ref.-No. 3065

Combination distributor

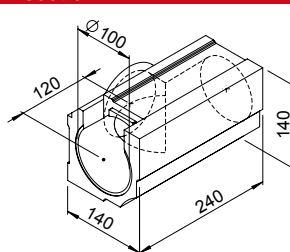


RenoPipe combination distribution box, supply air left

Compact distributor from galvanised sheet steel with sound absorbing lining inside. Features: Extract air collector, supply air distributor with sound attenuation function. Unit connection 2 DN 125, 2 x DN 100 for extraction, 2 x DN 100 for supply air. Includes inspection opening and cover plate.

RP-KVK 3-100/125 L No. 3038

T-section



T-section SU = 4 pcs*

Compact T-piece with smooth, square profile. Inside diameter DN 100/100/100.

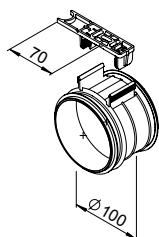
RP-T Ref.-No. 3062

T-section with stucco profile

SU = 4 pcs*
Like above, but with visually attractive stucco profile.

RP-ST Ref.-No. 3066

Long connector set

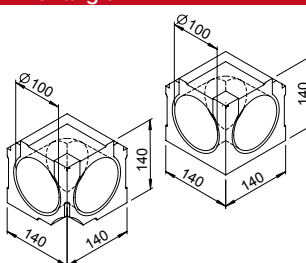


Long connector set

Consisting of connection sleeve DN 100 from impact resistant polypropylene and two rubber lip-seals for airtight connection with duct piece. Clamp for easy snap mounting of duct piece, included in delivery.

RP-LV Ref.-No. 3029

Inner angle



Inner angle SU = 2 pcs*

90°-interior angle piece in compact cube form with smooth, square profile. Inside diameter DN 100.

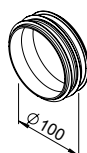
RP-IW Ref.-No. 3075

Inner angle with section

SU = 2 pcs*
Like above, but with visually attractive stucco profile.

RP-SIW Ref.-No. 3077

Short connector

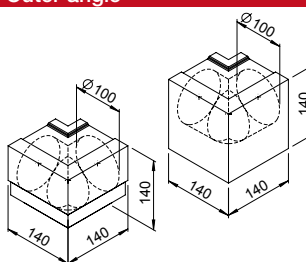


Short connector

Connection sleeve DN 100 from impact resistant polypropylene including rubber lip-seals for airtight connection with RenoPipe EPS shaped parts and wall sleeve.

RP-KV Ref.-No. 3030

Outer angle



Outer angle SU = 2 pcs*

90°-exterior angle piece in compact cube form with smooth, square profile. Inside diameter DN 100.

RP-AW Ref.-No. 3076

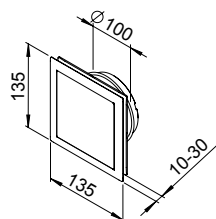
Outer angle with section

SU = 2 pcs*
Like above, but with visually attractive stucco profile.

RP-SAW Ref.-No. 3078

* Supplied in packaging units.

Ventilation valve



All dimensions in mm

Design ventilation valve

Design ventilation valve for extract air operation, DN 100, adjustable. With concealed opening and integrated filter.

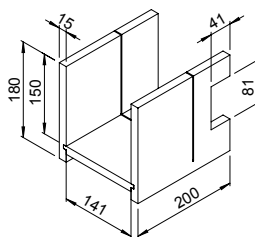
DLV 100 Ref.-No. 3039

Replacement air filters

SU = 5 pcs*

ELF-DLV 100 Ref.-No. 3042

Cutting guide

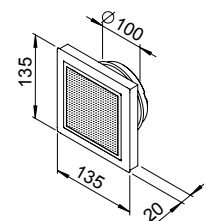


Cutting guide

Practical cutting guide, beech multiplex 15 mm, for easy cutting duct piece to length.

RP-SH Ref.-No. 3036

Ventilation valve

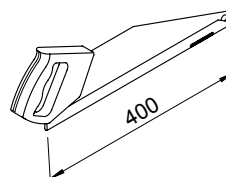


Design ventilation valve for supply air

Design ventilation valve for supply air operation, DN 100.

DLVZ 100 Ref.-No. 3040

Precision saw

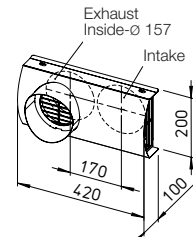


Precision saw

Special hand slitting saw for slight cuts.

RP-FS Ref.-No. 3044

Facade combination panel

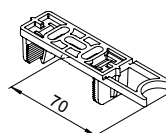


Facade combination panel

for connection of outside and exhaust air. Universally applicable; outside air alternatively left, right or below. Perfectly designed from high grade steel. Connection DN 125.

IP-FKB 125 Ref.-No. 2689

Clamp



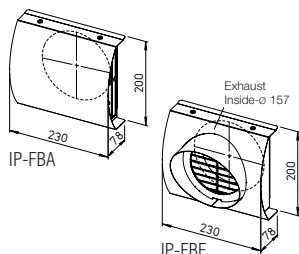
Fixing clamp

SU = 5 pcs*

From high quality, impact resistant polymer.

RP-BK Ref.-No. 3031

Facade panels



Outside air facade panel

Perfectly designed, from high grade steel. Connection DN 125.

IP-FBA 125 Ref.-No. 3125

Exhaust air facade panel

Perfectly designed, from high grade steel. Connection DN 125.

IP-FBF 125 Ref.-No. 3126

Seal



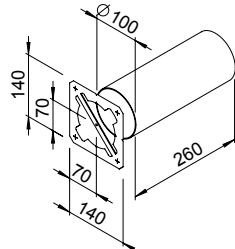
Lip seals

SU = 10 pcs*

DN 100 from EPDM.

RP-LD Ref.-No. 3033

Wall casing



Wall casing

DN 100 from PVC, including mounting template for easy wall penetration.

RP-WH Ref.-No. 3035

Final- and inspection lid



Final and inspection lid

DN 100 from high quality polymer, with rubber lip-seal. For installation at duct piece.

RP-RD Ref.-No. 3037

Note

„RenoPipe. The invisible air distribution system for renovations.“ Please ask for separate flyer.

Ref.-No. 86643

* Supplied in packaging units.

FlexPipe® plus round- and oval ducting system. Arbitrarily combinable.



FlexPipe® plus is the further development of the successful air distribution system FlexPipe® and unites round and oval pipe as of now in a clever system package with all conceivable round-oval-combinations.

The new oval pipe has the identical hydraulic cross-section and pressure loss like the round pipe as well as a point-symmetric design. This leads to unique advantages:

- No matter if it's planning and layout or installation and adjustment or maintenance, round and oval pipe behave completely identical.
- Depending on the structural condition, therefore any changes between round and oval pipe by means of adapters are possible. This along the line as well as from the distribution box away. This offers greatest possible

freedom during planning and installation.

- The ideal, cost-effective option can be selected at any time. The space-saving oval pipe is mainly used when low structure heights are required.
- The round-oval-compatibility leads to a low parts variety. Stockpiling and consultation are strongly simplified. The installation is almost intuitively carried out.
- The point-symmetric oval design allows the laying from the horizontal line into vertical without the use of adapter pieces to the position correction.

Note

FlexPipe ducting system with outer-Ø: 63 mm, inner: 52 mm for air flow volume up to 20 m³/h see page 56

■ **FlexPipe® plus contains two design types which are arbitrarily combinable:**

- FRS.. 75, round:
Outer-Ø: 75 mm, inner: 63 mm for air flow vol. up to 30 m³/h. For laying into concrete. High resilience ($S_{R24} > 8 \text{ kN/m}^2$). Bending radius horizontal and vertical 150 mm.
- FRS.. 51, oval:
51 x 114 mm, for air flow volume up to 30 m³/h, ideal for space-saving laying e.g. on the unfinished floor or in the wall. Bending radius horizontal 300 mm, vertical 200 mm.

■ **Laying, handling, initiation**

- Easiest planning thanks to identical pipe cross-sections and pressure losses.
- Fast to install through star shaped laying.
- Convenient handling due to the light weight.
- Fast initiation as the adjustments are reduced to a minimum.
- Constant air distribution.
- Easy to clean, hygienically perfect.

■ **Duct characteristics and advantages**

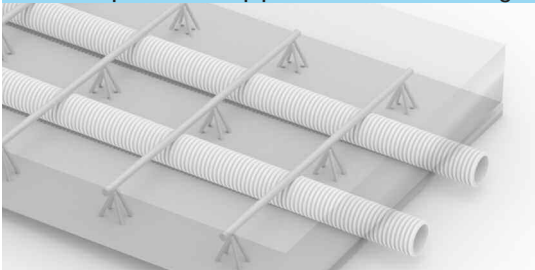
- The round and oval pipe consists of quality-assured PE-HD made of new raw material.
- The outside is ribbed where as the inner surface is absolutely smooth and antistatically coated. This minimizes the pressure losses and prevents flow-generated noise and dirt disposits.

- The extreme horizontal and vertical bending elasticity of both pipe geometries reduces the number of required fittings to a minimum.
- Due to the point-symmetric design the laying of the oval pipe is vertically up- or downwards from the horizontal line possible without adapter pieces.

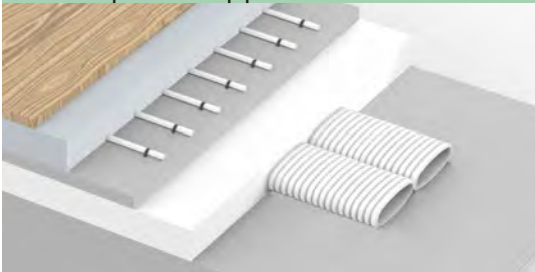
■ **Laying-conception/installation**

- Fixing brackets on all parts for secure fixing to floor, wall, or ceiling.
- Unlockable fixing clips guarantee the fast and no-pull-out pipe mounting on all joints.
- By sound absorbing distribution boxes additional cross-talk sound attenuators are omitted.
- Precise sealing system on all fittings for leakage-free air transportation.
- Many different components ensure the perfect solution for nearly every request. There are ceiling outlets available for all kind of valves with ND 125 as well as wall and floor outlets, delivered with grilles as standard. They each have two parallel pipe connections for the low pressure loss airflow of the required air flow volumes to DIN 1946-6.

○ **FlexPipe® plus round pipe in the concrete ceiling**



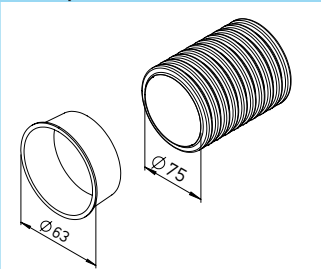
○ **FlexPipe® plus oval pipe on the the unfinished floor**



○ **FlexPipe® plus allows any round-oval-combination**



FlexPipe® duct round ○

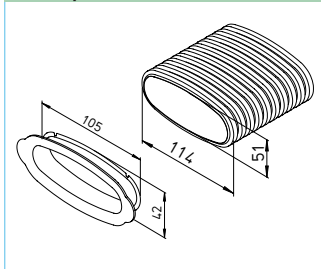


FlexPipe® duct (bundle = 50 running mtrs)

Type	Ref.-	Dim. in mm	
ø 75 mm	No.	Outer-ø	Inner-ø
FRS-R 75 ○	2913	75	63
Hygiene-duct cap			
FRS-VD 75 ○	2915	10 pcs	

Flexible round pipe from PE-HD, ideal for the laying into the concrete ceiling. Incl. two hygiene-duct caps, in addition can be ordered separately.

FlexPipe® duct oval ○

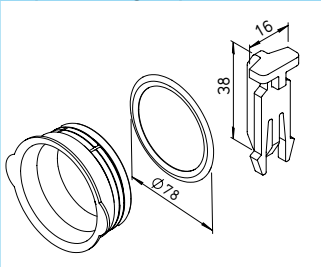


FlexPipe® duct (bundle = 20 running mtrs)

Type	Ref.-	Dim. in mm	
114 x 51 mm	No.	Width	Height
FRS-R 51 ○	3850	114	51
Hygiene-duct cap			
FRS-VD 51 ○	3866	10 pcs	

Flexible oval pipe from PE-HD, for space-saving laying on the unfinished floor, installation in the wall or false ceiling. Incl. two hygiene-duct caps, in addition can be ordered separately.

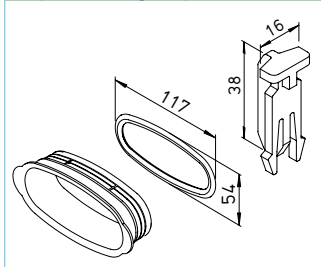
Cap, seal ring, clip ○



Spigot cap / seal ring / clip

Type	Ref.-	SU
ø 75 mm	No.	
Spigot cap with sealing		
FRS-VDS 75 ○	3855	1 pc
Seal ring		
FRS-DR 75 ○	2916	10 pcs
Clip, unlockable		
FRS-FK ○○	3854	10 pcs

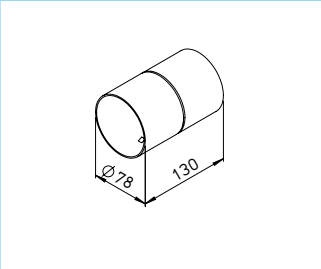
Cap, seal ring, clip ○



Spigot cap / seal ring / clip

Type	Ref.-	SU
114 x 51 mm	No.	
Spigot cap with sealing		
FRS-VDS 51 ○	3856	1 pc
Seal ring		
FRS-DR 51 ○	3864	10 pcs
Clip, unlockable		
FRS-FK ○○	3854	10 pcs

Connection sleeve ○

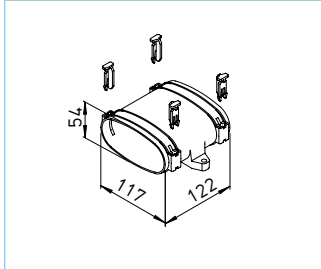


Connection sleeve

Type	Ref.-
ø 75 mm	No.
FRS-VM 75 ○	2914

Connection sleeve for round pipe FRS-R 75 with interlocking protection on both sides, from polyethylene.

Connection sleeve ○

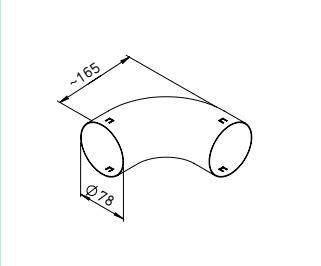


Connection sleeve

Type	Ref.-
114 x 51 mm	No.
FRS-VM 51 ○	3862

Connection sleeve for oval pipe FRS-R 51, with integrated fixing brackets, incl. pipe fixing clips (4 pcs). Made from impact-resistant polypropylene.

Elbow 90° ○

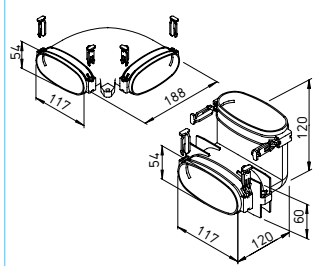


Elbow 90°

Type	Ref.-
ø 75 mm	No.
FRS-B 75 ○	2994

Elbow 90° for bend radius < 2 x duct outer diameter. Horizontal and vertical use with interlocking protection on both sides. Made from galvanised sheet steel.

Elbow horizontal / vertical ○



Elbow horizontal / vertical

Type	Ref.-
114 x 51 mm	No.
FRS-BH 51 ○	3863
FRS-BV 51 ○	3859

Horizontal or vertical elbow 90°. With integrated fixing brackets, incl. pipe fixing clips (4 pcs). Made from impact-resistant polypropylene.

■ Any combination of round and oval pipe

- With FlexPipe® plus from Helios you decide for one system and have – depending on the object requirement – the perfect solution in the access.
- The only 51 mm super flat oval pipe is then used, when low construction height is required. The approved round pipe is offered for the direct laying into the concrete ceiling.
- Thanks to identical hydraulic cross-sections and pressure losses of the two pipes and due to well-conceived system components you can combine round and oval as required. This along the line as well as from the distribution box away.

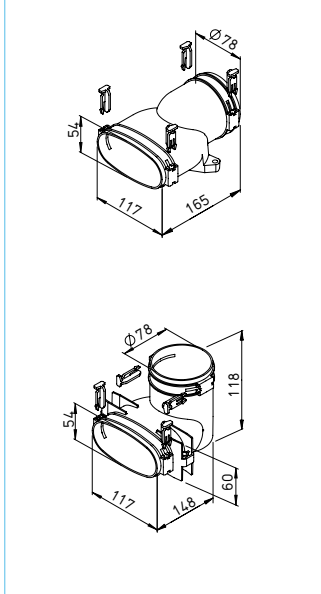


Vertical and horizontal adapters allow each round/oval, oval/oval and round/round combination.



The distribution boxes can be equipped with round and oval single spigots as well as combined.

Adaptor straight / vertical ○○

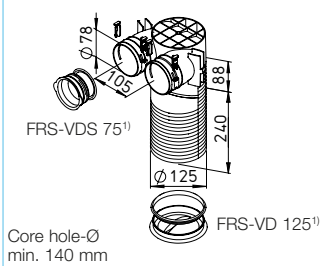


Adaptor straight / vertical

Type	Ref.-
ø 75 mm / 114 x 51 mm	No.
Adaptor straight	
FRS-ÜG 51-75 ○○	3861
Adaptor vertical	
FRS-ÜV 51-75 ○○	3860

Horizontal and vertical adapter from round pipe FRS-R 75 to oval pipe FRS-R 51. With integrated fixing brackets, incl. pipe fixing clips (4 pcs). Made from impact-resistant polypropylene.

Ceiling-/wall outlet ○

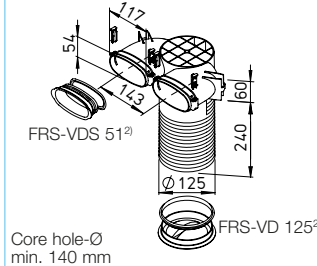


Ceiling-/wall outlet

Type	Ref.- No.
FRS-DWK 2-75/125 ○	3857

Ceiling-/wall outlet to connect max. 2 round pipes FRS-R 75. For intake and extract valves nom. dia. 125. Integrated bench marks for precise shortening. Incl. spigot cap with seal ring¹⁾ 75 mm and DN 125 (each 1 pc). With integrated fixing brackets, incl. pipe fixing clips (4 pcs). From impact-resistant polypropylene.

Ceiling-/wall outlet ○

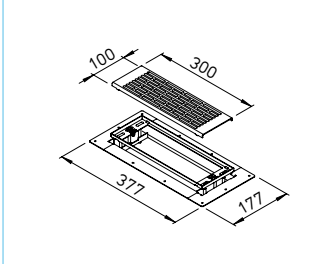


Ceiling-/wall outlet

Type	Ref.- No.
FRS-DWK 2-51/125 ○	3858

Ceiling-/wall outlet to connect max. 2 oval pipes FRS-R 51. For intake and extract valves nom. dia. 125. Integrated bench marks for precise shortening. Incl. spigot cap with seal ring¹⁾ 75 mm and DN 125 (each 1 pc). With integrated fixing brackets, incl. pipe fixing clips (4 pcs). From impact-resistant polypropylene.

Floor grille kit ○



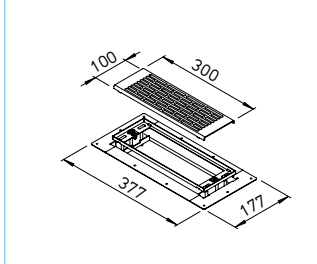
Floor grille kit

Type	Ref.- No.
FRS-BGS 1 ○	3878

Floor grille kit from high-quality steel for multi-floor outlet FRS-MBK 2-75, consisting of:

- Air volume regulating insert, grid frame and fall-through-resistant design floor outlet.
- Telescopic box with height compensation for ground level installation.

Floor grille kit ○



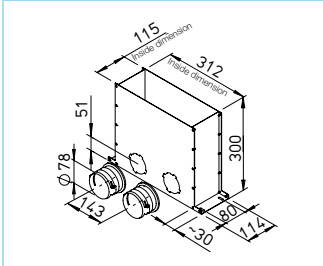
Floor grille kit

Type	Ref.- No.
FRS-BGS 1 ○	3878

Floor grille kit from high-quality steel for multi-floor outlet FRS-MBK 2-51, consisting of:

- Air volume regulating insert, grid frame and fall-through-resistant design-floor outlet.
- Telescopic box with height compensation for ground level installation.

Multi-floor outlet ○



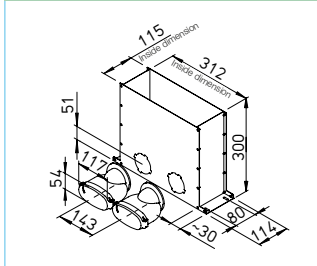
Multi-floor outlet

Type	Ref.- No.
FRS-MBK 2-75 ○	3872

Multi-floor outlet to connect max. 2 round pipes FRS-R 75. Suitable for casting in concrete ceiling, consisting of:

- Floor outlet for grille 300 x 100 mm in robust sheet-metal design.
- 2 pcs single spigots (round) and 1 pc spigot cap with sealing (round).

Multi-floor outlet ○



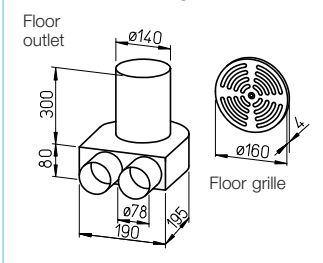
Multi-floor outlet

Type	Ref.- No.
FRS-MBK 2-51 ○	3870

Multi-floor outlet to connect max. 2 oval pipes FRS-R 51. Suitable for casting in concrete ceiling, consisting of:

- Floor outlet for grille 300 x 100 mm in robust sheet-metal design.
- 2 pcs single spigots (oval) and 1 pc spigot cap with sealing (oval).

Floor outlet with grille ○



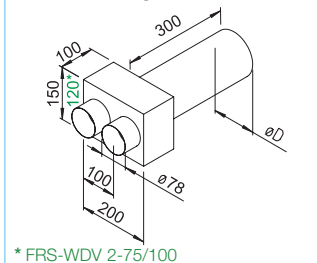
Floor outlet with grille

Type	Ref.- No.
FRS-BKGS 2-75 ○	9992

Floor outlet with grille consisting of

- 1 pc floor outlet for grille nom. dia. 160
- 1 pc floor grille from high-quality steel with adjustable air flow.
- 1 pc cap

Wall mounting kit ○

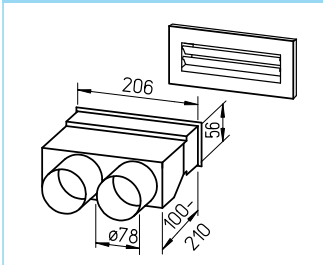


Wall mounting kit for valve connection

Type	Ref.- No.	Ø D mm
FRS-WDV 2-75/100 ○	9621	100
FRS-WDV 2-75/125 ○	9622	125

Wall mounting kit including plaster cover plate and cap (1 pc). For connection of supply or extract air valves nom. dia. 100 or 125.

Grille with box ○



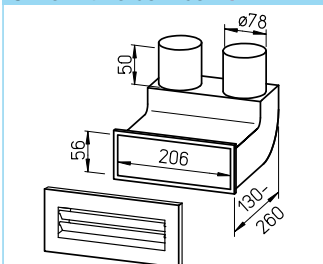
Grille with box, straight

Type	Ref.- No.
FRS-WDS 2-75 ○	9994

Grille with box consisting of

- outlet box with sliding type fitting
- grille white (FK-WA 200 W), 250x113 mm
- 1 pc cap

Grille with elbow box ○



Grille with elbow box, 90°

Type	Ref.- No.
FRS-WBS 2-75 ○	9996

Grille with elbow box consisting of

- elbow box with sliding type fitting
- grille white (FK-WA 200 W), 250x113 mm
- 1 pc cap

Basic site package ○



Basic site package

Type	Ref.- No.	Ø D mm
FRS-RP 75 ○	9397	75

FlexPipe® duct system basic site package

- 3 pcs FRS-R 75 (Ref.-No. 2913)
- 2 pcs FRS-VK 10-75/160 (Ref.-No. 3847)
- 8 pcs FRS-DWK 2-75/125 (Ref.-No. 3857)
- 7 pcs FRS-B 75 (Ref.-No. 2994)
- 7 pcs FRS-VM 75 (Ref.-No. 2914)
- 4 sets FRS-DR 75 (Ref.-No. 2916)
- 1 set FRS-VD 75 (Ref.-No. 2915)
- 1 pc Cold shrinking strip KSB (Ref.-No. 9343)

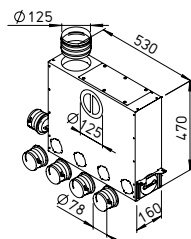
Choosing the Helios basic site package, saves

- money as you will benefit from the package-price.
- time because everything you need is already included. That way you can start right away.

¹⁾ Cap with integrated sealing FRS-VDS 75, Ref.-No. 3855 and -VD 125, Ref.-No. 3865.
Cap can be used for single sigot- respectively pipe connection opening at the distribution box.

²⁾ Cap with integrated sealing FRS-VDS 51, Ref.-No. 3856 and -VD 125, Ref.-No. 3865.
Cap can be used also for single sigot- respectively pipe connection opening at the distribution box.

Multi-distribution box 4+1

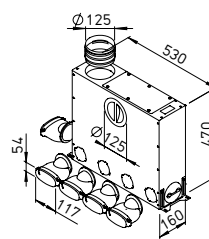


Multi-distribution box ¹⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-MVK 4+1-75/125	3843	125

For universal installation in/on the concrete ceiling. With height-adjustable mounting brackets. Pipe connection nom. dia. 125 is horizontally or vertically possible as an option. 10 connections for up to 5 flexible pipes FRS-R 75. With sound absorbing lining and large inspection opening.

Multi-distribution box 4+1

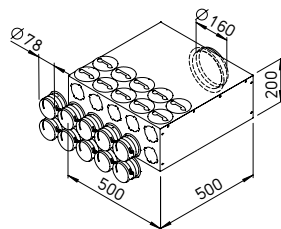


Multi-distribution box ¹⁾

Type	Ref.-	Ø NW
114 x 51 mm	No.	mm
FRS-MVK 4+1-51/125	3841	125

For universal installation on the concrete ceiling. With height-adjustable mounting brackets. Pipe connection nom. dia. 125 is horizontally or vertically possible as an option. 10 connections for up to 5 flexible pipes FRS-R 51. With sound absorbing lining and large inspection opening.

Distribution box 10-fold

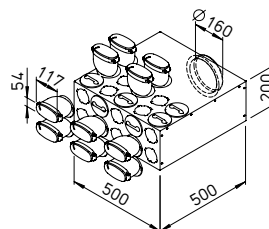


Distribution box 10-75 ²⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-VK 10-75/160	3847	160

20 connection possibilities for up to 10 flexible pipes FRS-R 75. Optional mounting as straight-through-, 90°-distributor or combined. Combined installation with oval single spigots possible (FRS-ES 51, Ref.-No. 3851, see below). With sound absorbing lining and large inspection opening.

Distribution box 10-fold

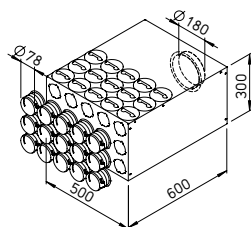


Distribution box 10-51 ²⁾

Type	Ref.-	Ø NW
114 x 51 mm	No.	mm
FRS-VK 10-51/160	3849	160

20 connection possibilities for up to 10 flexible pipes FRS-R 51. Optional mounting as straight-through-, 90°-distributor or combined. Combined installation with round single spigots possible (FRS-ES 75, Ref.-No. 3852, see below). With sound absorbing lining and large inspection opening.

Distribution box 15-fold



Distribution box 15-75 ²⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-VK 15-75/180	3848	180

30 connection possibilities for up to 15 flexible pipes FRS-R 75. Optional mounting as straight-through-, 90°-distributor or combined. Combined installation with oval single spigots possible (FRS-ES 51, Ref.-No. 3851, see below). With sound absorbing lining and large inspection opening.

■ New: The ingenious FlexPipe® plus distribution concept

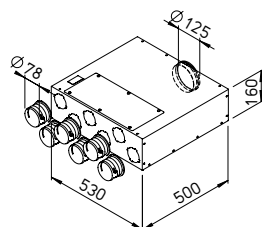
1. Helios offers the right solution for every installation situation:

- The distribution boxes are variably applicable: Optional as straight through or 90° distributor, for wall or ceiling installation.
- The multi-distribution boxes optimally are suitable as storey distributors. They can be installed in or on the raw concrete ceiling with an inspection opening from above or below.
- With a height of only 160 mm the flat distribution box fits even in the smallest spaces, e.g. in suspended ceilings.
- The compact distribution box is an extract air collector and supply air distributor at the same time and is used when kitchens and bathrooms border directly on each other.

2. Flexible to the last detail

- All distribution boxes are supplied with tight clamping bayonet catch caps, which are applicable (leakage-free) with one move of the hand.
- Depending on architectural situation a combined installation of the distribution boxes with round and oval single spigots is possible. Moreover the spigots can be ordered individually (see below). The maximum possible number of oval single spigots (FRS-ES 51, Ref.-No. 3851) is to be requested if necessary.
- Included in delivery: Fixing clips for the no pull out pipe mounting at the spigots as well as bayonet catch caps with integrated seal rings for non occupied distribution box openings.

Flat distribution box 6-fold

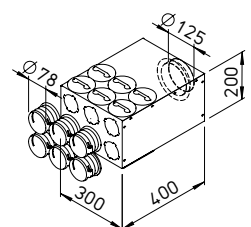


Distribution box 6-75, flat-design ¹⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-FVK 6-75/125	3845	125

To connect up to 6 flexible pipes FRS-R 75. Mounting as straight-through distributor. Combined installation with oval single spigots possible (FRS-ES 51, Ref.-No. 3851, see below). With sound absorbing lining and large inspection opening.

Distribution box 6-fold

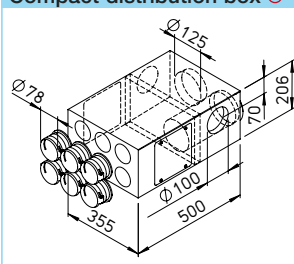


Distribution box 6-75 ¹⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-VK 6-75/125	3846	125

12 connection possibilities for up to 6 flexible pipes FRS-R 75. Optional mounting as straight-through-, 90°-distributor or combined. Combined installation with oval single spigots possible (FRS-ES 51, Ref.-No. 3851, see below). With sound absorbing lining and large inspection opening.

Compact distribution box

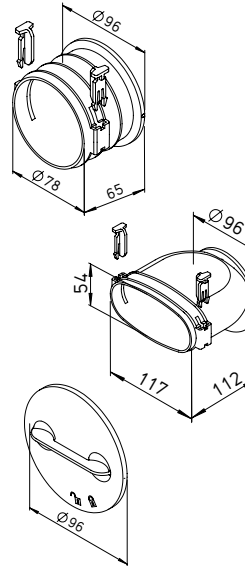


Compact distribution box ¹⁾

Type	Ref.-	Ø NW
Ø 75 mm	No.	mm
FRS-KVK 6-75/125 L*	3873	125
FRS-KVK 6-75/125 R*	3874	125

*Supply air connection optionally on the left or right. Compact distribution box, perfect next to adjacent exhaust air rooms. 2 x DN 100 for extraction with extract air valves DLV (see accessories). Supply air distribution via connection of up to 6 flexible ducts FRS-R 75.

Single spigot, cap



Single spigot, bayonet catch cap

Type	Ref.-	SU
No.	No.	
Single spigot, Ø 75 mm		
FRS-ES 75	3852	1 pc
Single spigot, 114 x 51 mm		
FRS-ES 51	3851	1 pc
Bayonet catch cap		
FRS-VDB	3853	1 pc

Additional single spigots to connect round pipe FRS-R 75 and/or oval pipe FRS-R 51 to distribution box. By means of bayonet catch cap simply and variably positionable. Seals tightly, inclusive pipe fixing clips (2 pcs), made from impact-resistant polypropylene. Bayonet catch cap for the single spigot holes at the distribution box.

¹⁾ incl. 2 pcs caps.

²⁾ incl. 4 pcs caps.

The flexible ducting system FlexPipe® is directly laid into or on the concrete.

- Simple to plan and easy to install through star shaped laying.
- Convenient handling due to the light weight.
- Fast initiation, constant air distribution.
- Easy to clean.

■ Available in two sizes and designs

- FRS.. 63
Outer-Ø: 63 mm, inner-Ø: 52 mm for air flow vol. up to 20 m³/h.
- FlexPipe®*plus*
Outer-Ø: 75 mm, inner-Ø: 63 mm for air flow vol. up to 30 m³/h. Can be combined with oval pipe FRS-R51 and oval components, see page 52 on.

■ Characteristics and advantages

- The pipe consists of quality-assured PE-HD made of new raw material and is treated to be non-porous, odourless and antistatic.
- The outside is ribbed where as the inner surface is absolutely smooth and antistatically coated. This provides substantial advantages:
- very low air flow resistance and high sound absorption

- minimal dirt deposits
- easy to clean

■ Laying

- The FlexPipe® polymer pipe has a high resilience ($S_{R24} > 8 \text{ kN/m}^2$) and can simply be laid directly into, on or under the concrete ceiling in the desired course due to the high flexibility.
- Air- and watertight connection is simply made by use of the FRS seal rings

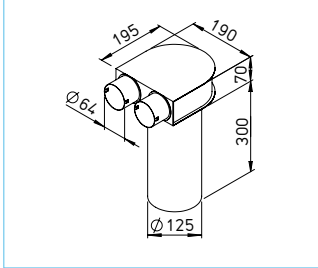
FlexPipe® duct round



FlexPipe® duct (bundle = 50 running mtrs)

Type	Ref.- No.	Dim. in mm	
ø 63 mm	No.	Outer-ø	Inner-ø
FRS-R 63	9327	63	52

Ceiling outlet

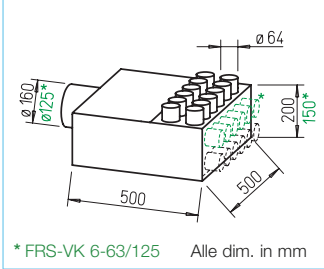


Ceiling outlet²⁾ for valves DN 125

Type	Ref.- No.
FRS-DKV 2-63/125	9430

Ceiling outlet incl. cover to avoid soil in the system during construction work. For intake and extract valves nom. dia. 125 (accessories, see page 60)

Distribution box 6-63, 12-63

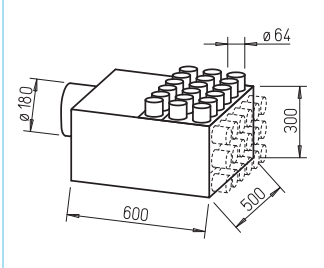


Distribution box 6-63, 12-63¹⁾

Type	Ref.- No.	ø NW mm
FRS-VK 6-63/125	9355	125
FRS-VK 12-63/160	9336	160

To connect up to 6 or 12 flexible ducts FRS-R 63. As the box is noise-absorbing it is also suitable as silencer element. Choice of manifold position with 12-63, the cover of the access opening. Therefore the distribution box can be used for vertical and horizontal positioning.

Distribution box 18-63

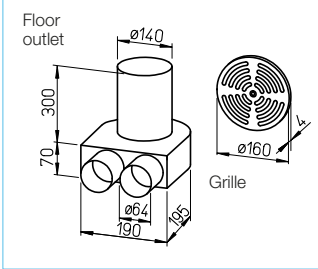


Distribution box 18-63¹⁾

Type	Ref.- No.	ø NW mm
FRS-VK 18-63/180	9364	180

To connect up to 18 flexible ducts FRS-R 63. As the box is noise-absorbing it is also suitable as silencer element. The connecting plate with the pipe spigots is interchangeable with the inspection door and can be shifted by 90°. Therefore the box can be used for vertical and horizontal positioning.

Floor outlet with grille

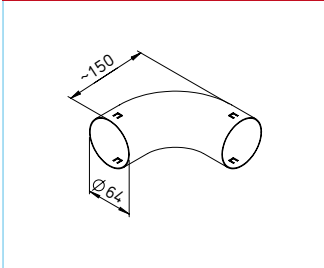


Floor outlet with grille²⁾

Type	Ref.- No.
FRS-BKGS 2-63	9991

Floor outlet with grille consisting of:
– 1 floor outlet for grilles nom. dia. 160
– 1 floor grille made of stainless steel with adjustable air flow.

Elbow 90°

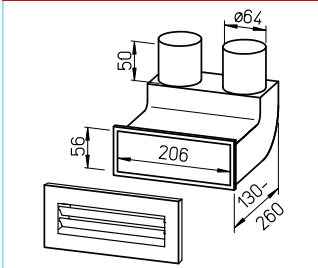


Elbow 90°

Type	Ref.- No.
ø 63 mm	
FRS-B 63	9348

Elbow 90° for bend radius < 2 x duct outer diameter.

Grille with elbow box

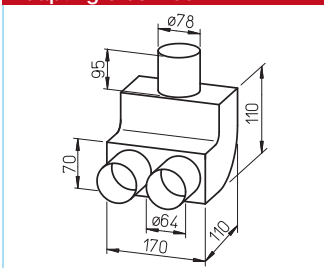


Grille with elbow box, 90°²⁾

Type	Ref.- No.
ø 63 mm	
FRS-WBS 2-63	9995

Grille with elbow box consisting of:
– elbow box with sliding type fitting
– grille white (FK-WA 200 W), 250x113 mm

Adapting elbow 90°

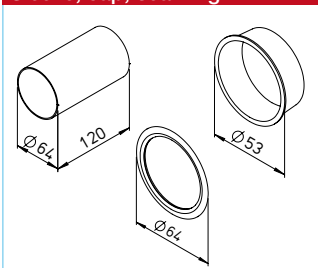


Adapting elbow 90°

Type	Ref.- No.
ø 63 mm	
FRS-B 75/2-63	9341

Adapting elbow 90° as adaptor from 1 x 75 mm to 2 flexible ducts nom. dia. 63 mm.

Sleeve, cap, seal ring



Sleeve / Cap / Seal ring

Type	Ref.- No.	SU
ø 63 mm		
FRS-VM 63 Sleeve	9329	
FRS-VD 63 Cap	9330	10 pcs
FRS-DR 63 Seal ring	9331	10 pcs

Note: At each joint section (pipe/pipe, pipe/fitting), a sealing ring (for IP 66) must be used. Please order corresponding number separately. Coating with a lubricant recommended for the assembly.

¹⁾ incl. 6 pcs caps.

²⁾ incl. 1 pc cap.

Flat polymer duct system F



Laying

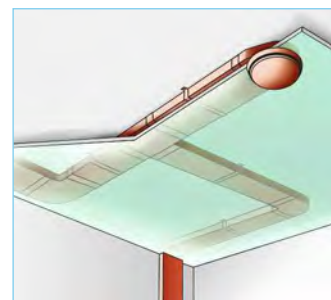
- Easy and fast laying due to the low weight.
- Joining of sections of all kinds allows numerous possibilities.
- Space-saving and universal.
- Previously used for renovation of existing buildings and prefabricated houses.

Characteristics

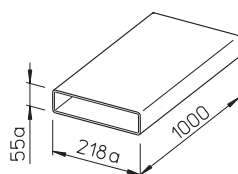
All sections of white, antistatic polymer. Hardly inflammable B1, DIN 4102. Max. temperature +50 °C. Max. outside dimension: 218.5 x 55.5 mm.

Duct-concept and mounting

- Specially shaped duct alignment starting at either the unit or the distributor air intakes/outlets of the rooms. Branch connection ensured by T-pieces.



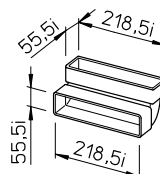
- Cross-section surface for air flow volume of up to 150 m³/h.
- The connections of the formed parts are built as slip-in sleeves; duct connection is done by outside-connection sleeves.
- Requires air-tight connection achieved by using duct tape (accessories).
- Fixation of the pieces using FB.



All dimensions in mm

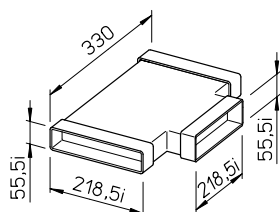
Flat duct w/o sleeve, length 1 m
FOM

Ref.-No. 0624



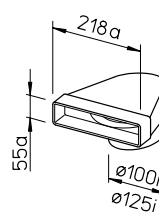
90°-bend vertical
FBV 90

Ref.-No. 0630



Flat duct T-piece
FTS

Ref.-No. 0631

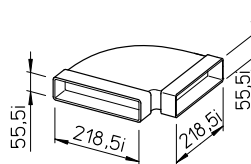


End piece
with connection from ø to □

FE 100 Ref.-No. 0621
FE 125 Ref.-No. 0622

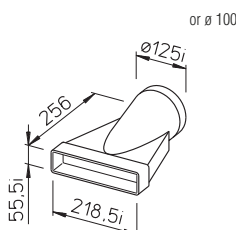
End piece
with connection from ø to □
with 1 mtr. tube and 2 brackets

FU 90/100 Ref.-No. 0627
FU 90/125 Ref.-No. 0638



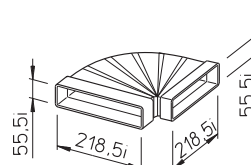
90°-bend horizontal
FBH 90

Ref.-No. 0629



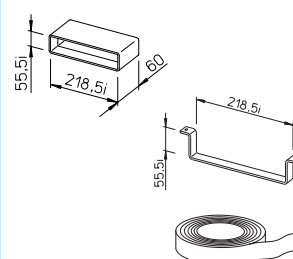
Connection
from ø to □

FUE 100 Ref.-No. 0628
FUE 125 Ref.-No. 0639



Flexible bend
FBO

Ref.-No. 0632



Flat duct connector
FV

Ref.-No. 0625

Mounting bracket
FB

Ref.-No. 0626

Strip

KLB Ref.-No. 0619
PVS-strip, width 50 mm, roll with 20 mtrs. length.

Flat duct system FK



Underfloor-system made of galvanised steel; especially developed for room ventilation. The optimum solution for hidden air ducts, therefore perfectly suitable for new buildings.

■ Characteristics

- All parts made of galvanised steel, noncorrosive and non flammable.

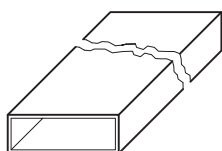
■ Available in two sizes

- FK.. 150 x 50 mm for air flow volume up to 90 m³/h.
- FK.. 200 x 50 mm for air flow volume up to 140 m³/h.

■ Ducts conception and mounting

- Flat design and rigid construction allow a trouble-free laying below the floor screed. The substantial range of fittings allows nearly every course of the ducting.
- Connection via external connectors. Fittings with sockets (35 mm insertion). Therefore, the absolutely smooth inner surface ensures low air flow resistance and no barriers for dirt. However, disinfection is possible, if desired.
- The junction box for the supply air and extract air routing is installed on each floor which simplifies the duct routing.
- Special flat sound absorbers can be installed within the duct route to protect (e. g. bedrooms) from noise (FK-SD).

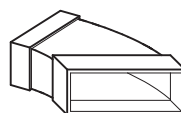
Flat duct



Flat duct

Type	Ref.- No.	Dim. in mm		
		Width	Height	Length
150 x 50 mm				
FK 150	2905	150	50	1500
200 x 50 mm				
FK 200	2906	200	50	1500

Elbow, horizontal 45°



Elbow, horizontal 45°

Type	Ref.- No.	Dim. in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BH 150/45	2910	153	53	45°
200 x 50 mm				
FK-BH 200/45	2912	203	53	45°

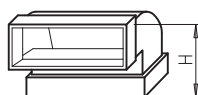
Flat duct connector



Flat duct connector

Type	Ref.- No.	Dim. in mm		
		Width	Height	Length
150 x 50 mm				
FK-V 150	2941	153	53	200
200 x 50 mm				
FK-V 200	2942	203	53	200

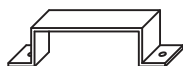
Elbow, vertical 90°



Elbow, vertical 90°

Type	Ref.- No.	Dim. in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BV 150/90	2919	153	103	90°
200 x 50 mm				
FK-BV 200/90	2920	203	103	90°

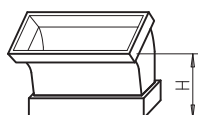
Mounting bracket



Mounting Bracket

Type	Ref.- No.	Dim. in mm		
		Width	Height	Length
150 x 50 mm				
FK-B 150	2907	151	52	30
200 x 50 mm				
FK-B 200	2908	201	52	30

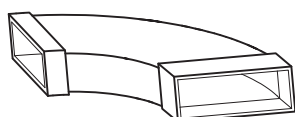
Elbow, vertical 45°



Elbow, vertical 45°

Type	Ref.- No.	Dim. in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BV 150/45	2917	153	73	45°
200 x 50 mm				
FK-BV 200/45	2918	203	73	45°

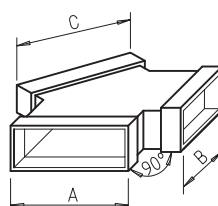
Elbow, horizontal 90°



Elbow, horizontal 90°

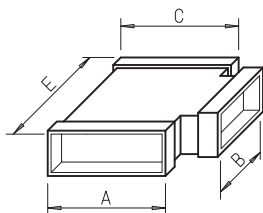
Type	Ref.- No.	Dim. in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BH 150/90	2909	153	53	90°
200 x 50 mm				
FK-BH 200/90	2911	203	53	90°

Y-Branch

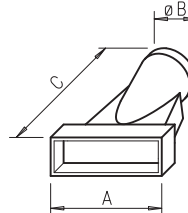


Y-Branch

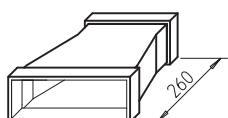
Type	Ref.- No.	Dim. in mm		
		A	B	C
150 x 50 mm				
FK-Y 150/150/150	2927	153	153	153
200 x 50 mm				
FK-Y 200/150/150	2929	153	153	203



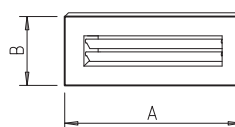
Type	Ref.- No.	Dim. in mm			
		A	B	C	E
FK-T 150/150/150	2921	153	153	153	250
FK-T 150/150/200	2923	153	153	203	390
FK-T 150/200/150	2926	153	203	153	300
FK-T 200/150/200	2925	203	153	203	250
FK-T 150/200/200	2924	153	203	203	450
FK-T 200/200/200	2922	203	203	203	300



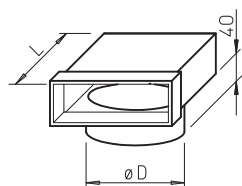
Type	Ref.- No.	Dim. in mm		
		A	ø B	C
150 x 50 mm				
FK-Ü 75/150	2948	153	78	260
FK-Ü 100/150	2996	153	103	260
200 x 50 mm				
FK-Ü 100/200	2997	203	103	260
FK-Ü 125/200	2998	203	128	260



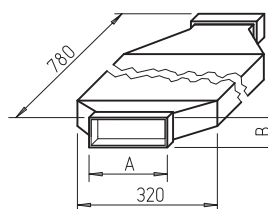
Type	Ref.- No.	Dim. in mm Length Height
Reducer symmetric		
FK-RS 200/150	2932	260 53
Reducer asymmetric		
FK-RA 200/150	2933	260 53



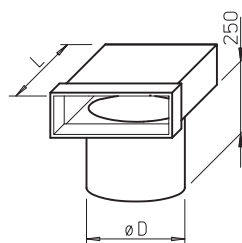
Type	Ref.		Dim. in mm	
	No.	colour	A	B
200 x 50 mm				
FK-WA 200 W	9350	white	250	113
FK-WA 200 AL	9351	alu	250	113



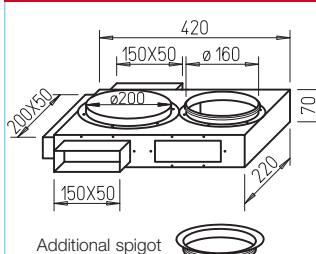
Type	Ref.- No.	Dim. in mm	
		ø D	L
150 x 50 mm			
FK-ER 150/100	2934	99	200
FK-ER 150/125	2935	124	200
200 x 50 mm			
FK-ER 200/160	2936	159	220



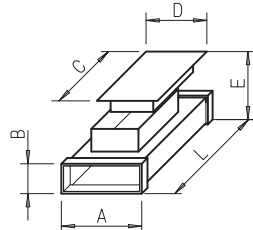
Type	Ref.- No.	Dim. in mm	
		A	B
150 x 50 mm			
FK-SD 150	2945	153	53
200 x 50 mm			
FK-SD 200	2946	203	53



Type	Ref.- No.	Dim. in mm	
		ø D	L
150 x 50 mm			
FK-EV 150/100	2937	102	200
FK-EV 150/125	2938	127	200
200 x 50 mm			
FK-EV 200/100	2939	102	200
FK-EV 200/125	2940	127	200

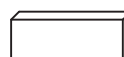


Type	Ref. - No.
FK-VK	2987
Scope of delivery FK-VK	
4 spigots 150 x 50 (2 fixed, 2 loose)	
1 spigot 200 x 50 plus 1 revision shutter	
Additional spigots for pass junction box	
FK-ZS	2947

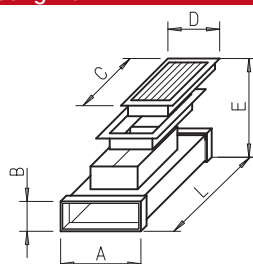


Type	Ref.	Dim. in mm				
	No.	A	B	C	D	L
150 x 50 mm						
FK-RZ 150	2930	153	53	347	137	500
200 x 50 mm						
FK-RZ 200	2931	203	53	347	137	500

E can be adapted from 105-130 mm.



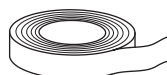
Type	Ref.- No.
150 x 50 mm	
FK-ED 150	2943
200 x 50 mm	
FK-ED 200	2944



Type	Ref.-		Dim. in mm			
	No.	A	B	C	D	L
150 x 50 mm						
FK-BA 150	2986	153	53	348	152	500

E can be adapted from 112-152 mm.

E can be adapted from 112-152 mm.



Type	Ref. - No.	
Cold shrinking strip aluminium		
KSB	9343	50 mm width, 15 mtrs
Cold shrinking strip		
KSB ALU	9344	50 mm width, 15 mtrs
Strip		
KLB	0619	50 mm width, 20 mtrs

Extract air elements



Design valves and valves

For air extract with higher and lower air flow speeds and/or resistances, with compact and attractively designed fascia and integrated filter.

Supply air valves



Design valves and valves

For air supply with higher and lower air flow speeds and/or resistances.

Type DLV 125 with compact and attractively designed fascia and integrated filter.

Attachment filter element VFE



Attachment filter element VFE

covering air extract elements AE.. or valves. Prevents fat and dust deposits on extract elements, valves and connected ducting system. Casing made from galvanised steel, white, powder coated. Filter made from aluminium with 324 cm² filter surface and aluminium frame.

Door grilles



Door grilles

Discreet, non vision door transfer grille made from impact resistant polymer, to be installed into doors.

For full details see product page.

Control line



Control line

Ribbon cable, on both sides with plugs RJ12 for slide switch controller KWL BE. On both sides with plugs RJ10 for comfort controller KWL-BEC, CO₂-, mixing gas (VOC), humidity sensor, KNX/EIB module or the extension module. For full details of accessory components see product pages KWL-units.

ø 80		ø 100		ø 125		ø 160	
Type	Ref.-No.	Type	Ref.-No.	Type	Ref.-No.	Type	Ref.-No.
Design valve DLV¹⁾ for extraction							
		DLV 100	3039	DLV 125	3049		
		ELF-DLV 100 ²⁾	3042	ELF-DLV 125 ²⁾	3058		
Polymer valve KTVA							
KTVA 75/80	0940	KTVA 100	0941	KTVA 125	0942	KTVA 160	0943
Metall valve for extraction (especially for areas, in which inflammable components are not prescribed)							
MTVA 75/80	8868	MTVA 100	8869	MTVA 125	8870	MTVA 160	8871

¹⁾ With integrated filter.

²⁾ Replacement air filters for DLV., SU = 5 pcs

ø 80		ø 100		ø 125		ø 160	
Type	Ref.-No.	Type	Ref.-No.	Type	Ref.-No.	Type	Ref.-No.
Design valve DLV.. for supply							
LGK 80	0259	DLVZ 100	3040	DLV 125	3049		
				ELF-DLV 125 ²⁾	3058		
Polymer valve KTVZ							
KTVZ 80	2762	KTVZ 100	2736	KTVZ 125	2737	KTVZ 160	2738
Metall valve for supply (especially for areas, in which inflammable components are not prescribed)							
MTVZ 75/80	9603	MTVZ 100	9604	MTVZ 125	9605	MTVZ 160	9606

¹⁾ Replacement air filters for DLV 125, SU = 5 pcs

VFE 70 Ref.-No. 2552

VFE 90 Ref.-No. 2553

ELF/VFE Ref.-No. 2554

Replacement air filters, SU = 2 pcs

LTGW Ref.-No. 0246

Made from white polymer.

LTGB Ref.-No. 0247

Made from brown polymer.

	For KWL-BE (Ribbon cable on both sides with RJ12 plugs)		For KWL-BEC, -CO ₂ -, -VOC, -FTF, -KNX, -EM (Ribbon cable on both sides with RJ10 plugs)	
Cable length*	Type	Ref.-No.	Type	Ref.-No.
3 mtrs	KWL-SL 6/3	9987	KWL-SL 4/3	4404
5 mtrs	KWL-SL 6/5	9980	KWL-SL 4/5	4405
10 mtrs	KWL-SL 6/10	9444	KWL-SL 4/10	4411
20 mtrs	KWL-SL 6/20	9959	KWL-SL 4/20	4413

* Other lengths on request.

Shutters



Attenuators



Water heater battery



Cleaning kit



Air temperature control system



Hydraulic unit



Other accessories

- Enthalpy heat exchanger 12 on
- HygroBox 42 on
- Undersoil heat exchanger 44 on
- Insulated ducting system 48 on
- Air distribution systems 50 on
- Fire protection elements

Helios main catalogue

ø 80	ø 100	ø 125	ø 160	ø 200	ø 250	ø 315	ø 400
Back draught shutter – automatic, in-line installation, casing made from galvanised sheet steel or *polymer, flaps made from aluminium							
	RSKK* 100 5106	RSKK* 125 5107	RSK 160 5669	RSK 200 5074	RSK 250 5673	RSK 315 5674	RSK 400 5651
Lock cold smoke valves – for mains common in multi-storeyed building.							
KAK 80 4096	KAK 100 4097	KAK 125 4098	KAK 160 4099	KAK 200 4100			
Flexible attenuator (FSD) or elastic silencer (SDE) – made from aluminium duct							
	FSD 100 0676	SDE 125 0789	SDE 160 0790	FSD 200 0679	FSD 250 0680	FSD 315 0681	FSD 400 0683

Type	Ref.-No.	Suitable for pipe ø mm	Air-side data					Water-data ¹⁾		Weight ca. kg	Suitable temperature Control system	
			Heat power		Δ T Air		at V	Pressure drop	At water flow rate		Type	Ref.-No.
			kW ¹⁾	kW ²⁾	K ¹⁾	K ²⁾	m³/h	Δp _w kPa	l/h			
WHR 100	9479	100	1.9	0.9	35	17	150	1	84	3.2	WHST 300 T50	8820
WHR 125	9480	125	2.6	1.1	29	13	250	2	115	3.2	WHST 300 T50	8820
WHR 160	9481	160	5.5	3.1	38	22	400	11	245	4.9	WHST 300 T50	8820
WHR 200	9482	200	7.2	4.1	33	19	600	17	317	4.9	WHST 300 T50	8820
WHR 250	9483	250	10.7	6	37	21	800	8	470	6.9	–	–
WHR 315	9484	315	18.3	10.4	36.2	21	1400	9	810	9.0	–	–
WHR 400	9524	400	26.2	15	36	21	2000	11	1060	12.5	–	–

Cleaning kit for distribution system FlexPipe® and RenoPipe

The universal cleaning kit is perfect for cleaning of the flexible ducting system FlexPipe® (DN 75, DN 63) as well as the RenoPipe air distribution system (DN 100).

Application is optionally under pressure (with short ways) or tension possible. With longer ducting distances or narrow elbows the nylon wheel brush is pulled simply

toward the distribution box, at which the 90° elbow is used for the vacuum connection. Via this, the dust particles dislodged by the nylon wheel brush are vacuumed without problems with a commercial vacuum cleaner.

Delivery in practical transportation bag.

- Scope of delivery: 1 piece of each
- Hand reel with flexible glass fibre reinforced wire (20 running mtrs)
 - Wheel brush DN 63, 75, 100
 - 90° elbow and sealing for vacuum connection DN 56
 - Adapter DN 56/40, DN 56/32.

KWL-RS

Ref.-No. 2797

Air temperature control system for KWL®-units with PWW heater battery.

For air temperature control of KWL.. WW types with integrated PWW water heater battery. Consisting of thermostat with remote control and remote sensor. Simple, low-cost and quick assembly solution.

Temperature range 8 – 38 °C.

WHST 300 T38 Ref.-No. 8817

Air temperature control system



Air temperature control system for warm water battery WHR. Ideal for application as supply air heating.

Consisting of thermostat incl. duct temperature sensor (with 2 m capillary tube) and valve. Enables a constant supply air temperature. Simple, low-cost and quick assembly solution.

Temperature range 20 – 50 °C.

WHST 300 T50 Ref.-No. 8820

Clock timer



Clock timer

Digital with LCD-display or the automatic control of the operation, all days of the week can be programmed.

For surface- and flush mounting.

Dim. mm (WxHxD) 85 x 85 x 52

WSUP Ref.-No. 9990

For switchboard installation (2 space units required).

Dim. mm (WxHxD) 36 x 90 x 69

WSUP-S Ref.-No. 9577

Accessories details

Dimensions, further technical information as well as other sizes: Water heater batteries and temperature control systems, grilles, ducts, duct components, roof terminations, extract air elements, attachment filter elements, valves

Helios main catalogue



The professionals choice

Helios Ventilation Systems Ltd. • 5 Crown Gate • Wyncolls Road • Severalls Industrial Park • Colchester, Essex CO4 9HZ
phone: +44 - (0) 1206 228 500 • telefax: +44 - (0) 1206 228 501 • e-mail: sales@heliosfans.co.uk • www.heliosfans.co.uk

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The professionals choice