

KWL® Ventilation Systems

for your feel-good climate.



Enjoyment comes when
everything fits into place.



Contents

Why Helios is your partner for ventilation with heat recovery:

- An overview of our ventilation systems
- Everything from a single source
- Our focus on design-oriented air inlets and outlets
- Advantages for end users, tradesmen, specialist planners and housing companies
- Online design with KWLeasyPlan

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Decentralised domestic ventilation with heat recovery

- Wall installation units KWL EC 60 and KWL EC 45-160

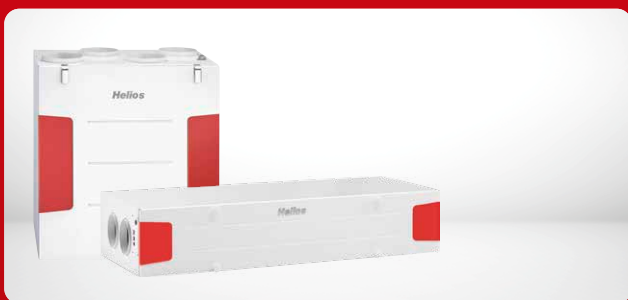
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Decentralised ventilation with heat recovery

- KWL YOGA with up to 400, 700 or 1000 m³/h

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Central ventilation units

- Wall installation "W": Wall units with up to 170, 200, 300, 360, 470 or 500 m³/h
- Ceiling installation "D": Ceiling units with up to 220, 340, 700, 1400 or 2000 m³/h
- Standing installation "S": Central units with up to 800, 1200, 1800 or 2600 m³/h

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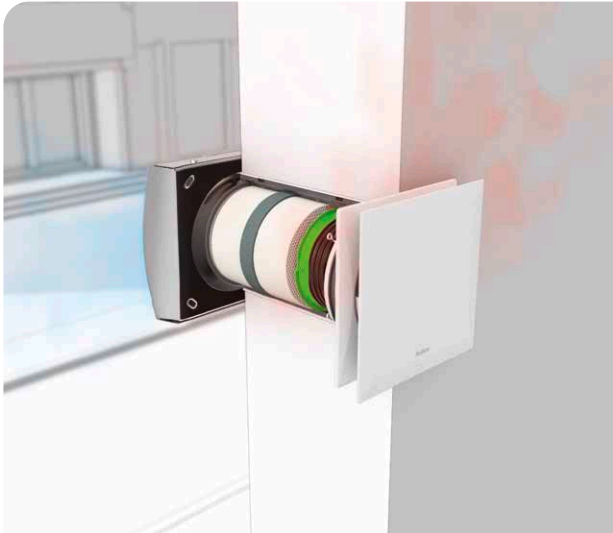


The peripherals:

- *flexpipe*^{plus} for installation in, on or under the ceiling
- IsoPipe for intake and exhaust ducting
- *renopipe* for installation in existing housing
- Flat duct system for installation on unfinished floors
- Additional accessories for KWL units
- KWL MultiZoneBox for compact supply and extract ventilation
- KWL HygroBox for active humidification
- Ground-to-brine/air heat exchangers

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For individual rooms and residential units: Decentralised ventilation systems.



KWL EcoVent Verso

The KWL EcoVent Verso heat recovery is regenerative via a ceramic heat accumulator. In extract air mode, this absorbs the heat from the indoor air and stores it in the ceramic core in order to transfer it to the inflowing intake air in the following supply air phase.

- A functional unit consists of at least two units, which operate out of phase.
- Particularly space-saving thanks to a diameter of just 160 mm.
- KWL EcoVent Verso achieves the energy efficiency class A+ with additional room sensors.

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KWL EcoVent

Helios EcoVent is the compelling solution for a comfortable living environment and energy savings in individual rooms. A heat recovery efficiency of more than 70 % is achieved due to the large-scale aluminium plate heat exchanger.

- Compact wall installation unit for the energy-saving supply and extract ventilation of individual rooms without an air distribution system.
- Convenient, room-by-room control, with automatic humidity or CO₂ elements upon request.
- Ideal for bringing existing buildings up to the legally required EnEV standard in the course of a renovation.

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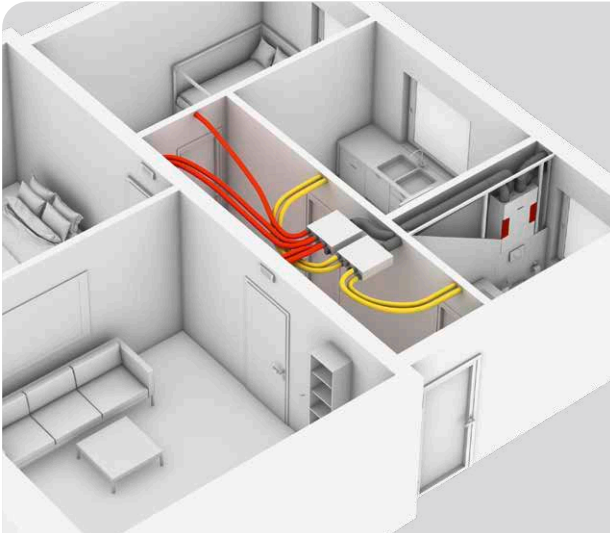
KWL Yoga

Whether in schools or public buildings, at work or in leisure time – the new ventilation units with heat recovery KWL Yoga provide the best indoor air quality. This is possible thanks to the decentralised functionality with minimal installation work and space requirements. It is also ideal for subsequently and substantially improving the air quality in individual rooms.

- Flexible: Three available unit sizes for flow rates up to 400, 700 and 1000 m³/h.
- Customised: 12 different equipment options.
- New: Types "ET" are equipped with highly efficient enthalpy heat exchanger.

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For residential and commercial buildings: Central ventilation solutions.

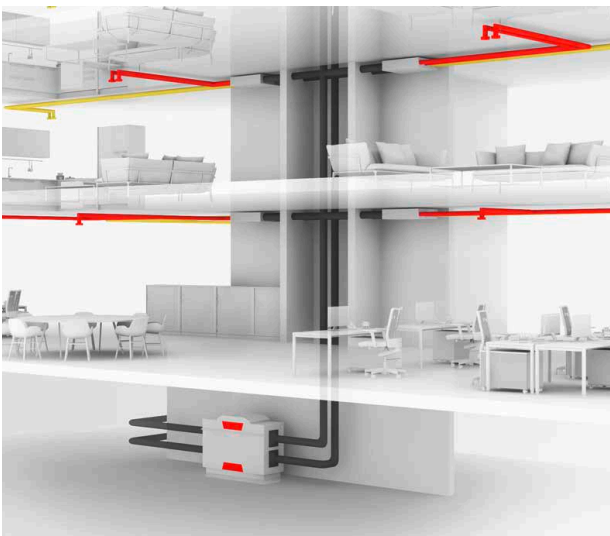


KWL compact units

Central KWL compact units are available in many sizes with air capacities up to 500 m³/h and they offer a variety of ventilation solutions for apartments and single family houses – individually adapted to the needs of residents.

- Wall and ceiling units in different gradations.
- Intuitive and modern control concept easyControls 3.0.
- Compact dimensions and high installation flexibility.
- Passive house certified units.

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KWL large units

Reliable solutions for the supply and extract ventilation of all residential units are sought after in residential buildings and apartment buildings. Helios KWL large units are available in many equipment variants - for air capacities up to 2600 m³/h.

- Floor-standing and ceiling units with passive house certification for a variety of requirements.
- Certified according to VDI 6022.
- Various comfort and equipment variants.

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Do you already know about our energy-efficient compact ventilation units Helios AIR1? These large units with heat recovery offer a wide range of solutions with air capacities of up to 15,000 m³/h – for almost any application.

- 4 series, 28 types and more than 100 configuration options.
- Various heating and cooling options.
- Components with German Hygiene- (VDI 6022) and Eurovent-Certification.

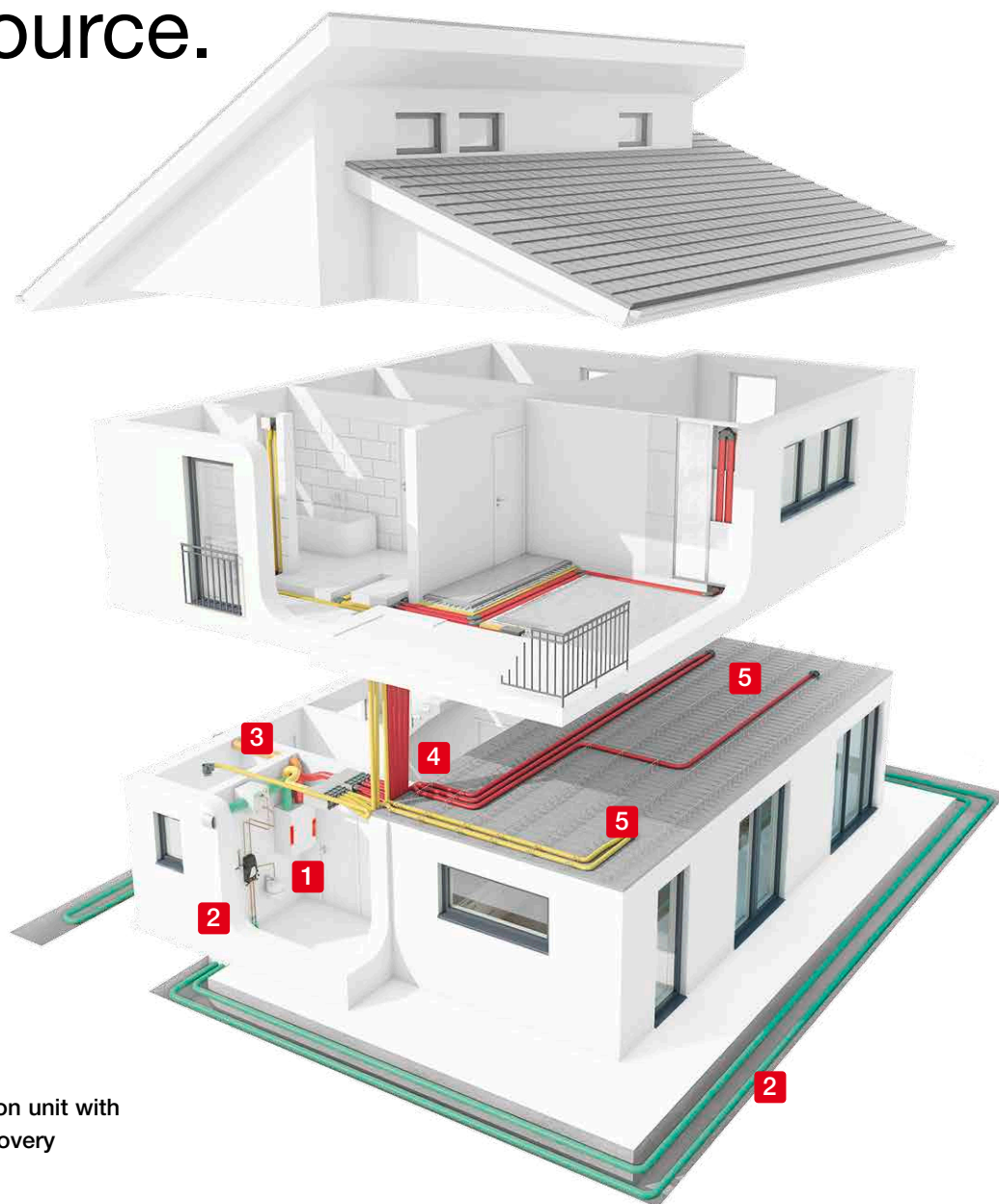


More info at:
www.eurovent-certification.com

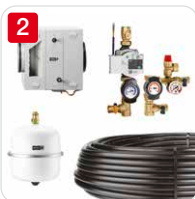
www.HeliosAIR1.com



Everything from a single source.



Ventilation unit with heat recovery



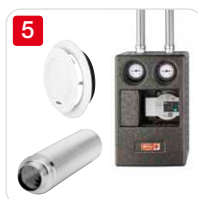
Ground-to-brine/air heat exchanger



Insulated ducting system IsoPipe for intake and exhaust ducting



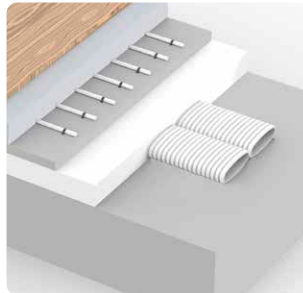
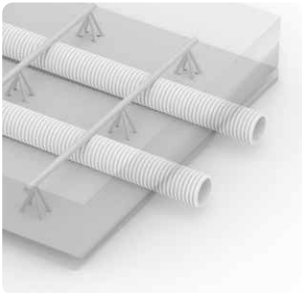
Air distribution system FlexPipe^{plus} for extract and supply air



Accessories such as silencers, air inlets and outlets, etc.

Always the perfect solution with *flexpipe^{plus}*.

- Suitable for solid, timber or prefabricated house construction.
- Installation in concrete ceilings, on unfinished flooring, in walls or in suspended ceilings.
- Vertical and horizontal adapters allow any desired combination round/oval, oval/oval, round/round for maximum flexibility.

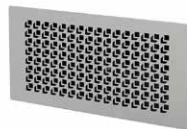


Universal, flexible and individual. The *flexpipe^{plus}* distribution boxes.



- The sophisticated distribution concept from Helios offers the ideal solution for all installation requirements.
- All connections to the distributors are freely selectable, whether they are on the front, offset by 90° or combined.
- Mixed installation with round and oval connectors is possible depending on the requirements.

Eye-catching with added value: The KWL design wall grilles.



The elegant wall grilles are available in three classic designs (in stainless steel or signal white). They fit perfectly in any room atmosphere and provide for a pleasant and draught-free supply air flow.

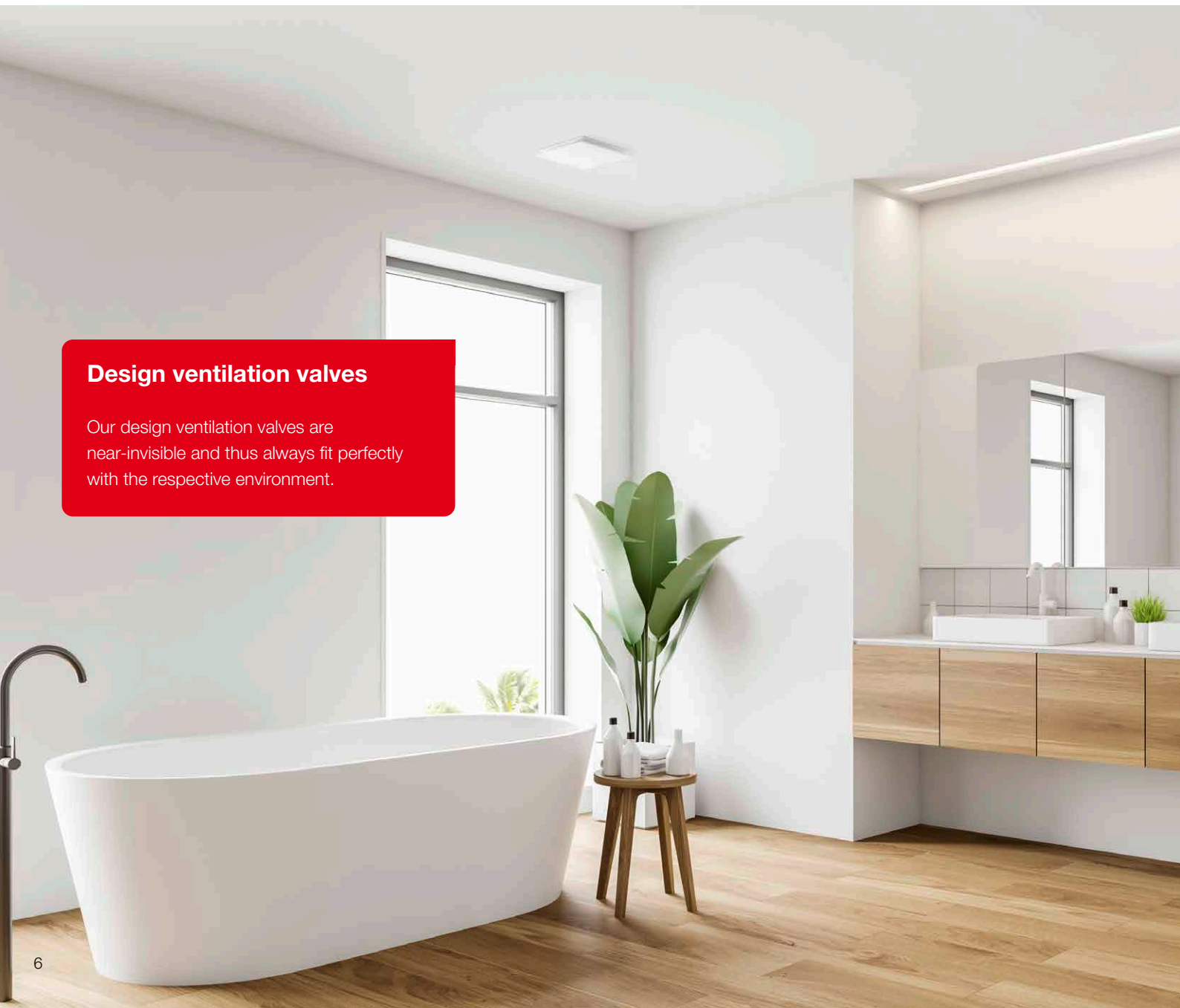
We are not only developing innovative ventilation systems – **comfort and aesthetics also play a major role.**

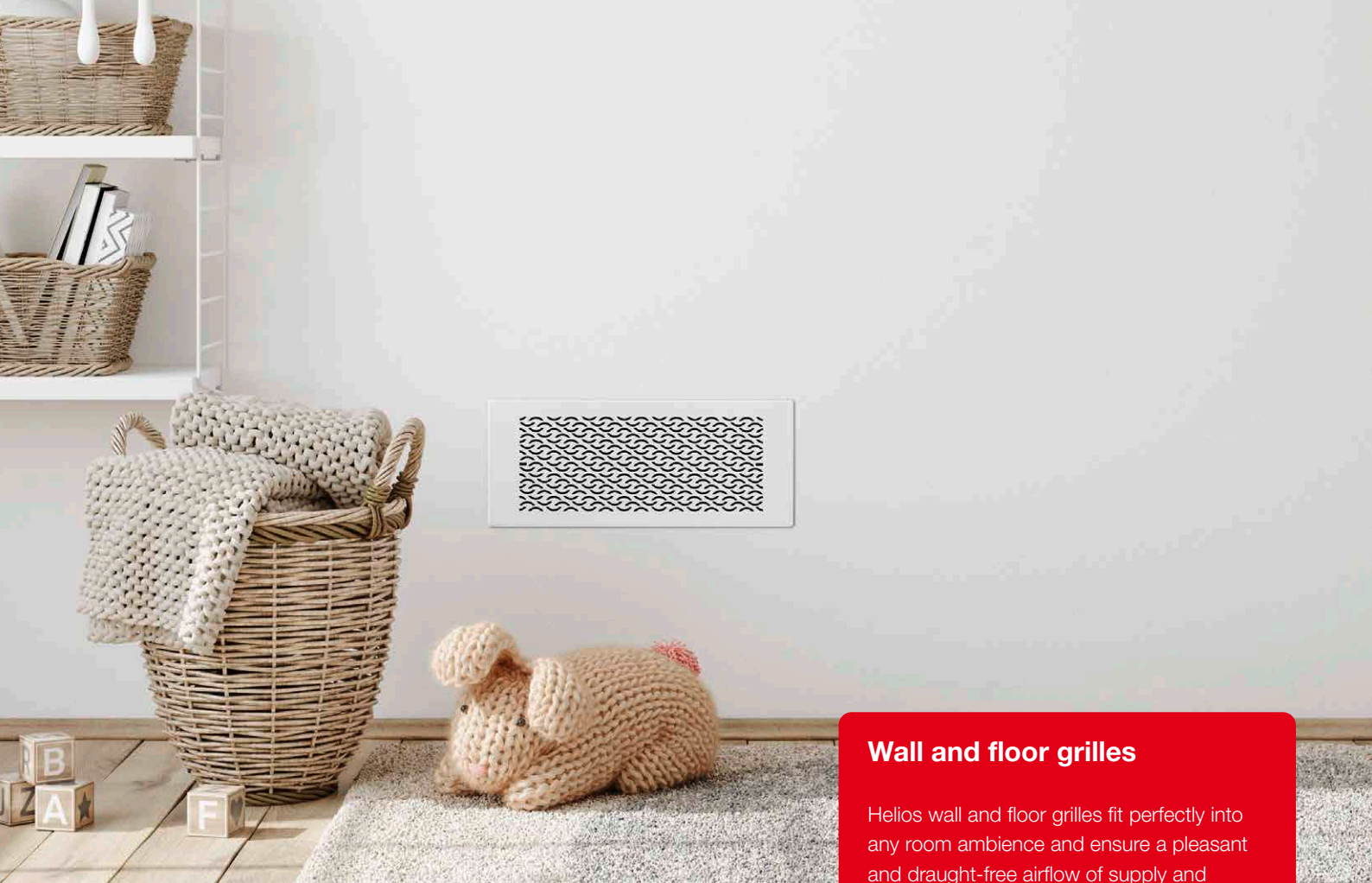


Harry Haas,
Sales Director KWL

Design ventilation valves

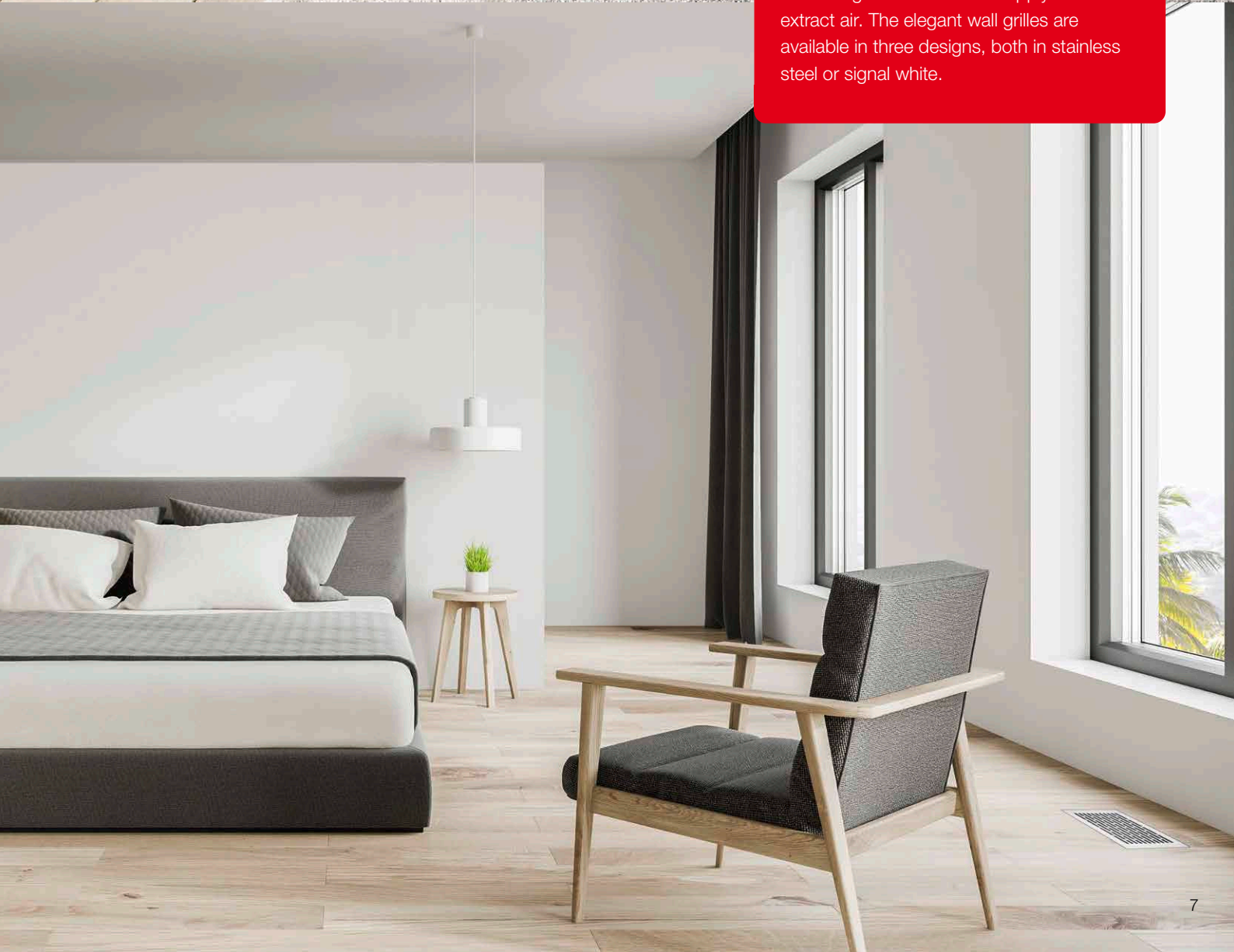
Our design ventilation valves are near-invisible and thus always fit perfectly with the respective environment.





Wall and floor grilles

Helios wall and floor grilles fit perfectly into any room ambience and ensure a pleasant and draught-free airflow of supply and extract air. The elegant wall grilles are available in three designs, both in stainless steel or signal white.



Added safety. Added value for you.

Whether it is installers, specialist planners, architects or end users – the systems from Helios benefit everyone across the board. Discover your personal advantages now and be inspired by the many highlights of our KWL ventilation systems.

Helios is
award-winning:



Advantages for end users

- **Take full advantage:**
You will always have a healthy, sustainable feel-good atmosphere and save on energy costs at the same time.
- **Not just for allergy sufferers:**
The first-class filters effectively remove pollen and dust from the room air.
- **Fully automatic ventilation system control:**
With modern sensors, without any user intervention and according to your needs.
- **The right unit for every requirement:**
Whether it is building quality A++ (passive house), A+ or A – the individual classes can only be reached with a ventilation system with heat recovery.
- **Award-winning design:**
The multiple award-winning system components can be ideally integrated into any room atmosphere.
- **Flexible, intuitive and smart:**
Convenient and intuitive controllers facilitate everyday use.



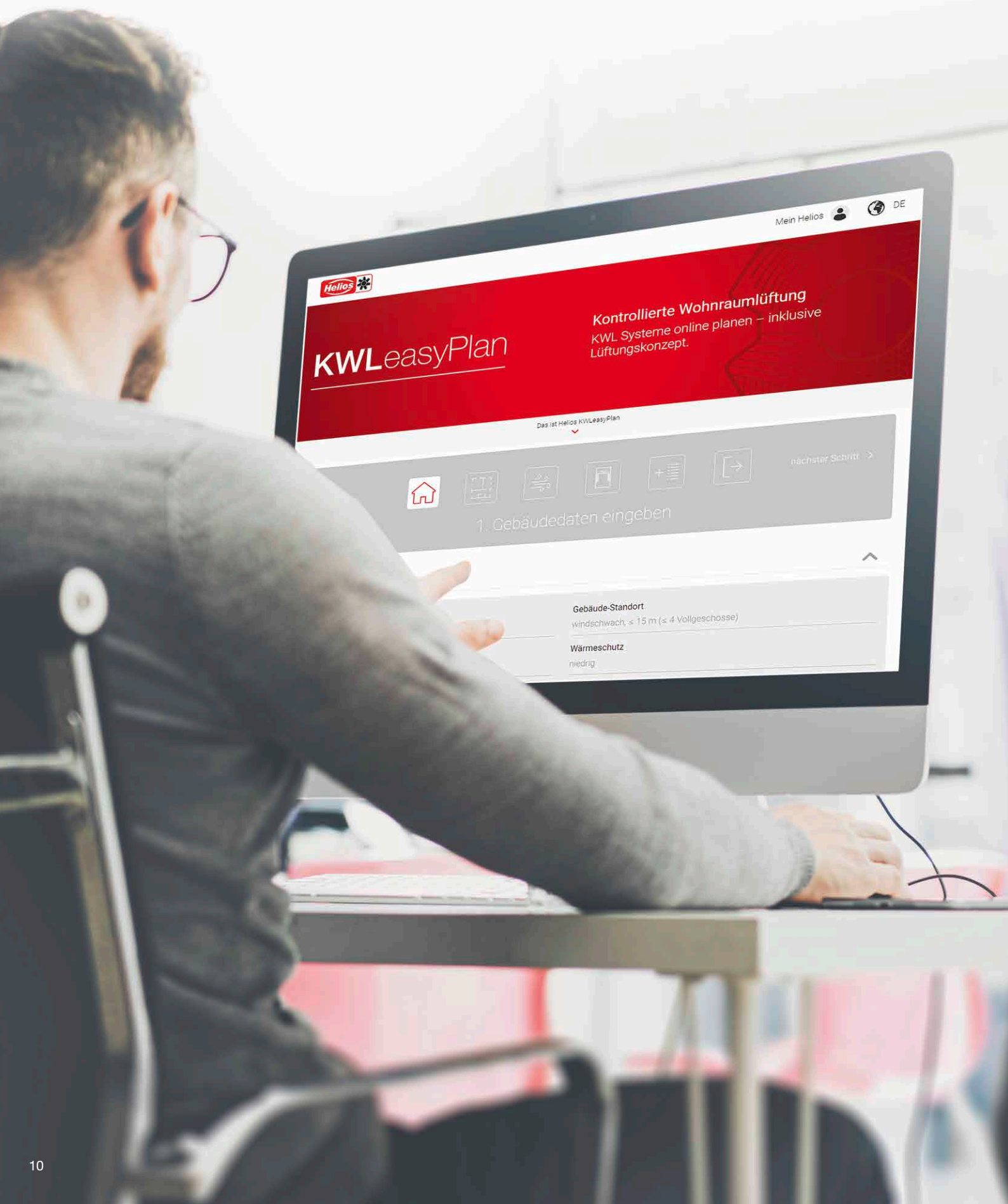
Advantages for tradesmen

- **Everything from a single source:**
Our system components are ideally tuned to each other.
- **Decades of experience:**
We always consider the needs of installers and we only develop systems which are quick and easy to install on site.
- **Simple commissioning:**
Every system is ready for operation in no time thanks to the various commissioning assistants.



Advantages for specialist planners, architects and housing companies

- **Best support:**
You will find us right around the corner from you thanks to our nationwide sales force.
- **It couldn't be simpler:**
You can plan your individual solution for a variety of applications easily, quickly and in compliance with DIN standards with our online tool KWL easyPlan.
- **Fulfils every customer request:**
You can meet all requirements thanks to our wide range of products.



Helios
KWLeasyPlan

Kontrollierte Wohnraumlüftung
KWL Systeme online planen – inklusive
Lüftungskonzept.

Das ist Helios KWLeasyPlan



nächster Schritt: >

1. Gebäudedaten eingeben

Gebäude-Standort:

windschwach, < 15 m (< 4 Vollgeschosse)

Wärmeschutz:

niedrig

Simple, fast and safe:

Online design with KWL[®]easyPlan.

Our online software www.KWLeasyPlan.de takes all the hassle out of creating a ventilation concept and the DIN-compliant design of a ventilation system. The obtained results can be transferred to a Material Assistant, which will suggest the suitable Helios system components for your project – simple, uncomplicated and in no time at all. All results can also be provided as a PDF document and in other data formats.

All programme functions are available free of charge, without obligation and without registration.

Registered “easyPlanners” have additional options, such as saving, re-editing or copying projects. A list of materials with list price information is also issued.

> Smart assistants quickly guide you to your goal

The online software is divided into three steps. The user guidance through each step is always intuitive and dialogue-oriented and maintains an overview at all times:

1.

Creation of a ventilation concept

- Check whether a ventilation measure is required for your project with just a few clicks and entering the living area.
- The results can be determined for both single family houses and apartment buildings.

2.

Select and design the ventilation measure

- If a ventilation measure is required, you can choose between different solutions for each residential unit.
- Once the rooms per residential unit are entered, KWLeasyPlan automatically creates a DIN-compliant ventilation design. Experienced users can also adjust this design manually.
- The air volumes per residential unit are clearly illustrated in tabular form for each room.
- The required number of air inlets/outlets per room is determined once the desired pipe diameter is selected.
- Finally, the location of the ventilation unit must be selected and the programme will automatically provide a schematic diagram of the ventilation unit including the air volume details.

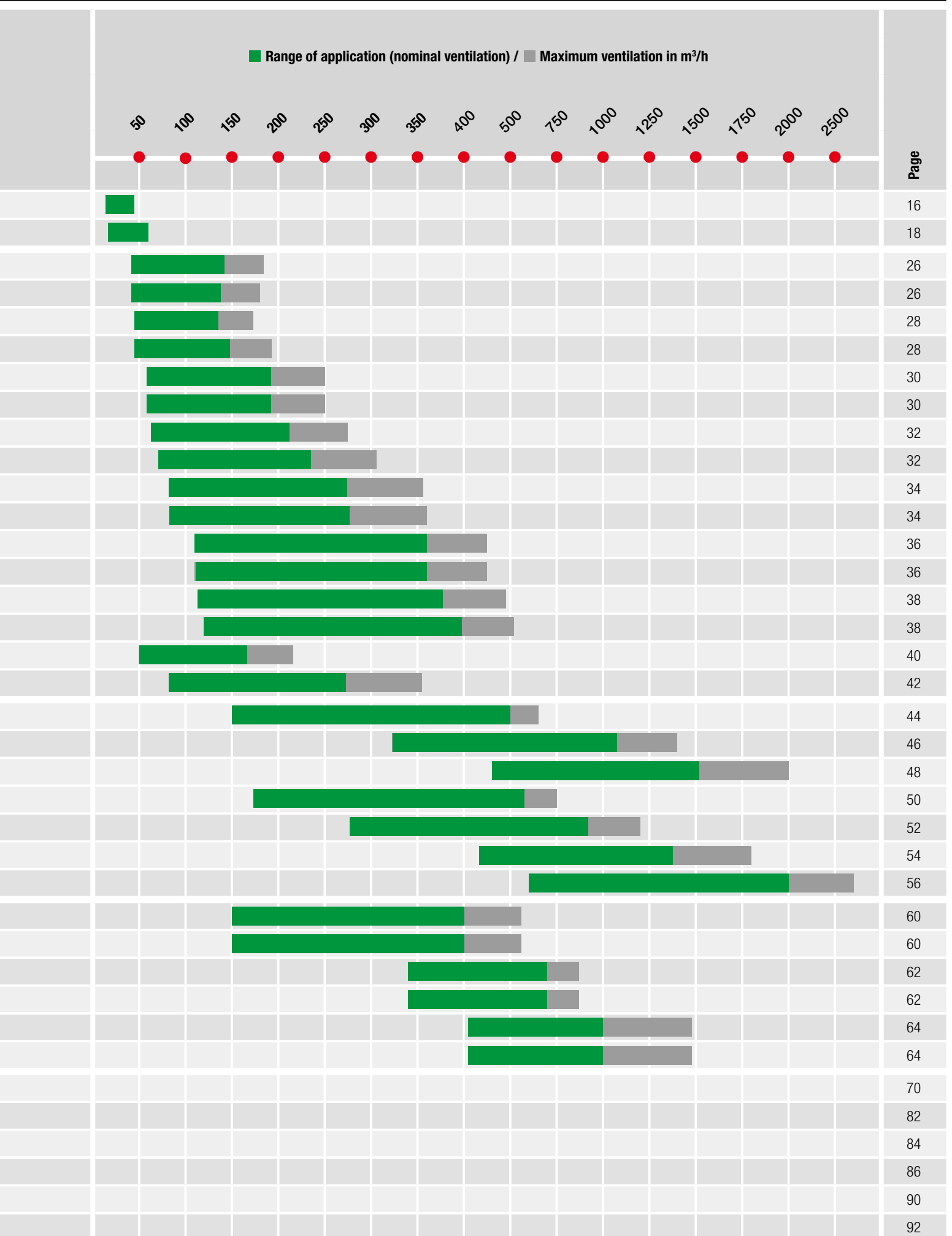
3.

The Material Assistant

- The ventilation design results can be transferred directly to the Material Assistant.
- The Material Assistant suggests suitable Helios products and system components – perfect for inexperienced or occasional users. Of course, professionals can adjust the selection if necessary.
- The generated material list generally includes all required system components for the domestic ventilation system and is perfectly suited for quotation requests or for an initial cost estimate.

	Type	Installation			Decentralised / Central	Typical areas of application					Maximum energy efficiency class*	Moisture recovery	With passive house certificate	
		Wall mounting / wall	Ceiling	Floor		Living room	Single family house	Apartment building – apartment central	Apartment building – building central	Commercial / municipal buildings				
	KWL EC 45-160	■			D	■	■	■			A+			
	KWL EC 60	■			D	■	■	■			A			
  	KWL 170 W	■			C		■	■			A+		■	
	KWL 170 W ET	■			C		■	■			A	■	■	
	KWL 200 W	■			C		■	■			A			
	KWL 200 W ET	■			C		■	■			A	■		
	KWL 250 W	■			C		■	■			A+			
	KWL 250 W ET	■			C		■	■			A	■		
	KWL 300 W	■			C		■	■			A			
	KWL 300 W ET	■			C		■	■			A	■		
	KWL 360 W	■			C		■	■			A+		■	
	KWL 360 W ET	■			C		■	■			A	■	■	
	KWL 470 W	■			C		■	■		■	A+			
	KWL 470 W ET	■			C		■	■		■	A	■		
	KWL 500 W	■			C		■	■		■	A			
	KWL 500 W ET	■			C		■	■		■	A	■		
	KWL 220 D		■		C		■	■			A+		■	
	KWL 340 D		■		C		■	■			A+			
	KWL EC 700 D		■		C				■	■			■	
	KWL EC 1400 D		■		C				■	■			■	
	KWL EC 2000 D		■		C				■	■			■	
	KWL EC 800 S			■	C				■	■			■	
	KWL EC 1200 S			■	C				■	■			■	
	KWL EC 1800 S			■	C				■	■			■	
	KWL EC 2600 S			■	C				■	■			■	
	KWL YOGA Style 400		■		D					■				
	KWL YOGA Style 400 ET		■		D					■		■		
	KWL YOGA Style 700		■		D					■				
	KWL YOGA Style 700 ET		■		D					■		■		
	KWL YOGA Style 1000		■		D					■				
	KWL YOGA Style 1000 ET		■		D					■		■		
	flexpipe ^{plus}						■	■	■					
	IsoPipe						■	■						
	renopipe							■						
	Flat duct						■							
	KWL HygroBox						■	■						
	Ground heat exchanger						■	■						

* See KWL® unit product pages for details.



Decentralised domestic ventilation **with heat recovery.**



Controlled domestic ventilation with heat recovery (KWL) fully ensures ventilation pursuant to DIN 1946-6 and thus guarantees that not only the indoor environment, but also the energy balance sheet benefit from the ventilation technology measures.

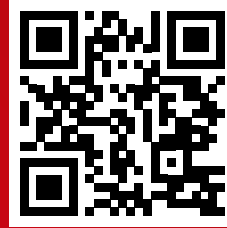
In this respect, a decentralised ventilation system with heat recovery offers major advantages, especially in renovation, as it is an economical and simple solution for single rooms.

The focus is on two main points:

On the one hand, high efficiency is a prerequisite for the economical operation of the units and, on the other hand, the individual ventilation units must form a complete system in perfect coordination with each other.

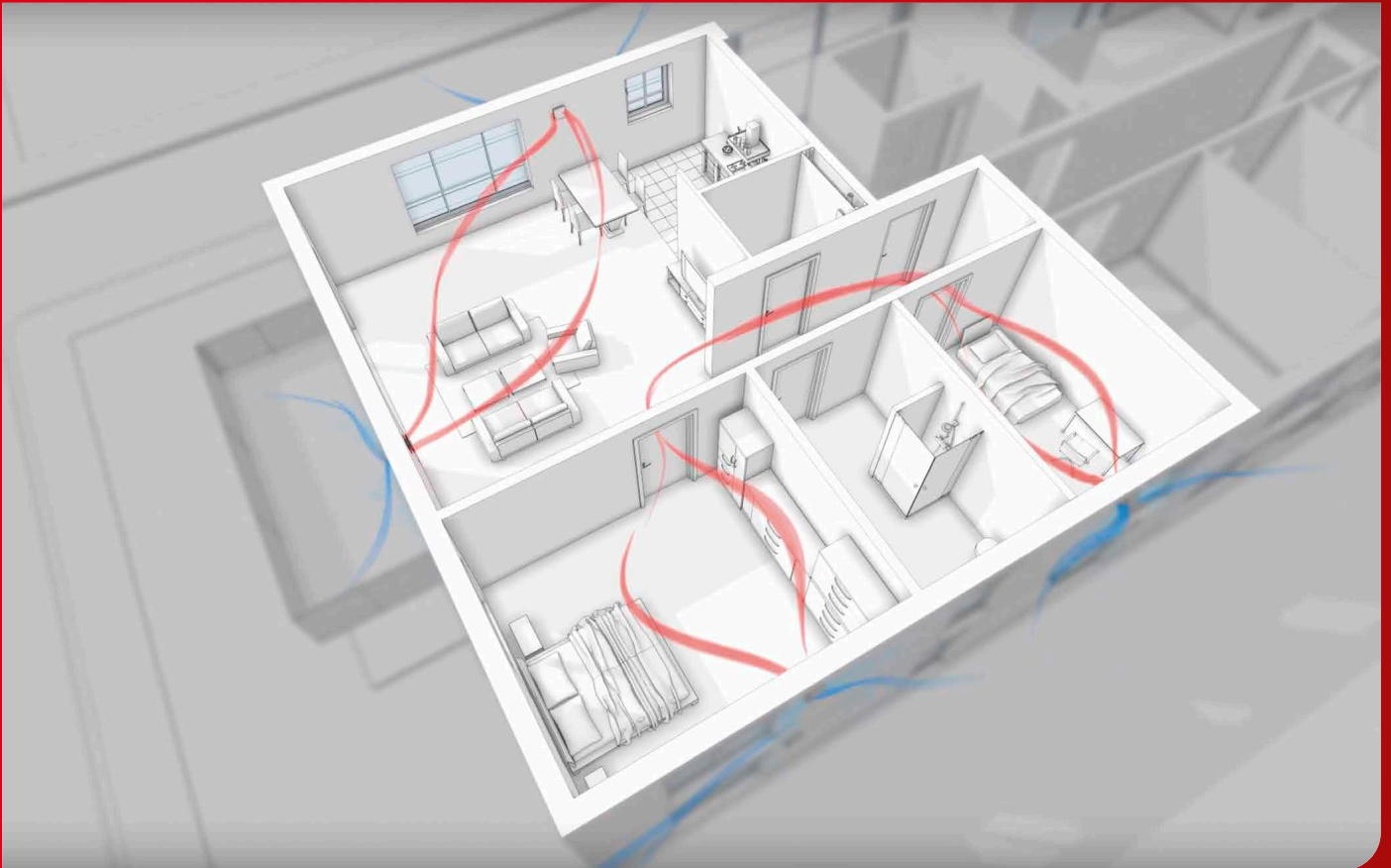
The decentralised ventilation units with heat recovery from Helios are among the best in their class in both categories.

Thanks to the quick and simple installation, they provide an economical solution for the supply and extract ventilation of single rooms. Residents can sit back, relax and take a deep breath of fresh air!



▶ **PLAY**

Learn about the many possibilities offered by EcoVent Verso KWL EC 45-160 now on our YouTube channel.



■ **EcoVent Verso
KWL EC 45-160**

With a ceramic heat exchanger, flow straightener and EC fan.
For flush wall mounting in single rooms, ideal if space is limited.



16^f

■ **EcoVent
KWL EC 60**

With a large-scale aluminium plate heat exchanger and two EC fans.
For flush wall mounting in single rooms - the optimal renovation solution.



18^f

■ **Selection matrix**

12^f

KWL EC 45-160



Efficiency class

- A+** KWL EC 45-160 with additional room sensor
- A** KWL EC 45-160



KWL EC 45-160 belongs to the category of switching ventilation units with heat recovery.

DIBt-approved (general technical approval), Z-51.3-417. It is intended for installation in the external building wall. The passage of air is from the outside of the wall through a stainless steel panel. A closable plastic panel on the inner side of the wall, which has integrated sound insulation and a fibre fleece air filter (class ISO Coarse 50% (G3)), is used for this purpose. The KWL EC 45-160 has an EC axial fan which operates in reversing cycles. In this respect, the supply air phases, where the intake air flows into the building, continuously alternate with the extract air phases, which are characterised by the extraction of indoor air from the building.

The heat recovery is regenerative using a ceramic heat exchanger. During extract air operation, this absorbs heat from the indoor air (storage charge) to transfer it to the incoming intake air (storage discharge) in the subsequent supply air cycle. Heat recovery efficiency up to 88 % (according to current DIBt test procedure).

There is an insect screen on the outside of the ceramic heat exchanger in order to protect against coarse dirt.

In order to maintain balanced ventilation operation, at least 2 units are required for a residential unit, which operate out of phase in terms of operating phases (supply air/extract air). Depending on the total air requirement of the residential unit, more than 2 units are normally installed, whose individual volume flows are automatically co-ordinated using the central control unit.

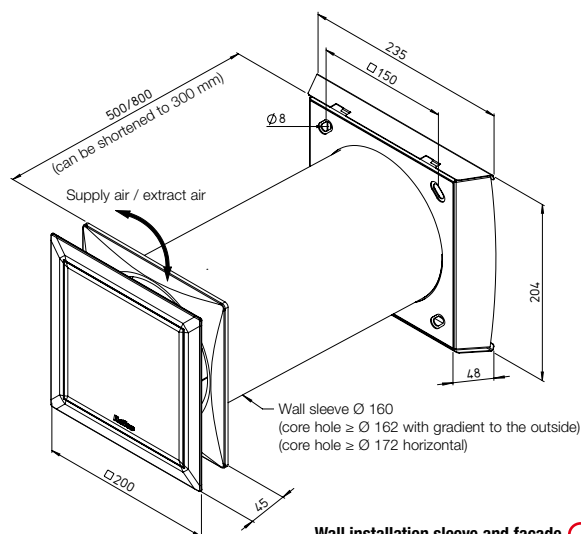
■ Highlights KWL EC 45-160

- ☐ Economical, quiet EC axial fan.
- ☐ Elegant and timeless design.
- ☐ Tool-free, simple installation and dismantling of components.
- ☐ Integrated sound insulation.
- ☐ Integrated ISO Coarse 50% (G3) air filter, easily accessible and changeable without tools.
- ☐ Simple, intuitive operation via two keys.
- ☐ LED display for operating mode and current ventilation level.
- ☐ Up to 8 controllable units.
- ☐ 5 ventilation levels: 14, 24, 32, 37, 45 m³/h.
- ☐ 4 operating modes: Heat recovery (= reversing operation), cross ventilation and supply air/extract air mode.
- ☐ Possibility of external activation from standby, cross ventilation, supply air mode or party mode (maximum ventilation level) by evaluating an external, potential-free contact.
- ☐ Intelligent integration of e.g. demand-controlled extract air fans via an extension module (accessories).
- ☐ Filter change indicator.
- ☐ Programming via PC.

■ Control

The central control unit with control element enables the controlling of up to 8 units. 5 ventilation levels and 4 operating modes can be set on the control element: Heat recovery (= reversing operation), cross ventilation and supply air/extract air mode. The user is reminded to replace the filter by flashing LEDs on the control element after a preset time period.

Dimensions KWL EC 45-160



Dimensions in mm

■ GUI user interface

It is possible to connect the control element to a PC or laptop via the USB interface with Helios software. This makes it easy and convenient to access the control settings.

- ☐ Thus, the commissioning and entry of required values (e.g. filter replacement interval or minimum ventilation level) within a very short time. All specified setting options can be changed quickly via the programme interface with the user-friendly assistance of appropriate help texts.
- ☐ The configuration settings can be stored directly on the PC or laptop and reloaded into the control system, if required. The installation costs in a larger building can be reduced to a minimum. If several identical ventilation

systems are installed, the required configuration is carried out once for a ventilation system and it can then be transferred to any number of control elements. Controller and software can be secured with a PIN.

■ Replacement air filter

– 2 pcs. ISO Coarse 50% (G3) ELF-KWL 45-160/3/3 No. 09366

■ Sound insulation element

Sound insulation element for use in the soffit channel, fire protection class B1. KWL 45 SEL No. 04170

Sound insulation element for use in the wall sleeve, fire protection class B1. KWL 45-160 SE No. 09362

Technical data

Unit ¹⁾	KWL EC 45-160 ¹⁾					Ref. no. 09361
Flow rate at level	5	4	3	2	1	
supply air / extract air $\dot{V}$ m ³ /h	45	37	32	24	14	
Sound pressure L_{pA} dB(A) at 3 m	34	29	27	21	14	
Sound power L_{WA}	52	47	45	39	32	
Standard sound level diff. $D_{n,e,w}$ dB ²⁾	Facade panel 44 / Soffit					
Power consumption W	4.5	3.4	2.8	2.1	1.6	
Heat recovery efficiency ³⁾	up to 88 %					
Operating voltage mains adapter	Input 230 V~, 50/60 Hz / Output 12 V=					
Rated current mA	42	32	27	21	17	
El. supply line mains adapter ⁴⁾	NYM-O 2 x 1.5 mm ²					
El. supply line power supply control ⁴⁾	NYM-O 2 x 1.5 mm ²					
El. supply line to fan ⁵⁾	J-Y (ST) Y 3 x 0.8 mm					
Protection class III, protection cat.	IP20					
Wiring diagram no.	1091 / 1093					
Temperature operating range	– 12 °C to + 40 °C					
Weight (unit+inner panel) approx. kg	2.8					

¹⁾ The required wall installation sleeve and facade panel must be ordered separately.

²⁾ Test value.

³⁾ According to latest DIBt test procedure. ⁴⁾ Use of NYM-J 3 x 1.5 mm² is permitted.

⁵⁾ Use of J-Y (ST) Y 2 x 2 x 0.8 mm is permitted.

■ Unit with inner panel

KWL 45-160 No. 09361

Consists of design inner panel with filter, ceramic heat exchanger, flow straightener, insect screen, EC axial fan with protection grille, removal tool (cord) and EPP half shell base.



■ Installation package soffit*

KWL 45-160 LE-RP No. 08160

With wall sleeve and plaster protective cover. Made of EPP, fire protection class B1.

■ Wall installation sleeve

Length 500 mm

KWL 45-160 WH No. 09319

Length 800 mm

KWL 45-160 WH-L No. 09320

Ø 160 mm, plastic, incl. condensate wedge and 2 covers.



■ Soffit grille

Made of stainless steel

KWL 45 LG No. 04167

External grille with integrated condensate drain and seal. Dim. mm (H x W) 324 x 74

With additional coating

KWL 45 LG-B No. 04168

For use in environments with severe air pollution or high salt concentration in the air (near the coast).

With white coating

KWL 45 LG-W No. 04169



■ Facade panel

Made of stainless steel

KWL 45-160 FB-E No. 09321

With additional coating

KWL 45-160 FB-B No. 09322

For use in environments with severe air pollution or high salt concentration in the air (near the coast).

With white coating

KWL 45-160 FB-W No. 09323



■ Facade panel DEEP

Made of stainless steel

KWL 45-160 FBT-E No. 09324

For installation in external wall thicknesses from 250 – 300 mm.

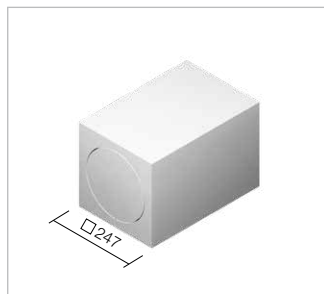
With additional coating

KWL 45-160 FBT-B No. 09326

For use in environments with severe air pollution or high salt concentration in the air (near the coast).

With white coating

KWL 45-160 FBT-W No. 09340



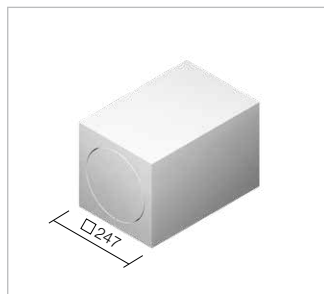
■ Insect screen

KWL 45 ISL No. 03004

Made of stainless steel.

For installation package soffit (KWL 45-160 LE-RP). Suitable for retrofitting.

Dim. mm (H x W) 203 x 48



■ Wall stone

Length 365 mm

KWL 45-160 WS No. 09302

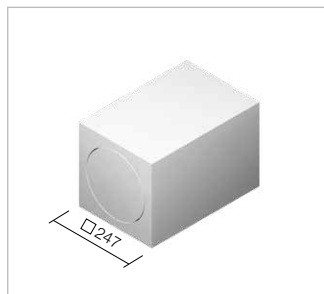
Length 490 mm

KWL 45-160 WS-L No. 09306

Installation aid for brickwork.

Made of EPS, fire protection class B1.

Replaces the otherwise necessary core hole drilling.



■ Control set UP

KWL 45 STS-UP No. 03006

Consists of control element KWL 45 BEU and switching power supply KWL 45 SNU for installation in flush-mounted box. Allows the connection of up to 6 units. In case of more than 6 units, an additional KWL 45 SNU is required. Max. 8 units per control element.



■ Switching power supply UP

KWL 45 SNU No. 03008

For extending the control set KWL 45 STS-UP from 6 to 8 units.

Input 230 V AC, 50/60 Hz. output 12 V DC / 1.9 A for flush-mounted installation in insulated wall.

Output voltage according to SELV protection class 3.

■ Casing for surface installation

KWL-APG No. 04270

■ Extension module

KWL 45 EM No. 03012

For the combined operation of an extract air system, e.g. according to DIN 18017, pt. 3 with KWL EC 45-160 (combined ventilation).

■ Room sensor

HY 3 No. 01359

With internal scale

HY 3 SI No. 01360

Electromechanical humidity controller for connection to the external contact of the control element. For surface installation. Function type can be adjusted using Helios software or control element.

Attention: Parallel use with KWL-EM is not possible.

■ Reference

A flush-mounted box (depth 61 mm) is required for the control element KWL 45 BEU and for each installed switching power supply KWL 45 SNU.

Control element (w/o adapter)

KWL 45 BEU No. 03041

■ Control set HS

KWL 45 STS-HS No. 03007

Consists of control element KWL 45 BEU and switching power supply KWL 45 SNH for top-hat rail (2 pcs). Allows the connection of up to 4 units. In case of more than 4 units, an additional KWL 45 SNH is required. Max. 8 units per control element.

■ Switching power supply HS

KWL 45 SNH No. 03001

For extending the control set KWL 45 STS-HS from 4 to 8 units.

Input 230 V AC, 50/60 Hz. Output 12 V DC / 1.5 A for installation in distribution box (2 pcs). Output voltage according to SELV protection class 3.

KWL EC 60



Compact wall installation unit with heat recovery for the supply and extract ventilation of individual rooms. KWL EC 60 is a convincing solution for a comfortable indoor climate and energy savings in individual rooms. Ideal for bringing existing building structures up to the legally required EnEV standard during renovation. KWL EC 60 ventilates small and large individual rooms. The installation of multiple units is recommended for a medium-sized residential unit.

Ideal for renovation due to simple installation

KWL EC 60 is the optimal renovation solution, even for retrofitted installations. The intake air connection is simply through a core hole in the external wall, in which the wall sleeve is inserted. This simply takes place during the facade renovation. The openings are closed by two building protection covers. The elegant stainless steel outer facade is installed upon completion of plastering. The desired unit is inserted into the wall sleeve and electrically connected in the course of the interior work. Only the elegant facade can be seen on the room side, the front of which is completely closed. Thus, the KWL EC 60 blends discreetly into any room environment and bothersome dirt deposits on ventilation grilles are a thing of the past.

Aluminium plate heat exchanger with a heat recovery efficiency of over 70 %

The KWL EC 60 saves expensive heating energy due to the efficient and large-dimensioned aluminium plate heat exchanger with a heat recovery efficiency of over 70 %.

ECgreenVent by Helios

Particularly energy-saving ventilation units with EC technology, such as Helios KWL EC 60, are marked with the ECgreenVent label. KWL EC 60 allows the demand-dependent supply and extract ventilation of individual rooms with heat recovery; multiple units can be independently controlled. Adjustment is not necessary.

Functionality of the KWL EC 60 ventilation with heat recovery

Two highly efficient direct current EC fans ensure a uniform air exchange. Contaminants, odours and the stale room air is moved outside, and fresh, preheated air is supplied to the room. The heat is transferred from the stale extract air to the fresh supply air in the large aluminium plate heat exchanger, whereby both airflows remain separate.

■ Delivery / scope of order

Designed for the installation steps, the following elements can be ordered separately:

□ Installation kit

KWL 60 RS No. 00708
KWL 60 RS-B No. 01961

Consists of wall sleeve (349 mm long), two building protection covers, outer facade and deflector plate made of stainless steel (type RS-B with additional coating*).

□ Unit optionally available in Eco or Pro version.

* The external components, such as facade panel, spacer frames and protection grille, are made of high-quality stainless steel. Alternatively available in coated version (types -B) for use in environments with severe air pollution or high salt concentration in the air (near the coast).

Installation example KWL EC 60



Common features Eco and Pro

■ Heat exchanger

□ Large aluminium plate heat exchanger with a heat recovery efficiency of over 70 %.

■ Air delivery

Two highly efficient direct current EC fans ensure a uniform air exchange.

■ Condensate drain

Condensate is drained outside directly via the deflector plate on the external cover.

■ Air filters

□ Two efficient air filters (class ISO coarse 60 % (G4)) in the supply air and extract airflow guarantee the best air purity. An ISO ePM_{2.5} 65 % (F7) pollen filter on the supply air side is optional.

ECO

KWL EC 60 Eco
The economical solution with a favourable price / performance ratio for all applications.

Unit Eco

KWL EC 60 Eco No. 09950

Consists of inner facade made of high-quality plastic with an integrated, three-step control element.

■ Power control

Three-step operation via the control element integrated in the inner facade (can be placed at the top or bottom by rotating the facade 180°).
0 position via on-site off-switch.

■ Electrical connection

Via screwless terminals.

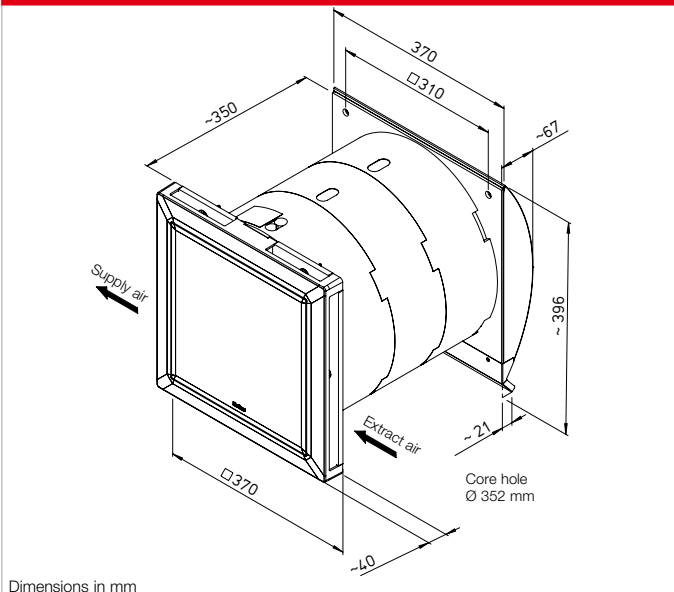
Technical Data

Unit ¹⁾	KWL EC 60 Eco ¹⁾			Ref. no. 09950
Flow rate at level ²⁾	③	②	①	
supply air/extract air $\dot{V}$ m ³ /h	60	30	17	
Noise dB(A)				
radiation L _{pA} at 3 m	30	22	18	
Power consumption Fans 2xW	4		1	
Standard sound level diff. D _{n,e,w} dB		39 – 41		
Voltage/Frequency		230 V~, 50 Hz		
Rated current A		0.05		
Protection category IP		X4		
Electrical supply line		NYM-J 3 x 1.5 mm ²		
Wiring diagram no.		949		
Temperature operating range		– 20 °C to + 40 °C		
Weight approx. kg		6.5		

¹⁾ The required installation kit (types KWL 60 RS) must be ordered separately (see above for details).

²⁾ Volume reduction of approx. 10 % when using pollen filters.

Dimensions EcoVent KWL EC 60



Dimensions in mm

PRO

KWL EC 60 Pro / Pro FF
Meets even the highest comfort requirements with many useful functions.

Unit Pro

KWL EC 60 Pro No. 09951
Consists of inner facade made of high-quality plastic and comfort control element (KWL-BCU, 1 pc. included in delivery). See right for details.

Unit Pro FF

KWL EC 60 Pro FF No. 09957
Like KWL EC 60 Pro, but with additional integrated humidity sensor for demand-dependent ventilation. The humidity values can be adjusted.

Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Four-step manual operation or with digital weekly timer.

- ☐ Control via intelligent CO₂ sensors (accessories, connection of up to 4 pcs. possible.)
- ☐ Supply air/extract air operation individually switchable.
- ☐ Party mode, intensive ventilation.
- ☐ Indication of necessary filter replacement, operating status, operating hours, error messages.
- ☐ Multiple units can be controlled via one control element.
- ☐ Multiple control elements can be connected to one unit.

Shutters

In case of absence (holiday) or standstill periods, two airtight shutters will close outwards or one airtight shutter will close in case of supply air or extract air operation.

Electrical connection

Via plug-in coupling (included in delivery.)

Technical data

Unit ¹⁾	KWL EC 60 Pro ¹⁾ KWL EC 60 Pro FF ¹⁾				Ref. no. 09951 Ref. no. 09957
– incl. humidity sensor					
Flow rate at level²⁾	4	3	2	1	
Supply/extract air V m ³ /h	60	45	30	17	
Noise dB(A)					
Radiation L _{PA} at 3 m	30	29	22	18	
Power consumption Fans 2xW	4	3	2	1	
Standard sound level diff. D _{n,e,w} dB	39 – 41				
Voltage/Frequency	230 V~, 50 Hz				
Rated current A	0.06				
Protection category IP	X4				
Electrical supply line	NYM-J 3 x 1.5 mm ²				
Wiring diagram no.	950				
Temperature operating range	– 20 °C to + 40 °C				
Weight approx. kg	6.5				

¹⁾ The required installation kit (types KWL 60 RS) must be ordered separately (see above for details).

²⁾ Volume reduction of approx. 10 % when using pollen filters.

Delivery / scope of order

Designed for the installation steps, the following elements can be ordered separately:

Installation kit

KWL 60 RS No. 00708
KWL 60 RS-B No. 01961

As described on the left.

Unit optionally available in Eco or Pro version.

Common accessories

Wall sleeve extension

KWL 60 WV No. 00884
For wall thicknesses from 349 to 571 mm. Can be optionally shortened or connected, 111 mm long, with separator.

Sound insulation set

KWL 60 SDS No. 03059
Consists of sound insulation frame and matting, white, 100 mm deep. Noise reduction up to 6 dB.

Spacer frame

KWL 60 DR No. 00888
KWL 60 DR-B No. 01962
External stainless steel frame, 100 mm deep, with separator. For wall thicknesses from 249 to 349 mm.

Protection grille

KWL 60 SG No. 09978
KWL 60 SG-B No. 09976
Made of stainless steel (2 pcs.), for side attachment to outer facade.

i Installation kit essential for unit installation.

Replacement air filter
– 2 pcs. ISO coarse 60 % filter
ELF-KWL 60/4/4 No. 09445
– 2 pcs. ISO ePM_{2.5} 65 % filter
ELF-KWL 60/7/7 No. 09446



PRO

Accessories for KWL EC 60 Pro Control element (additional)

KWL-BCU (unterputz) No. 09955
Dim. mm (WxHxD) 80x80x37
Display and function as described on the left. 1 KWL-BCU included in delivery. Connection of up to 4 pcs. possible. Delivery incl. 3 m connection cable.

KWL-BCA (surface) No. 09956
Dim. mm (WxHxD) 83x83x51

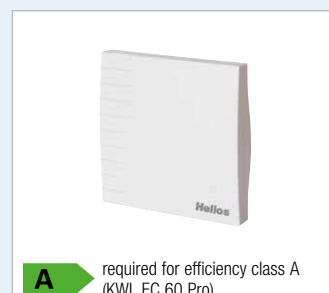
Casing for surface installation
KWL-APG No. 04270
Dim. mm (WxHxD) 83x83x41

Room sensor

KWL EC-CO2 No. 09988
For detecting the CO₂ concentration in the room air. Controls the ventilation unit in all 4 levels so that the CO₂ content remains below the respective setpoint. Delivery incl. 3 m connection cable. Up to 4 pcs. can be connected. When using multiple sensors, control according to the highest measured value. Dim. mm (WxHxD) 95 x 97 x 30

Connection cable

KWL-SL 6/5 (5 m) No. 09980
KWL-SL 6/10 (10 m) No. 09444
KWL-SL 6/20 (20 m) No. 09959
For distances > 3 m, with 2 RJ 12 plugs. For connection between control element and KWL EC 60 Pro or between multiple units.



A required for efficiency class A (KWL EC 60 Pro)

Connection cable branch

KWL-ALA No. 09960
For the connection of additional units or control elements and accessory components (1 pc. always required) which are not included in the delivery.

Central domestic ventilation with heat recovery.



A central KWL system with heat recovery from Helios fully ensures continuous ventilation for humidity protection pursuant to DIN 1946-6, regardless of user behaviour.

The required minimum air exchange is also automatically ensured around the clock.

How it works:

The KWL system heat exchanger continuously absorbs the heat from the stale room air and transfers it to the fresh intake air, which creates a healthy comfortable atmosphere in all rooms as preheated and filtered supply air. The heat recovery and particularly energy-saving EC fan technology reduces heating costs by up to a third.



Pollutants stay outside and contaminated room air is efficiently exchanged in a controlled manner.

Helios KWL added value.

The universal, perfectly matched Helios KWL system

solutions guarantee simple planning, secure installation and maximum efficiency.

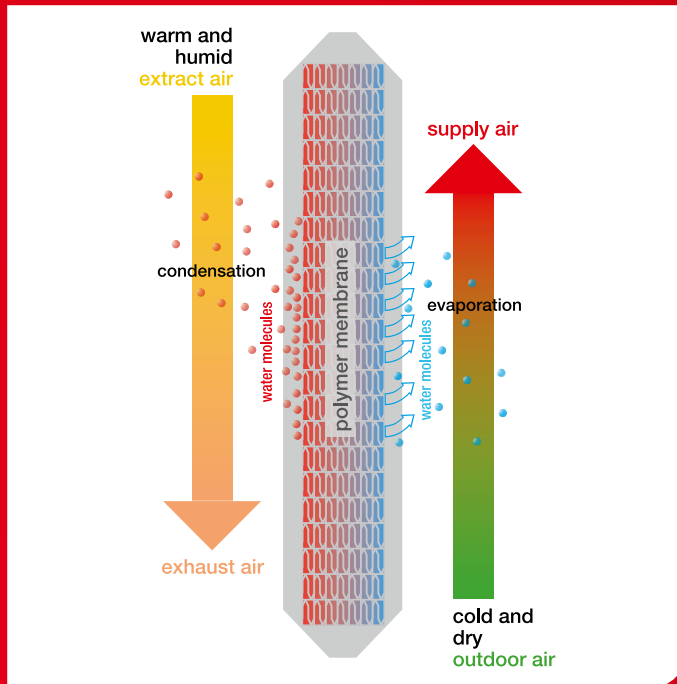
Enthalpy heat exchanger – ideal room air humidity, optimal climate.

KWL units with combined heat and humidity recovery by enthalpy exchanger provide for a comfortable, healthy room climate.

The relative room humidity in living areas should lie between 35–60 %. If the humidity is too low, mucous membranes will dry out, and

electrostatic charges and dust levels in the air will build up. If the used air with a high absolute moisture content is replaced by fresh but dry air

with a smaller absolute moisture content, the humidity in the room will decrease noticeably.



Ventilation units with enthalpy heat exchangers offer convincing advantages:

- Twofold benefit through energy-saving heat recovery and hygienic humidity recovery in the cold season.
- Humidity recovery from the extract air up to 70 %, depending on the indoor air humidity.

How the enthalpy heat exchanger works:

The water molecules in the extracted room air condense on contact with the surfaces of the enthalpy heat exchanger.

They move through the membrane in a similar way to water movement in plants (osmosis).

The water molecules are absorbed by the dry outside air on the membrane surface on the supply air side. The coated polymer-membrane on the enthalpy heat exchanger guarantees hygiene and efficiency in the humidity transmission process.

It ensures that the water retains its molecular configuration and does not enter the supply air flow as droplets. The extract and supply air flows are hermetically separated from each other, so that the transfer of organic particles or odours is excluded.

■ Wall installation “W”

Series “W”

Compact wall units up to 500 m³/h.

All models equipped with easyControls as standard and optional enthalpy exchanger.



26^{ff}

■ Ceiling installation “D”

Series “D”

Ultra-flat units up to 2000 m³/h for space-saving ceiling installation.

With ultra-efficient heat exchanger, EC technology and passive house certificate: KWL EC 220 D and 340 D with easyControls as standard.



40^{ff}

■ Standing installation “S”

Series “S”

With air outputs up to 2600 m³/h, for floor-standing installation.

Ideal as central systems in residential, commercial and industrial applications. With ultra-efficient heat exchanger, EC technology and passive house certificate.



50^{ff}

■ Selection matrix

12^f

■ Peripherals

68^{ff}

Smart, intuitive and individual.

Helios KWL[®] with **easyControls 3.0**



 **OnAIR**

Find out more
on YouTube!

Your needs – our solution:

With Helios easyControls 3.0, you can not only expect a new control generation, but also a new range with optimal flow rate capacity for unlimited applications and maximum energy efficiency.

The **new, intuitive control concept easyControls 3.0** can be easily adapted to the individual needs of residents and it can be manually controlled via the control element, internal web server or from any location via the Cloud as required. It's that simple!

Highlights:

- Smart touch control element in black and white, compatible with almost every switch range.
- Customised ventilation: adjustable weekly programme or fully automatically via room air quality sensors.
- Unit access via PC or Smartphone – also on the move via the new easyControls 3.0 Cloud.

This sets a new standard for a smart, modern control system. Or simply put: Helios easyControls 3.0.

Modern and intuitive: The new touch control element:



The ventilation unit can be adapted to individual paces of life by creating a weekly programme and by selecting from four different ventilation profiles.



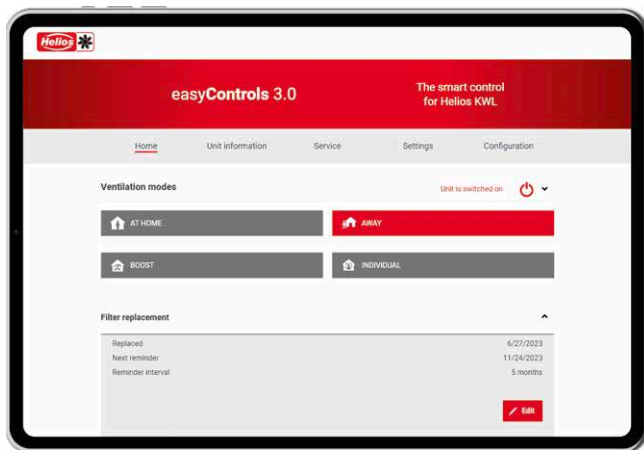
The dark mode always ensures the best readability – even at night thanks to its illuminated screen.



The control element can be integrated in common switch ranges and fits perfectly in any living environment.



The status of the selected ventilation profile, temperature and sensor values as well as filter replacement notifications can be viewed at any time.



Smart ventilation, simple control system

- Location-independent control of the KWL system via the integrated web server or with the easy-Controls Cloud, as required.
- Individual access rights through selectable profiles.
- Assistant-supported, fast commissioning.
- Practical and cost-effective remote maintenance when servicing.
- Smart integration in the existing building control system (KNX).

Customised ventilation for individual comfort

- The establishment of a personal weekly programme is possible.
- Individual configuration of up to four ventilation programmes.
- Compact overview of current status.

Functional principle

The control system with unlimited possibilities: Helios easyControls 3.0.

**Controllable anywhere
and at any time, whether
at home or on the move.**



Building control system

- ModBus interface (integrated)
- KNX-EIB module (optional)

Demand-controlled ventilation with sensors

- FTF rel. humidity (1x integrated)
- CO₂
- VOC mixed gas

Manual control elements

- Modern touch control element
- Discreet 3-level slide switch



Maximum flexibility in selecting the control elements

If no PC networks are available, or if manual access is preferred, easyControls can be controlled via a modern touch control element or a discreet slide switch.

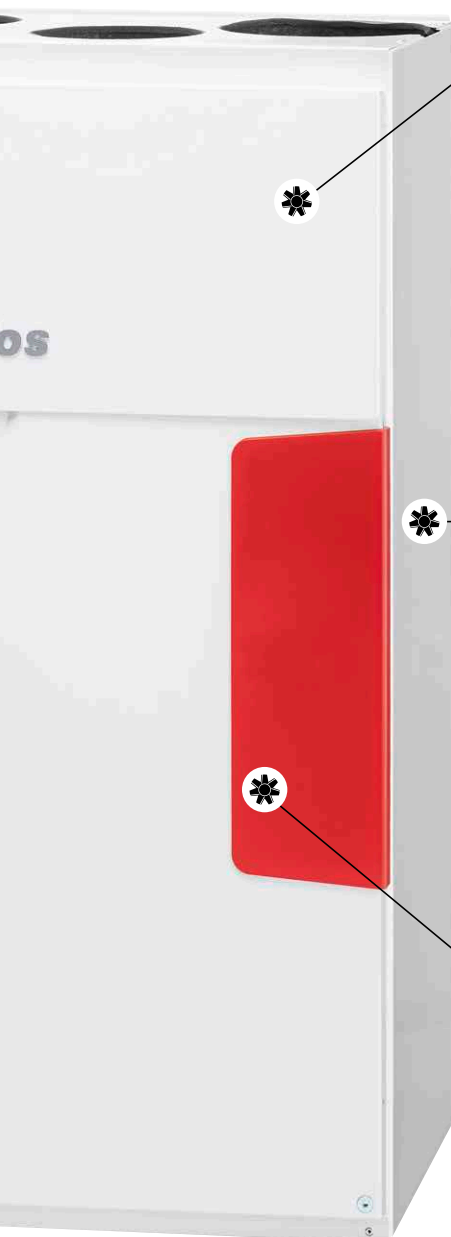
- Touch control element in white or black
- 3-level switch in white





Fully automated ventilation with comfort room sensors in 3 versions

- Relative humidity sensor
- VOC sensor
- CO₂ sensor



Easy integration in the building control system

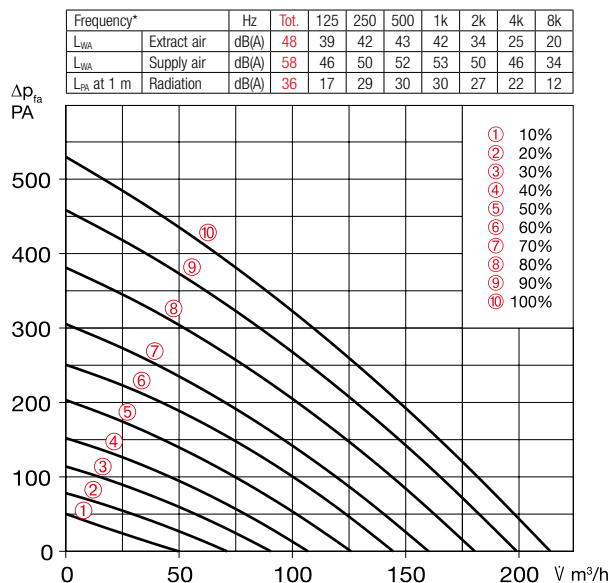
The KWL units can be easily integrated in a building control system network via the standard Modbus interface (RTU) or an optional KNX module.

Extension module for further comfort options

To control post-heating (either hot water or electric heating register) for additional supply air heating, e.g. in a passive house.



Performance curves KWL 170 W



*Sound information relate to Vref. according to ERP data sheet.

Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

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

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

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180



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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.				Type	Ref. no.			
	KWL 170 W	40043				KWL 170 W ET	40044			
Flow rate at level ^{1) 2)}	⑩ ⑧ ⑥ ④ ②					⑩ ⑧ ⑥ ④ ②				
Supply air/extract air V m³/h	214 180 145 107 71					211 179 142 107 69				
Power consumption fans 2xW ¹⁾	37 25 15 9 6					37 24 15 9 6				
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	0.7									
– preheating	4.4									
– max. total	0.7 (5.1 incl. preheater, accessories)									
Electric preheater kW	1.0 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	–20 °C to +40 °C									
Installation temperature	+5 °C to +40 °C (90% rel. humidity, non-condensin)									
Weight approx. kg	36				39					

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10% when using pollen filter.

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 170 W No. 00936

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

Dim. mm (WxHxD) 210x210x100

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 1.2/125 Ref. no. 09433

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 125 Ref. no. 09480

Rectangular duct temp. sensor

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

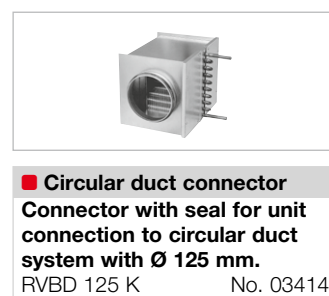
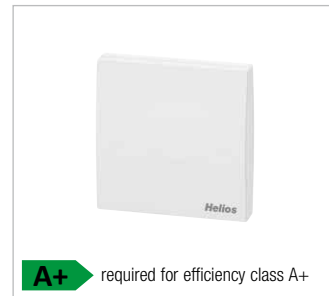
Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817



■ Replacement air filters
– 2 pcs. **ISO Coarse 65% (G4)**
ELF-KWL 170/4/4 No. 00951
– 1 pc. **ISO ePM, 50% (F7)**
ELF-KWL 170/7 No. 00965

■ Reference
Enthalpy heat exchanger (accessories) for retrofitting:
KWL-ET 170 No. 00976

Helios standard range

■ Other accessories Page

KWL peripherals 68 ff.
– Ground heat exchanger 92 ff.
– Insulated duct system 82 f.
– Air distribution systems 84 ff.
– Control lines, etc. 88 f.
Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves

KWL 200 W



Compact unit with heat recovery for the central supply and extract ventilation of residential buildings and apartments. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

Casing
Made of galvanised steel sheet, powder-coated in white, double-walled, with 12 mm heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removable front panels.

Heat exchanger
☐ Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
☐ Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

Fans
Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

Ducts
Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 125 mm using duct connectors (RVBD 125 K, accessories).

Condensate connection
Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

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

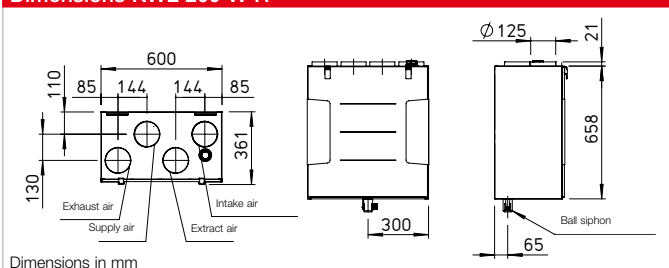
Summer operation
Equipped with automatic bypass function and heat exchanger cover as standard.

Heat exchanger anti-icing protection
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 200 W, accessories).

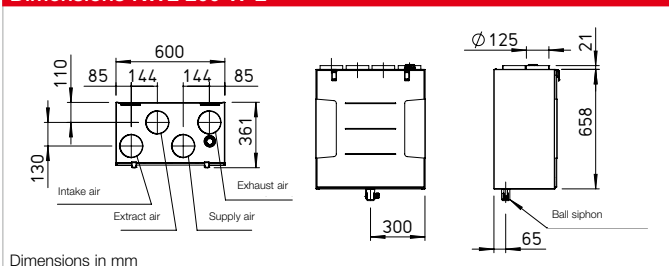
Control system
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for functionality. Helios easyControls 3.0 is prepared for:

- ☐ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ☐ The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF,

Dimensions KWL 200 W R



Dimensions KWL 200 W L



-VOC, accessories) enable automatic, demand-controlled ventilation.

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

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

Accessories – Functional description (see right for details)
KWL 200 W can be individually expanded with the following accessories:

- ☐ **Control element ECO**
 - Three ventilation profiles selectable via slide switch.
 - Control voltage can be measured directly on the control element.
 - Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
 - LED for visual indication of operating statuses, e.g. filter replacement and faults.

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

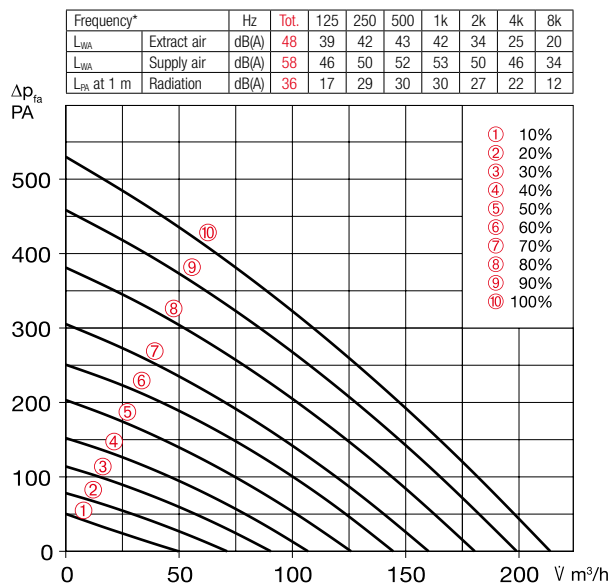
– Other functions (see operating instructions).

☐ **KNX/EIB module**
For connecting the ventilation unit to the building control system via the KNX Connect module.

☐ **Room sensors**
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ **Post-heating**
Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0	
The innovative KWL control concept	22 f.
Moisture recovery through enthalpy heat exchangers	21

Performance curves KWL 200 W


*Sound information relate to Vref. according to ERP data sheet.

Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs. possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dim. mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Right-hand version	KWL 200 W R	40045	KWL 200 W ET R	40047	Left-hand version	KWL 200 W L	40046	KWL 200 W ET L	40048	
Flow rate at level 1) 2)										
Supply air/extract air V m³/h	215	175	129	71	46	190	151	111	73	39
Power consumption fans 2xW 1)	40	26	16	8	5	40	26	16	8	5
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	1.2									
– preheating	4.4									
– max. total	1.2 (5.6 incl. preheater, accessories)									
Electric preheater kW	1.0 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	– 20 °C to + 40 °C									
Installation temperature	+ 5 °C to + 40 °C (90 % rel. humidity, non-condensing)									
Weight approx. kg	37					41				

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10 % when using pollen filter.

3) AK = Activated carbon filter

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 200 W No. 04224

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

Dim. mm (WxHxD) 210x210x100

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 1.2/125 Ref. no. 09433

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 125 Ref. no. 09480

Rectangular duct temp. sensor

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

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

Replacement air filters

– 2 pcs. **ISO Coarse 75 % (G4)**

ELF-KWL 200/4/4 No. 00021

– 1 pc. **ISO ePM₁, 50 % (F7)**

ELF-KWL 200/7 No. 00038

– 1 pc. **ISO ePM_{2.5} 60 % (AK)³⁾**

ELF-KWL 200 AK No. 04198

Reference

Enthalpy heat exchanger (accessories) for retrofitting:

KWL-ET 200 No. 00896


Other accessories

Page	
68 ff.	KWL peripherals
92 ff.	– Ground heat exchanger
82 f.	– Insulated duct system
84 ff.	– Air distribution systems
88 f.	– Control lines, etc.

Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves

Helios standard range

KWL 250 W



Efficiency class

A+	KWL 250 W with additional room sensor
A	KWL 250 W



Compact unit with heat recovery for the central supply and extract ventilation of residential units up to 190 m². Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

■ Casing

Universal casing concept:
Intake air left/right, supply air top or bottom.

Outside made of galvanised steel sheet in white, internal components made of highly thermal insulating EPP. The intake air connection can be installed on the left or right. Maintenance-friendly access to all unit components through removeable front panels. Delivery state: Intake air on the right.

■ Heat exchanger

- ☐ Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
- ☐ Type "ET" is equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

■ Fans

Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 125 mm using duct connectors (RVBD 125 K, accessories).

■ Condensate connection

Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

Clean outdoor air supply via ISO Coarse 65 % (G4) filter and 2nd filter stage via optional ISO ePM, 50 % (F7) or activated carbon filter. Extract air side equipped with an ISO Coarse 65 % (G4) filter in front of the heat exchanger. Easy filter maintenance without opening the unit.

■ Summer operation

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

■ Heat exchanger anti-icing protection

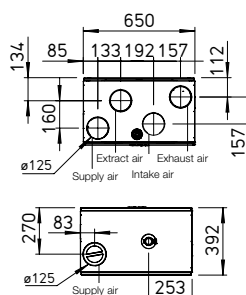
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 250 W, accessories).

■ Control system

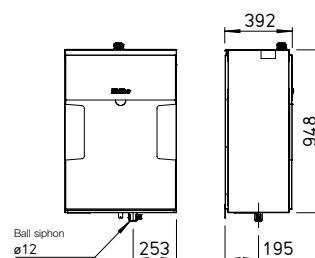
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for functionality. Helios easyControls 3.0 is prepared for:

- ☐ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ☐ The humidity sensor integrated as standard and other optionally available external air qua-

Dimensions KWL 250 W



Dimensions in mm



lity sensors (KWL-CO2, -FTF, -VOC, accessories) enable automatic, demand-controlled ventilation.

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

■ Electrical connection

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

■ Accessories – Functional description (see right for details)

KWL 250 W can be individually expanded with the following accessories:

☐ Control element ECO

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

☐ Control element Touch

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

- Other functions (see operating instructions).

☐ KNX/EIB module

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

☐ Room sensors

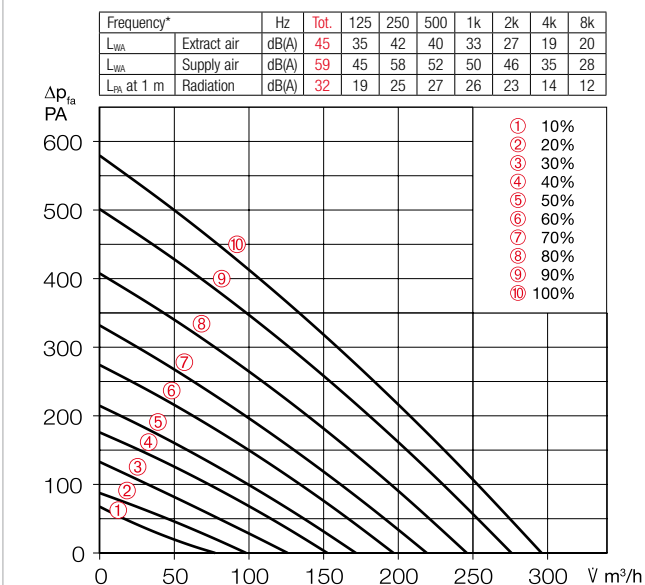
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ Post-heating

Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

■ References	Page
Helios easyControls 3.0 The innovative KWL control concept	22 f.
Moisture recovery through enthalpy heat exchangers	21

Performance curves KWL 250 W



Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

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

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

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.	Type					Type	Ref. no.	
	KWL 250 W	40149	KWL 250 W ET					40150		
Flow rate at level 1) 2)	⑩ ⑧ ⑥ ④ ②		⑩ ⑧ ⑥ ④ ②							
Supply air/extract air V m³/h	296 246 197 153 98		302 246 197 154 103							
Power consumption fans 2xW 1)	51 33 20 13 7		52 32 22 13 8							
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	1,5									
– preheating	4,4									
– max. total	1.5 (5.9 incl. preheater, accessories)									
Electric preheater kW	1.0 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	– 20 °C to + 40 °C									
Installation temperature	+ 5 °C to + 40 °C (90% rel. humidity, non-condensing)									
Weight approx. kg	43					47				

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10% when using pollen filter.

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 250 W No. 40157

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

Dim. mm (WxHxD) 210x210x100

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 1.2/125 Ref. no. 09433

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 125 Ref. no. 09480

Rectangular duct temp. sensor

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

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

Replacement air filters

– 2 pcs. **ISO Coarse 65% (G4)**

ELF-KWL 250/2xCoarse65%

Ref. no. 40151

– 1 pc. **ISO ePM₁ 50% (F7)**

ELF-KWL 250/ePM1 50%

Ref. no. 40152

– 1 pc. **Activated carbon filter**

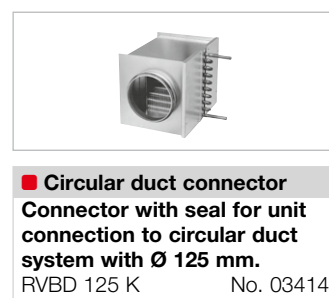
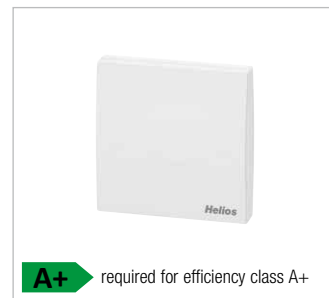
ELF-KWL 250 AK No. 40153

Reference

Enthalpy heat exchanger

(accessories) for retrofitting:

KWL-ET 250 Nr. 40159



Other accessories	Page
KWL peripherals	68 ff.
– Ground heat exchanger	92 ff.
– Insulated duct system	82 f.
– Air distribution systems	84 ff.
– Control lines, etc.	88 f.
Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves	

Helios standard range

KWL 300 W



Compact units with heat recovery for the central supply and extract ventilation of residential buildings and apartments. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

■ Casing
Made of galvanised steel sheet, powder-coated in white, double-walled, with 12 mm heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removable front panels.

■ Heat exchanger
☐ Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
☐ Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

■ Fans
Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

■ Ducts
Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 125 mm using duct connectors (RVBD 125 K, accessories).

■ Condensate connection
Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

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

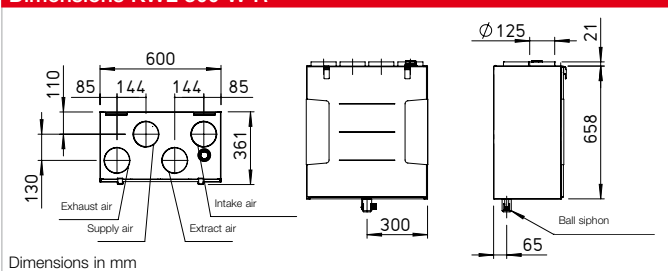
■ Summer operation
Equipped with automatic bypass function and heat exchanger cover as standard.

■ Heat exchanger anti-icing protection
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 300 W, accessories).

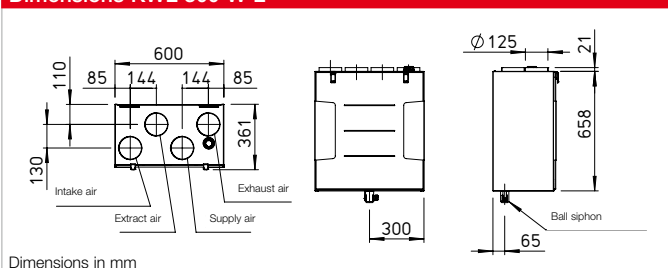
■ Control system
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for functionality. Helios easyControls 3.0 is prepared for:

- ☐ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ☐ The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF,

Dimensions KWL 300 W R



Dimensions KWL 300 W L



-VOC, accessories) enable automatic, demand-controlled ventilation.

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

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

■ Accessories – Functional description (see right for details)
KWL 300 W can be individually expanded with the following accessories:

- ☐ **Control element ECO**
 - Three ventilation profiles selectable via slide switch.
 - Control voltage can be measured directly on the control element.
 - Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
 - LED for visual indication of operating statuses, e.g. filter replacement and faults.

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

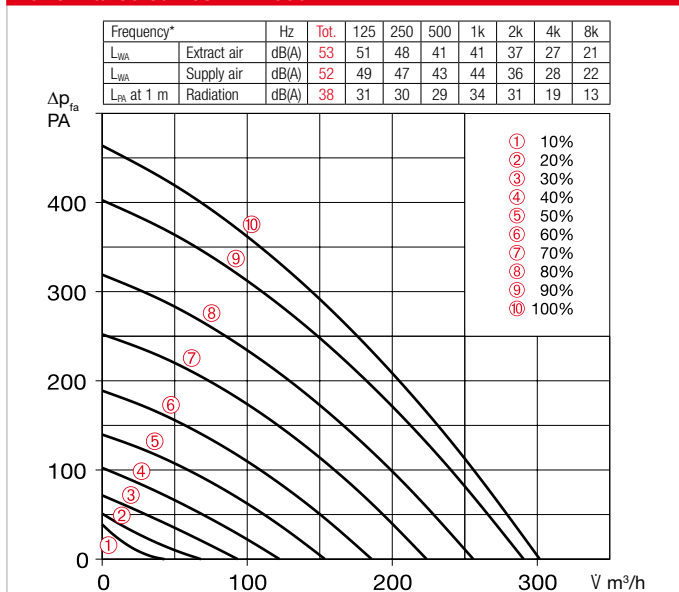
– Other functions (see operating instructions).

☐ **KNX/EIB module**
For connecting the ventilation unit to the building control system via the KNX Connect module.

☐ **Room sensors**
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ **Post-heating**
Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0	
The innovative KWL control concept	22 f.
Moisture recovery through enthalpy heat exchangers	21

Performance curves KWL 300 W

Slide switch control element
KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation
KWL APG Ref. no. 04270

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

Touch control element
KWL BE Touch bl
(black) Ref. no. 20244

KWL BE Touch wh
(white) Ref. no. 20245

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

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

Casing for surface installation
KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable
KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180


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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.				Type	Ref. no.			
Right-hand version	KWL 300 W R	40049				KWL 300 W ET R	40051			
Left-hand version	KWL 300 W L	40050				KWL 300 W ET L	40052			
Flow rate at level ^{1) 2)}	⑩ ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ①					⑩ ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ①				
Supply air/extract air V m³/h	302 255 186 122 68					271 216 161 107 56				
Power consumption fans 2xW ¹⁾	84 54 27 13 6					86 54 27 13 7				
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	2.0									
– preheating	4.4									
– max. total	2.0 (6.4 incl. preheater, accessories)									
Electric preheater kW	1.0 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	–20 °C to +40 °C									
Installation temperature	+ 5 °C to +40 °C (90 % rel. humidity, non-condensing)									
Weight approx. kg	37				41					

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10 % when using pollen filter.

3) AK = Activated carbon filter

KNX/EIB module
KWL-KNX Connect No. 20253

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

Room sensors
KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater
KWL-EVH 300 W No. 04224

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module
KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

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

Motion detector
BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 1.2/125 Ref. no. 09433

Rectangular duct temp. sensor
KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

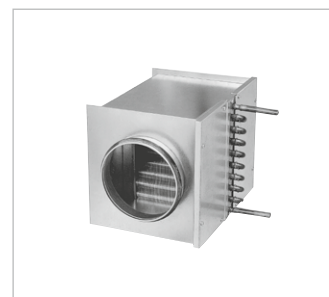
For additional supply air heating.

WHR 125 Ref. no. 09480

Rectangular duct temp. sensor
KWL-LTK eC (2 pc. req.) No. 40156

Hydraulic unit
WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control
WHST 300 T38 Ref. no. 08817


■ **Circular duct connector**
Connector with seal for unit connection to circular duct system with Ø 125 mm.
 RVBD 125 K No. 03414

■ **Reference**
Enthalpy heat exchanger (accessories) for retrofitting:
 KWL-ET 300 No. 00896

■ **Replacement air filters**
 – 2 pcs. **ISO Coarse 75 % (G4)**
 ELF-KWL 300/4/4 No. 00021
 – 1 pc. **ISO ePM₁ 50 % (F7)**
 ELF-KWL 300/7 No. 00038
 – 1 pc. **ISO ePM_{2.5} 60 % (AK)³⁾**
 ELF-KWL 300 AK No. 04198

KWL 360 W



Efficiency class

A+ KWL 360 W



Compact unit with heat recovery for the central supply and extract ventilation of residential buildings and apartments. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

Casing
Universal casing concept:
Intake air and exhaust air
side left/right, with integrated sound insulation. Made of galvanised sheet steel with sound and heat insulation, powder-coated in white. The intake air and exhaust air connection can be on the left or right side. Maintenance-friendly access to all unit components through removable front panel. Delivery condition: Intake air and exhaust air side on the right.

- Heat exchanger

- Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
- Type "ET" is equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

Fans

Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 160 mm using duct connectors (RVBD 160 K, accessories).

■ **Condensate connection**

Condensate drain at the bottom;
ball siphon included in delivery.
On-site connection to drain pipe.

- Air filter

Clean outdoor air supply via ISO Coarse 65% (G4) filter and 2nd filter stage via optional ISO ePM₁ 50% (F7) or activated carbon filter. Extract air side equipped with an ISO Coarse 65% (G4) filter in front of the heat exchanger. Easy filter maintenance without opening the unit.

- Summer operation

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

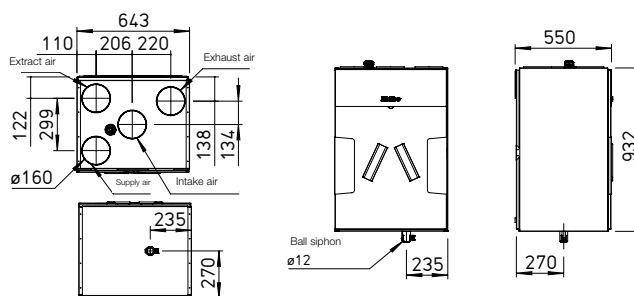
- Heat exchanger anti-icing protection

The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 360/470 W, accessories).

- Control system

EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for func-

Dimensions KWL 360 W



Dimensions in mm

tionality. Helios easyControls 3.0 is prepared for:

- ❑ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ❑ The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF, -VOC, accessories) enable automatic, demand-controlled ventilation.
- ❑ Connection to building control system via integrated Modbus interface or optional KNX module (KWL-KNX Connect, accessories).

■ Electrical connection

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

■ Accessories – Functional description (see right for details)
KWL 360 W can be individually expanded with the following accessories:

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

☐ Control element Touch

- Touch control element with graphic display and user-friendly menu navigation:
- Commissioning assistant.
- Selection of four ventilation profiles.

- Adjustment of an individual weekly programme.
- Adjustment of parameters for room sensors.
- Indication of e.g. filter replacement, operating statuses and error messages.
- Different access authorisations and child lock.
- Other functions (see operating instructions).

☐ KNX/EIB module

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

- Room sensors

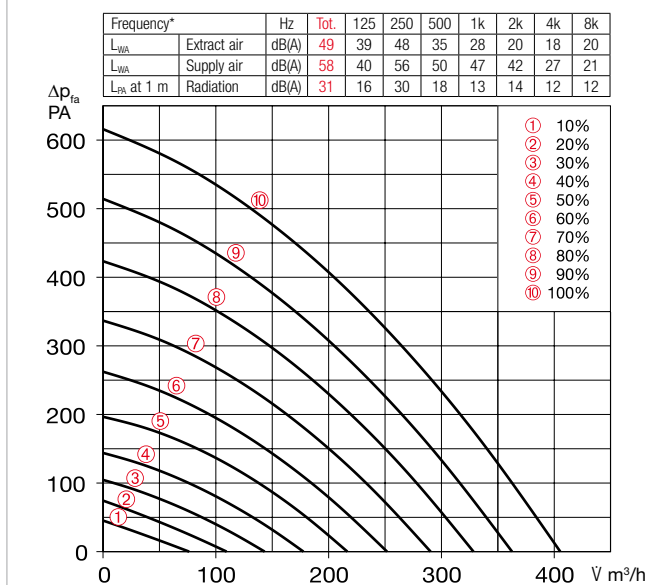
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ Post-heating

Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

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Performance curves KWL 360 W



Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs. possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dimensions mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.				Type	Ref. no.			
	KWL 360 W	40061				KWL 360 W ET	40062			
Flow rate at level 1) 2)	⑩ ⑧ ⑥ ④ ②		⑩ ⑧ ⑥ ④ ②							
Supply air/extract air V m³/h	405 328 252 178 110		403 332 264 192 121							
Power consumption fans 2xW 1)	51 30 17 10 6		45 28 16 9 5							
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	0.5									
– preheating	6.3									
– max. total	0.5 (6.8 incl. preheater, accessories)									
Electric preheater kW	1.5 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	–20 °C to +40 °C									
Installation temperature	+5 °C to +40 °C (90 % rel. humidity, non-condensing)									
Weight approx. kg	72					70				

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10% when using pollen filter.

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 360/470 W No. 07360

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1500 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

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

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 2.4/160 Ref. no. 09435

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 160 Ref. no. 09481

Rectangular duct temp. sensor

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

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

■ Circular duct connector

Connector with seal for unit connection to circular duct system with Ø 160 mm.

RVBD 160 K No. 03415

■ Replacement air filters

– 2 pcs. ISO Coarse 65% (G4)

ELF-KWL 360/470/4/4 No. 07371

– 1 pc. ISO ePM, 50% (F7)

ELF-KWL 360/470/7 No. 07375

– 1 pc. Activated carbon filter

ELF-KWL 360/470 AK No. 08129

■ Reference

Enthalpy heat exchanger (accessories) for retrofitting:

KWL-ET 360/470 No. 07354

KWL 470 W



Compact unit with heat recovery for the central supply and extract ventilation of residential buildings and apartments. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

Casing
Universal casing concept: Intake air and exhaust air side left/right, with integrated sound insulation. Made of galvanised sheet steel with sound and heat insulation, powder-coated in white. The intake air and exhaust air connection can be on the left or right side. Maintenance-friendly access to all unit components through removable front panel. Delivery condition: Intake air and exhaust air side on the right.

Heat exchanger
☐ Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
☐ Type "ET" is equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

Fans
Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

Ducts
Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 160 mm using duct connectors (RVBD 160 K, accessories).

Condensate connection
Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

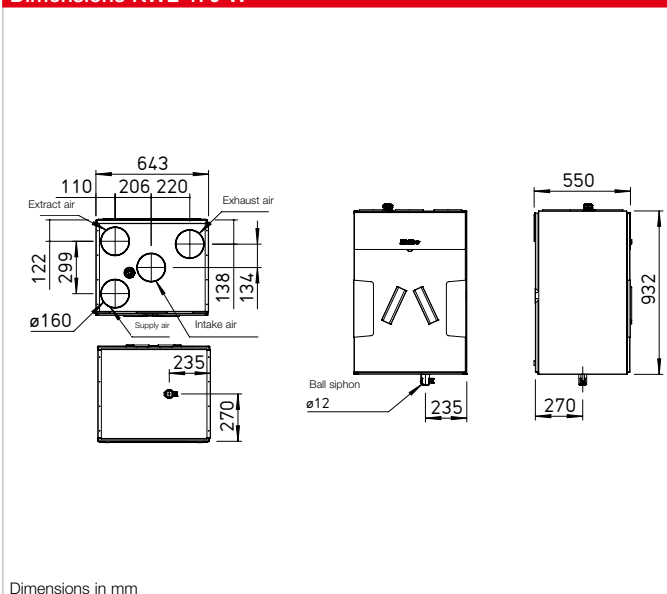
Air filter
Clean outdoor air supply via ISO Coarse 65 % (G4) filter and 2nd filter stage via optional ISO ePM₁, 50 % (F7) or activated carbon filter. Extract air side equipped with an ISO Coarse 65 % (G4) filter in front of the heat exchanger. Easy filter maintenance without opening the unit.

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

Heat exchanger anti-icing protection
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 360/470 W, accessories).

Control system
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for func-

Dimensions KWL 470 W



tionality. Helios easyControls 3.0 is prepared for:

- ☐ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ☐ The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF, -VOC, accessories) enable automatic, demand-controlled ventilation.
- ☐ Connection to building control system via integrated Modbus interface or optional KNX module (KWL-KNX Connect, accessories).

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

Accessories – Functional description (see right for details)
KWL 470 W can be individually expanded with the following accessories:

☐ **Control element ECO**

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

☐ **Control element Touch**
Touch control element with graphic display and user-friendly menu navigation:

- Commissioning assistant.
- Selection of four ventilation profiles.

- Adjustment of an individual weekly programme.
- Adjustment of parameters for room sensors.
- Indication of e.g. filter replacement, operating statuses and error messages.
- Different access authorisations and child lock.
- Other functions (see operating instructions).

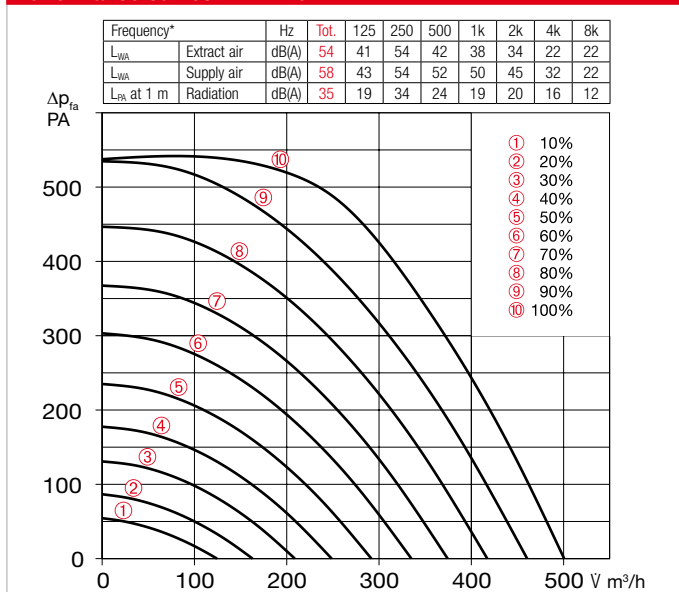
☐ **KNX/EIB module**
For connecting the ventilation unit to the building control system via the KNX Connect module.

☐ **Room sensors**
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ **Post-heating**
Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0	
The innovative KWL control concept	22 f.
Moisture recovery through enthalpy heat exchangers	21

Performance curves KWL 470 W



Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs. possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dimensions mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.	Type					Type	Ref. no.	
	KWL 470 W	40409	KWL 470 W ET	40410						
Flow rate at level 1) 2)	⑩ ⑧ ⑥ ④ ②	⑩ ⑧ ⑥ ④ ②								
Supply air/extract air V m³/h	501 417 335 249 163	501 420 338 253 171								
Power consumption fans 2xW 1)	85 53 31 16 8	87 54 31 16 8								
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	1.4									
– preheating	6.3									
– max. total	1.4 (7.7 incl. preheater, accessories)									
Electric preheater kW	1.5 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	–20 °C to +40 °C									
Installation temperature	+5 °C to +40 °C (90% rel. humidity, non-condensing)									
Weight approx. kg	72					70				

1) At 0 Pa, performance levels adjustable. 2) Volume reduction by approx. 10% when using pollen filter.

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 360/470 W No. 07360

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1500 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

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

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 2.4/160 Ref. no. 09435

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 160 Ref. no. 09481

Rectangular duct temp. sensor

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

Hydraulic unit

WHS HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

■ Circular duct connector

Connector with seal for unit connection to circular duct system with Ø 160 mm.

RVBD 160 K No. 03415

■ Replacement air filters

– 2 pcs. ISO Coarse 65% (G4)

ELF-KWL 360/470/4/4 No. 07371

– 1 pc. ISO ePM, 50% (F7)

ELF-KWL 360/470/7 No. 07375

– 1 pc. Activated carbon filter

ELF-KWL 360/470 AK No. 08129

■ Reference

Enthalpy heat exchanger

(accessories) for retrofitting:

KWL-ET 360/470 No. 07354

KWL 500 W



KWL 500 W R with accessories
(pollen filter, KWL-EVH 500 W)

Efficiency class

A

KWL 500 W R/L and 500 W ET R/L



Compact unit with heat recovery for the central supply and extract ventilation of residential buildings and apartments. Perfectly prepared for modern communication and operation with the new Helios easyControls 3.0 control system incl. integrated network connection. Equipped with EC fans for low energy consumption and highly efficient plastic or enthalpy heat exchangers for additional moisture recovery.

■ Casing

Made of galvanised steel sheet, powder-coated in white, double-walled, with 12 mm heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removable front panels.

■ Heat exchanger

- ☐ Large cross counterflow heat exchanger made of plastic, heat recovery efficiency up to 90 %.
- ☐ Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional moisture recovery.

■ Fans

Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 160 mm using duct connectors (RVBD 160 K, accessories).

■ Condensate connection

Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

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

■ Summer operation

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

■ Heat exchanger anti-icing protection

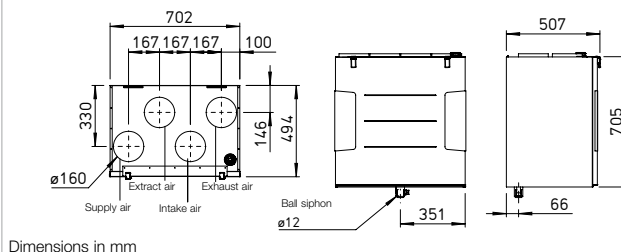
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 500 W, accessories).

■ Control system

EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 for functionality. Helios easyControls 3.0 is prepared for:

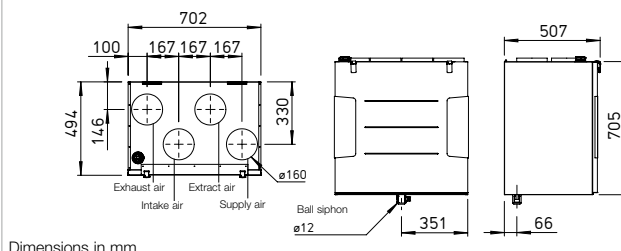
- ☐ The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- ☐ The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF,

Dimensions KWL 500 W R



Dimensions in mm

Dimensions KWL 500 W L



Dimensions in mm

-VOC, accessories) enable automatic, demand-controlled ventilation.

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

■ Electrical connection

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

- **Accessories – Functional description (see right for details)**
KWL EC 500 W can be individually expanded with the following accessories:

☐ Control element ECO

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

☐ Control element Touch

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

- Other functions (see operating instructions).

☐ KNX/EIB module

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

☐ Room sensors

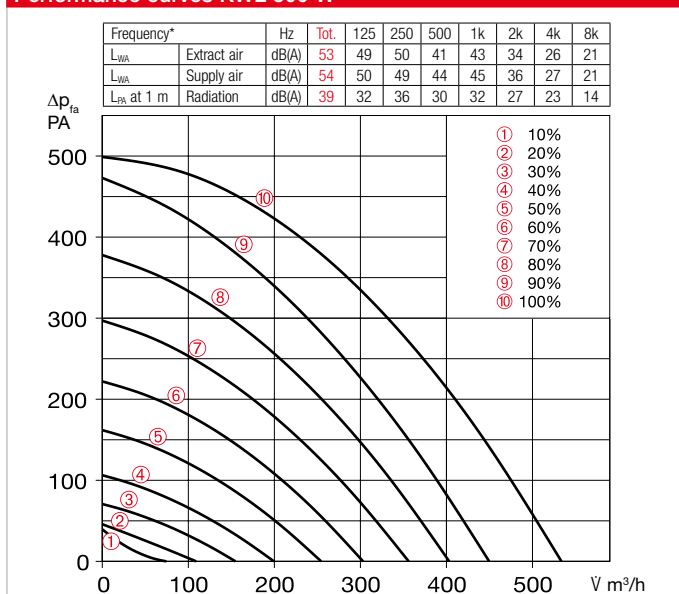
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

☐ Post-heating

Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (VHS HE, accessories) independently from Helios easyControls 3.0.

■ References	Page
Helios easyControls 3.0	
The innovative KWL control concept	22 f.
Moisture recovery through enthalpy heat exchangers	21

Performance curves KWL 500 W



Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs. possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dimensions mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	With plastic heat exchanger					With enthalpy heat exchanger				
	Type	Ref. no.				Type	Ref. no.			
Right-hand version	KWL 500 W R	40053				KWL 500 W ET R	40055			
Left-hand version	KWL 500 W L	40054				KWL 500 W ET L	40056			
Flow rate at level ^{1) 2)}	⑩	⑧	⑥	④	②	⑩	⑧	⑥	④	②
Supply air/extract air V m³/h	534	403	303	200	109	506	387	295	190	103
Power consumption fans 2xW ¹⁾	150	82	41	16	7	152	83	41	17	7
Voltage/Frequency	1~, 230 V, 50 Hz									
Rated current A – ventilation	2.5									
– preheating	4.4									
– max. total	2.5 (6.9 incl. preheater, accessories)									
Electric preheater kW	1.0 kW (accessories)									
Summer bypass	automatic (adjustable), with heat exchanger cover									
Wiring diagram no.	1433									
Temperature operating range	–20 °C to +40 °C									
Installation temperature	+ 5 °C to +40 °C (90 % rel. humidity, non-condensing)									
Weight approx. kg	58					66				

¹⁾ At 0 Pa, performance levels adjustable. ²⁾ Volume reduction by approx. 10% when using pollen filter.

³⁾ AK = Activated carbon filter ⁴⁾ For a duct diameter of 160 mm.

⁵⁾ For a duct diameter of 180 mm.

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 500 W No. 04262

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

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

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 2.4/160 Ref. no. 09435

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 160 Ref. no. 09481

Rectangular duct temp. sensor

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

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

Replacement air filters

– 2 pcs. ISO Coarse 75% (G4)

ELF-KWL 500/4/4 No. 00039

– 1 pc. ISO ePM₁, 50% (F7)

ELF-KWL 500/7 No. 00042

– 1 pc. ISO ePM_{2.5} 60% (AK)³⁾

ELF-KWL 500 AK No. 04199

Reference

Enthalpy heat exchanger (accessories) for retrofitting:

KWL-ET 500 No. 00897

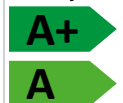


Circular duct connector	
Connector with seal for unit connection to circular duct system.	
RVBD 160 K ⁴⁾	No. 03415
RVBD 180/160 ⁵⁾	No. 09589
Other accessories	
Page	
KWL peripherals	68 ff.
– Ground heat exchanger	92 ff.
– Insulated duct system	82 f.
– Air distribution systems	84 ff.
– Control lines, etc.	88 f.
Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves	
Helios standard range	

KWL 220 D



Efficiency class



KWL 220 D R/L
with additional room sensor
KWL 220 D R/L



Ultra-flat ceiling units with heat recovery for the central supply and extract ventilation of apartments and small single family houses. Certified according to the passive house standard. Equipped with Helios easyControls 3.0, the innovative control concept for simple network connection and web browser control. Units come with highly efficient plastic heat exchangers and energy-efficient EC motors.

■ Casing

Made of galvanised steel sheet, inner and front panels powder-coated in white, double-walled, with 20 mm heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removeable side panels.

■ Heat exchanger

Large cross counterflow heat exchanger made of plastic, heat recovery efficiency of up to 90 %.

■ Fans

Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction. Maintenance-free, easily removeable for cleaning, if required.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 125 mm using duct connectors (RVBD 125 K, accessories).

■ Condensate connection

Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

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

■ Summer operation

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

■ Heat exchanger anti-icing protection

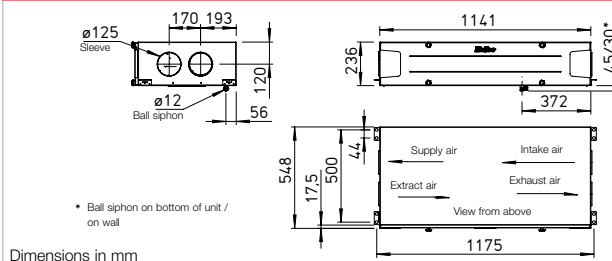
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 220 D, accessories).

■ Control system

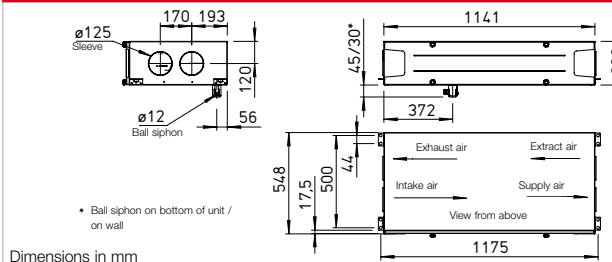
EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 f. Helios easyControls 3.0 is prepared for:

- The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- The humidity sensor integrated as standard and other optio-

Dimensions KWL 220 D R



Dimensions KWL 220 D L



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

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

■ Electrical connection

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

■ Accessories – Functional description (see right for details)

KWL EC 220 D can be individually expanded with the following accessories:

□ Control element ECO

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

□ Control element Touch

- Touch control element with graphic display and user-friendly menu navigation:
- Commissioning assistant.
- Selection of four ventilation profiles.
- Adjustment of an individual weekly programme.
- Adjustment of parameters for room sensors.
- Indication of e.g. filter replace-

ment, operating statuses and error messages.

- Different access authorisations and child lock.
- Other functions (see operating instructions).

□ KNX/EIB module

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

□ Room sensors

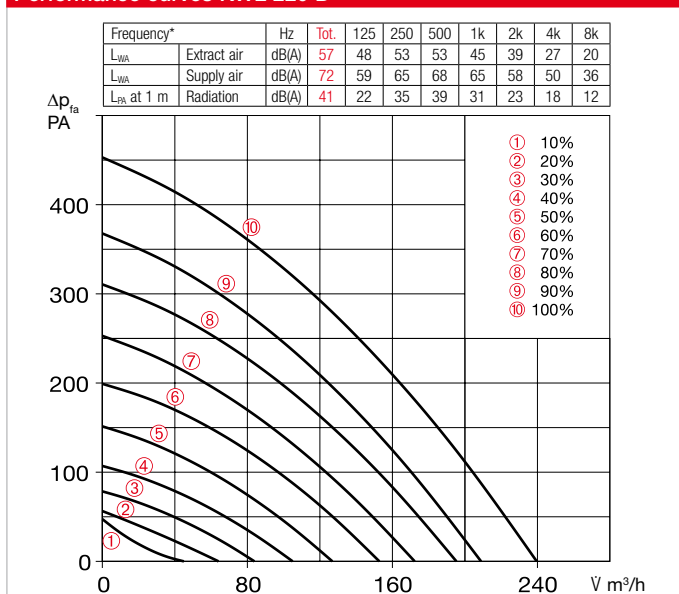
Room sensors, which measure the mixed gas, CO₂ concentration or relative room air humidity, are available for automatic operation and optimal air exchange.

□ Post-heating

Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0 The innovative KWL control concept	22 f.

Performance curves KWL 220 D



Slide switch control element

KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation

KWL APG Ref. no. 04270

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

Touch control element

KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

With graphic display, for flush-mounted installation. Function see left. Connection of up to 6 pcs. possible (additional power supply unit may be required). Can be integrated in common switch ranges with the dimensions mm (W x H x D) 55 x 55 x 35, Dim. with frame mm (W x H x D) 88 x 88 x 35

Casing for surface installation

KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	KWL 220 D R/L		For ceiling installation		
Right-hand version	KWL 220 D R		Ref. no. 40057		
Left-hand version	KWL 220 D L		Ref. no. 40058		
Flow rate at level ^{1) 2)}	⑩	⑥	⑤	④	②
Supply air/extract air V̇ m³/h	240	195	153	105	64
Power consumption fans 2xW ¹⁾	47	30	18	10	6
Voltage/Frequency	1~, 230 V, 50 Hz				
Rated current A – ventilation	0.8				
– preheating	4.4				
– max. total	0.8 (5.2 incl. preheater, accessories)				
Electric preheater kW	1.0 kW (accessories)				
Summer bypass	automatic (adjustable), with heat exchanger cover				
Wiring diagram no.	1433				
Temperature operating range	– 20 °C to + 40 °C				
Installation temperature	+ 5 °C to + 40 °C (90 % rel. humidity, non-condensing)				
Weight approx. kg	47				

¹⁾ At 0 Pa, performance levels adjustable. ²⁾ Volume reduction by approx. 10% when using pollen filter.

³⁾ AK = Activated carbon filter

KNX/EIB module

KWL-KNX Connect No. 20253

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

Room sensors

KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater

KWL-EVH 220 D No. 09636

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1000 W.

Extension module

KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

Dim. mm (WxHxD) 210x210x100

Motion detector

BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 1.2/125 Ref. no. 09433

Rectangular duct temp. sensor

KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 125 Ref. no. 09480

Rectangular duct temp. sensor

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

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control

WHST 300 T38 Ref. no. 08817

Replacement air filters

– 2 pcs. ISO Coarse 75% (G4)

ELF-KWL 220 D/4/4 No. 09638

– 1 pc. ISO ePM₁ 50% (F7)

ELF-KWL 220 D/7 No. 09639

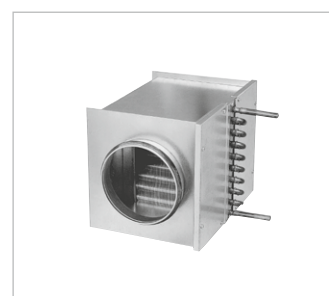
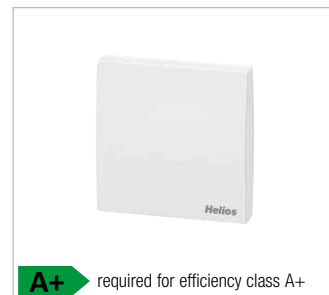
– 1 pc. ISO ePM_{2.5} 60% (AK)³⁾

ELF-KWL 220 AK No. 03050

Circular duct connector

Connector with seal for unit connection to circular duct system with Ø 125 mm.

RVBD 125 K No. 03414



Other accessories	Page
KWL peripherals	68 ff.
– Ground heat exchanger	92 ff.
– Insulated duct system	82 f.
– Air distribution systems	84 ff.
– Control lines, etc.	88 f.
Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves	

Helios standard range

KWL 340 D



Efficiency class

- A+** KWL 340 D R/L with additional room sensor
- A** KWL 340 D R/L

Ultra-flat ceiling units with heat recovery for the central supply and extract ventilation of apartments and small single family houses. Equipped with Helios easyControls 3.0, the innovative control concept for simple network connection and web browser control. Units come with highly efficient plastic heat exchangers and energy-efficient EC motors.

■ Casing

Made of galvanised steel sheet, inner and front panels powder-coated in white, double-walled, with 20 mm heat and sound insulation on all sides. Installation-friendly and maintenance-friendly. All elements are easily accessible through removeable side panels.

■ Heat exchanger

Large cross counterflow heat exchanger made of plastic, heat recovery efficiency of up to 90 %.

■ Fans

Two low-noise high-performance centrifugal fans with energy-saving EC motors ensure the air supply and extraction. Maintenance-free, easily removeable for cleaning, if required.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through ducts with NW 160 mm using duct connectors (RVBD 160 K, accessories).

■ Condensate connection

Condensate drain at the bottom; ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

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

■ Summer operation

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

■ Heat exchanger anti-icing protection

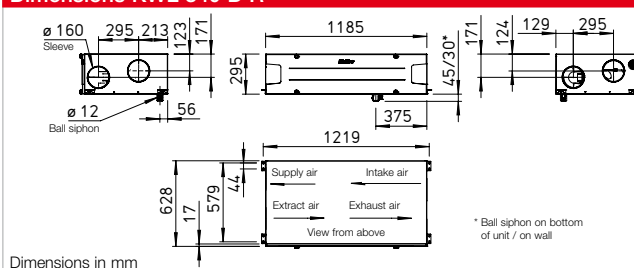
The standard frost monitoring system automatically controls the supply air flow volume and the optionally installed electrical preheater (KWL-EVH 340 D, accessories).

■ Control system

EasyControls 3.0 is the new, modern control system for all KWL compact units from Helios. The standard LAN interface allows the simple integration of the KWL unit in a network and the integration in Helios Cloud. The unit is optionally controlled via an external control element, on PC/laptop, tablet and Smartphone via the integrated web browser or on the move via the Cloud. See page 22 f. Helios easyControls 3.0 is prepared for:

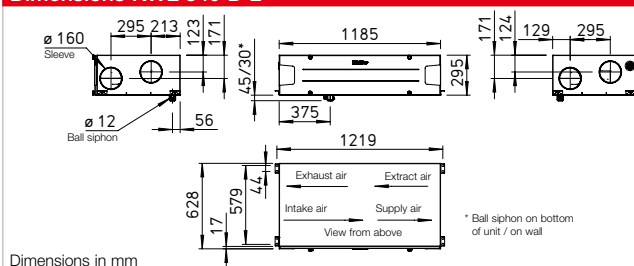
- The control elements KWL-BE ECO and KWL-BE Touch (optional accessories)
- The humidity sensor integrated as standard and other optionally available external air quality sensors (KWL-CO₂, -FTF, -VOC, accessories) enable automatic, demand-controlled ventilation.

Dimensions KWL 340 D R



Dimensions in mm

Dimensions KWL 340 D L



Dimensions in mm

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

■ Electrical connection

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

- Accessories – Functional description (see right for details) KWL EC 340 D can be individually expanded with the following accessories:

□ Control element ECO

- Three ventilation profiles selectable via slide switch.
- Control voltage can be measured directly on the control element.
- Weekly timer (WSUP / WSUP-S, no. 09990 / 09577, accessories) can also be added to implement a further operating level, e.g. night mode.
- LED for visual indication of operating statuses, e.g. filter replacement and faults.

□ Control element Touch

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

□ KNX/EIB module

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

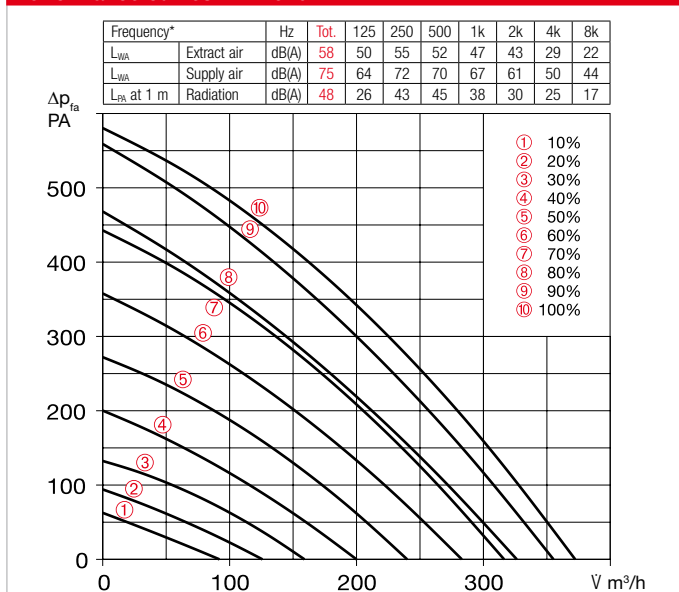
□ Room sensors

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

□ Post-heating

Helios easyControls 3.0 can be used with an electric post-heating element (EHR with KWL-LTK, accessories). The autonomous operation of the warm water heating element can be controlled via an air temperature control (WHS HE, accessories) independently from Helios easyControls 3.0.

References	Page
Helios easyControls 3.0 The innovative KWL control concept	22 f.

Performance curves KWL 340 D

Slide switch control element
KWL BE ECO Ref. no. 20246

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

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

Casing for surface installation
KWL APG Ref. no. 04270

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

Touch control element
KWL BE Touch bl

(black) Ref. no. 20244

KWL BE Touch wh

(white) Ref. no. 20245

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

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

Casing for surface installation
KWL APG Touch bl No. 40178

KWL APG Touch wh No. 40177

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

Control line cable
KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

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

Technical data	KWL 340 D R/L		For ceiling installation		
Right-hand version	KWL 340 D R		Ref. no. 40059		
Left-hand version	KWL 340 D L		Ref. no. 40060		
Flow rate at level ^{1) 2)}	⑩	⑧	⑥	④	②
Supply air/extract air V̇ m³/h	372	326	283	200	126
Power consumption fans 2xW ¹⁾	79	56	40	20	10
Voltage/Frequency	1~, 230 V, 50 Hz				
Rated current A – ventilation	1.2				
– preheating	5.6				
– max. total	1.2 (6.8 incl. preheater, accessories)				
Electric preheater kW	1.3 kW (accessories)				
Summer bypass	automatic (adjustable), with heat exchanger cover				
Wiring diagram no.	1433				
Temperature operating range	–20 °C to +40 °C				
Installation temperature	+5 °C to +40 °C (90% rel. humidity, non-condensing)				
Weight approx. kg	77				

¹⁾ At 0 Pa, performance levels adjustable. ²⁾ Volume reduction by approx. 10% when using pollen filter.

³⁾ AK = Activated carbon filter

KNX/EIB module
KWL-KNX Connect No. 20253

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

Room sensors
KWL-CO2 eC Ref. no. 20248

KWL-FTF eC Ref. no. 20249

KWL-VOC eC Ref. no. 20247

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. Please note the maximum number of sensors, additional power supply unit may be required.

Dim. mm (W x H x D) 98 x 98 x 33

Electric preheater
KWL-EVH 340 D No. 04241

Electrical preheater for simple, plug-in unit installation. For preheating the intake air at very low outdoor temperatures (heat exchanger anti-icing protection). Mandatory for passive houses. Output: 1280 W.

Extension module
KWL-EM eC Ref. no. 40155

For controlling external post-heating elements.

Dim. mm (WxHxD) 210x210x100

Motion detector
BWM Ref. no. 08323

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

Electric post-heating element

For additional supply air heating.

EHR-R 2.4/160 Ref. no. 09435

Rectangular duct temp. sensor
KWL-LTK eC (1 pc. req.) No. 40156

Warm water post-heating element

For additional supply air heating.

WHR 160 Ref. no. 09481

Rectangular duct temp. sensor
KWL-LTK eC (2 pc. req.) No. 40156

Hydraulic unit
WHSH HE 24 V (0-10V) No. 08318

Alternative:

Air temperature control
WHST 300 T38 Ref. no. 08817

Replacement air filters

– 2 pcs. **ISO Coarse 75% (G4)**

ELF-KWL 340 D/4/4 No. 04239

– 1 pc. **ISO ePM₁ 50% (F7)**

ELF-KWL 340 D/7 No. 04240

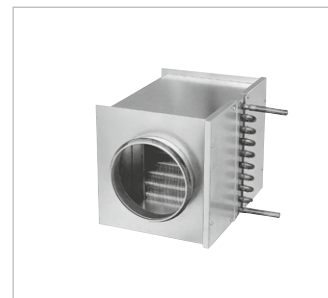
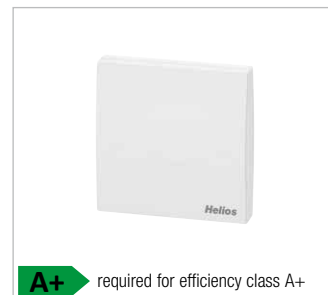
– 1 pc. **ISO ePM_{2.5} 60% (AK)³⁾**

ELF-KWL 340 AK No. 03051

Circular duct connector

Connector with seal for unit connection to circular duct system with Ø 160 mm.

RVBD 160 K No. 03415



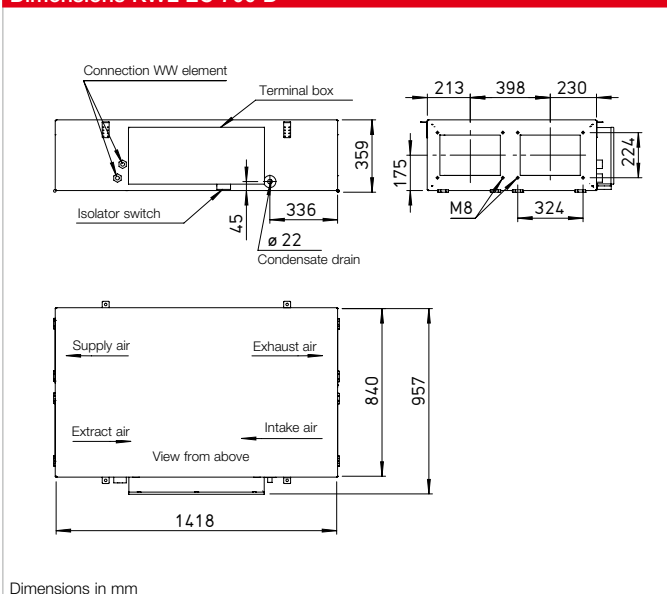
Other accessories	Page
KWL peripherals	68 ff.
– Ground heat exchanger	92 ff.
– Insulated duct system	82 f.
– Air distribution systems	84 ff.
– Control lines, etc.	88 f.
Heating element, control, ventilation grilles, ducts, roof outlets, extract air elements, design ventilation valves	

Helios standard range

KWL EC 700 D



Dimensions KWL EC 700 D



Ultra-flat ventilation units with heat recovery for compact and space-saving ceiling installation.

With a wide range of residential, commercial and industrial applications. Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022.

Available in various comfort and equipment variants.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides. The inspection openings for filter replacement are accessible at the bottom of the unit without tools.

Ceiling installation via vibration-damping fastening elements included in the delivery.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 250 mm.

■ Condensate connection

A separate condensate tray below the heat exchanger facilitates maintenance work on the unit. Drain connectors on the side next to the terminal box. Ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁ 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels. The ventilation unit is alternatively controllable via ModBus (RS 485, TCP/IP).

■ Electrical connection

Easily accessible terminal box on the side of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating

Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WHSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 700 D/5 VDI No.04189
- 1 pc. ISO ePM₁ 55% (F7)
ELF-KWL 700 D/7 VDI No.04191

■ Other accessories

	Page
KWL peripherals	68 ff.
– Air distribution systems	84 ff.
– Further overview, control lines	88 f.

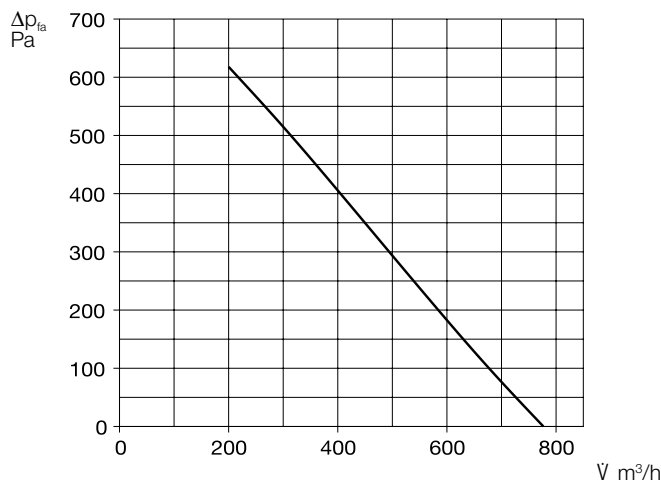
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 700 D

Frequency		Hz	Tot.	125	250	500	1k	2k	4k	8k
L _{WA}	Extract air	dB(A)	53	46	49	47	41	40	34	23
L _{WA}	Supply air	dB(A)	68	54	65	63	59	53	48	39
L _{PA} at 1 m	Radiation	dB(A)	47	33	41	43	41	35	29	14



■ Included in delivery:

Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).

Dim. mm (W x H x D) 115 x 80 x 25



Control element with connection cable (10 m) included in the scope of delivery. Dim. mm (W x H x D) 115 x 80 x 25

■ Accessories for Type Pro WW

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.



■ Accessories for all types

Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27



Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25



Transition piece – Symmetrical

KWL-ÜS 700 D No. 04206

From unit flange to round duct systems.

Flexible connecting sleeve

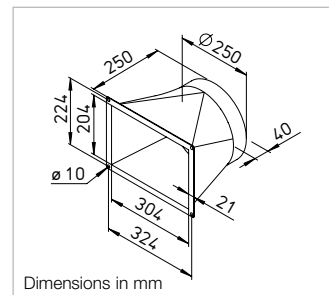
FM 250 No. 01672

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 250 No. 02576

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 250 No. 01203

Made of galvanised steel sheet, for duct connection.



Technical data	KWL EC 700 D			KWL EC 700 D, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For ceiling installation	KWL EC 700 D Pro	04171		KWL EC 700 D Pro WW	04172	
Flow rate at level¹⁾	③	②	①	③	②	①
Supply air/extract air V m ³ /h approx.	510	330	210	510	330	210
Noise dB(A)²⁾						
Supply air L _{WA} (sound power)	68	64	55	68	64	55
Extract air L _{WA} (sound power)	53	47	37	53	47	37
Radiation L _{PA} at 1 m	47	n/a	n/a	47	n/a	n/a
Power consumption fans 2 x W	110	60	38	110	60	38
Voltage/Frequency	230 V~, 50 Hz			230 V~, 50 Hz		
Rated current A – Ventilation	2.3			2.3		
– Preheating	12.0			12.0		
– max. total	14.3			14.3		
Heat output/Postheater kW	–			2.3 (at 60/40 °C) / 2.1 (at 50/40 °C) / 1.3 (at 40/30 °C)		
Electric preheater kW	2.6			2.6		
Summer bypass	automatic			automatic		
Wiring diagram no.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	110			115		

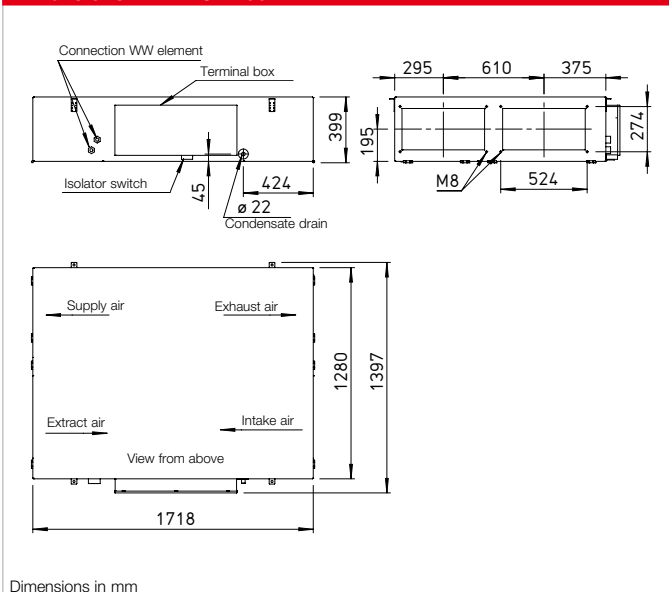
¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

²⁾ At 100 Pa.

KWL EC 1400 D



Dimensions KWL EC 1400 D



Ultra-flat ventilation units with heat recovery for compact and space-saving ceiling installation.

With a wide range of residential, commercial and industrial applications. Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022.

Available in various comfort and equipment variants.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides. The inspection openings for filter replacement are accessible at the bottom of the unit without tools.

Ceiling installation via vibration-damping fastening elements included in the delivery.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 315 mm.

■ Condensate connection

A separate condensate tray below the heat exchanger facilitates maintenance work on the unit. Drain connectors on the side next to the terminal box. Ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁ 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels. The ventilation unit is alternatively controllable via ModBus (RS 485, TCP/IP).

■ Electrical connection

Easily accessible terminal box on the side of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating

Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WHSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 1400 D/5 VDI No.04193
- 1 pc. ISO ePM₁ 55% (F7)
ELF-KWL 1400 D/7 VDI No.04195

■ Other accessories Page

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– Air distribution systems	84 ff.
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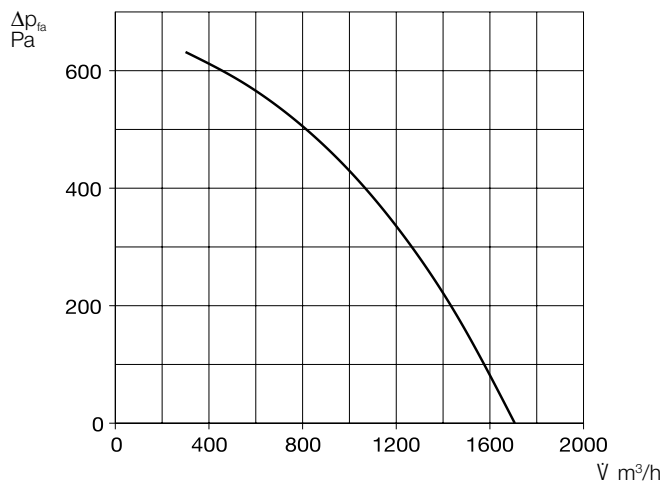
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 1400 D

Frequency		Hz	Tot.	125	250	500	1k	2k	4k	8k
L _{WA}	Extract air	dB(A)	60	51	53	53	50	51	49	45
L _{WA}	Supply air	dB(A)	80	63	68	71	71	75	71	70
L _{PA} at 1 m	Radiation	dB(A)	53	42	48	48	47	43	33	21



Included in delivery:

Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).

Dim. mm (WxHxD) 115x80x25



Control element with connection cable (10 m) included in the scope of delivery. Dim. mm (WxHxD) 115 x 80 x 25

Accessories for Type Pro WW

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.



Accessories for all types

Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27



Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25



Transition piece – Symmetrical

KWL-ÜS 1400 D No. 04207

For acoustic decoupling, incl. 2 pcs. hose clamps.

Flexible connecting sleeve

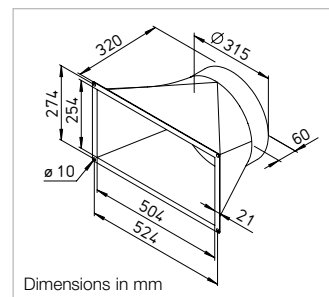
FM 315 No. 01674

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 315 No. 02578

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 315 No. 01204

Made of galvanised steel sheet, for duct connection.



Technical data	KWL EC 1400 D			KWL EC 1400 D, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For ceiling installation	KWL EC 1400 D Pro	04173		KWL EC 1400 D Pro WW	04174	
Flow rate at level¹⁾	3	2	1	3	2	1
Supply air/extract air V m³/h approx.	1000	650	400	1000	650	400
Noise dB(A)²⁾						
Supply air L _{WA} (sound power)	80	71	60	80	71	60
Extract air L _{WA} (sound power)	60	51	39	60	51	39
Radiation L _{PA} at 1 m	53	n/a	n/a	53	n/a	n/a
Power consumption fans 2 x W	225	140	80	225	140	80
Voltage/Frequency	3N~, 400 V, 50 Hz			3N~, 400 V, 50 Hz		
Rated current A – Ventilation	6.0 / – / –			6.0 / – / –		
– Preheating	– / 11.4 / 11.4			– / 11.4 / 11.4		
– max. total	6.0 / 11.4 / 11.4			6.0 / 11.4 / 11.4		
Heat output/Postheater kW	–			4.7 (at 60/40 °C) / 4.2 (at 50/40 °C) / 2.7 (at 40/30 °C)		
Electric preheater kW	4.1			4.1		
Summer bypass	automatic			automatic		
Wiring diagram no.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	185			190		

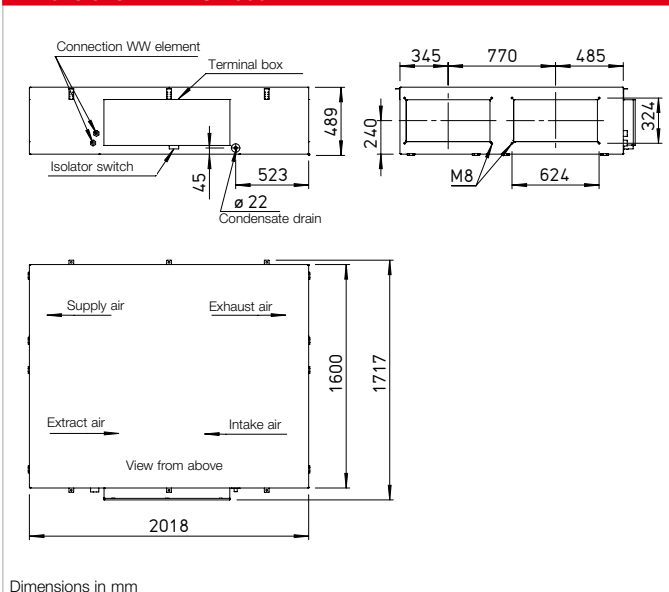
¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

²⁾ At 215 Pa.

KWL EC 2000 D



Dimensions KWL EC 2000 D



Ultra-flat ventilation units with heat recovery for compact and space-saving ceiling installation.

With a wide range of residential, commercial and industrial applications. Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022.

Available in various comfort and equipment variants.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides. The inspection openings for filter replacement are accessible at the bottom of the unit without tools.

Ceiling installation via vibration-damping fastening elements included in the delivery.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 400 mm.

■ Condensate connection

A separate condensate tray below the heat exchanger facilitates maintenance work on the unit. Drain connectors on the side next to the terminal box. Ball siphon included in delivery. On-site connection to drain pipe.

■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁ 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels. The ventilation unit is alternatively controllable via ModBus (RS 485, TCP/IP).

■ Electrical connection

Easily accessible terminal box on the side of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating

Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 2000 D/5 VDI No. 04197
- 1 pc. ISO ePM₁ 55% (F7)
ELF-KWL 2000 D/7 VDI No. 04204

■ Other accessories

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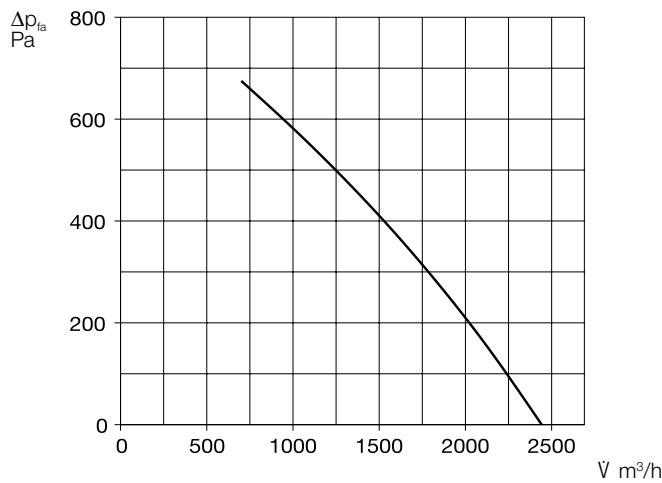
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 2000 D

Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k
L _{WA} Extract air	dB(A)	59	56	52	48	49	47	45	40
L _{WA} Supply air	dB(A)	77	66	68	67	72	69	64	
L _{PA} at 1 m Radiation	dB(A)	50	46	42	43	44	38	31	21



■ Included in delivery:

Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).

Dim. mm (W x H x D) 115 x 80 x 25



Control element with connection cable (10 m) included in the scope of delivery. Dim. mm (W x H x D) 115 x 80 x 25

■ Accessories for Type Pro WW

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.



■ Accessories for all types

Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27



Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25



Transition piece – Symmetrical

KWL-ÜS 2000 D No. 04208

From unit flange to round duct systems.

Flexible connecting sleeve

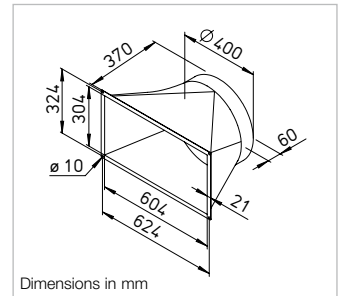
FM 400 No. 01676

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 400 No. 02580

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 400 No. 01206

Made of galvanised steel sheet, for duct connection.



Technical data	KWL EC 2000 D			KWL EC 2000 D, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For ceiling installation	KWL EC 2000 D Pro	04175		KWL EC 2000 D Pro WW	04176	
Flow rate at level¹⁾	3	2	1	3	2	1
Supply air/extract air V m³/h approx.	1800	1150	720	1800	1150	720
Noise dB(A)²⁾						
Supply air L _{WA} (sound power)	77	67	57	77	67	57
Extract air L _{WA} (sound power)	59	50	40	59	50	40
Radiation L _{PA} at 1 m	50	n/a	n/a	50	n/a	n/a
Power consumption fans 2 x W	395	245	150	395	245	150
Voltage/Frequency	3N~, 400 V, 50 Hz			3N~, 400 V, 50 Hz		
Rated current A – Ventilation	6.0 / – / –			6.0 / – / –		
– Preheating	10.0 / 11.0 / 11.0			10.0 / 11.0 / 11.0		
– max. total	16.0 / 11.0 / 11.0			16.0 / 11.0 / 11.0		
Heat output/Postheater kW	–			8.1 (at 60/40 °C) / 7.3 (at 50/40 °C) / 4.6 (at 40/30 °C)		
Electric preheater kW	6.6			6.6		
Summer bypass	automatic			automatic		
Wiring diagram no.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	265			270		

¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

²⁾ At 250 Pa.

KWL EC 800 S



KWL EC 800 S with base cover (accessories)



Central units with heat recovery for compact and space-saving floor installation (floor standing).

With a wide range of residential, commercial and industrial applications.

Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022. Optionally available with integrated warm water heating element.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides.

Inspection openings for filter replacement fastened to both side panels with screws.

Both side walls can be completely dismantled for free access to all components.

The unit is suitable for floor installation (standing) indoors.

Vibration dampers can be underlaid (on-site) to prevent the direct transmission of vibrations and structure-borne noise to building parts.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 250 mm. The floor-standing unit can be rotated 180° for installation so that intake air and exhaust air as well as extract air and supply air connections can be on the left or right sides.

■ Condensate connection

The unit contains a stainless steel condensate tray with a condensate drain below. Ball siphon included in delivery. On-site connection to drain pipe.

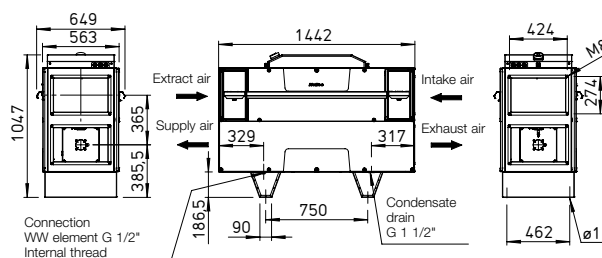
■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁ 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

Dimensions KWL EC 800 S



Dimensions in mm

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Building control system via ModBus (RS 485, TCP/IP).
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels.

■ Electrical connection

Easily accessible terminal box on top of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WHSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% filter ELF-KWL 800 S/5 VDI No. 08256
- 1 pc. ISO ePM₁ 55% filter ELF-KWL 800 S/7 VDI No. 08257

■ Other accessories Page

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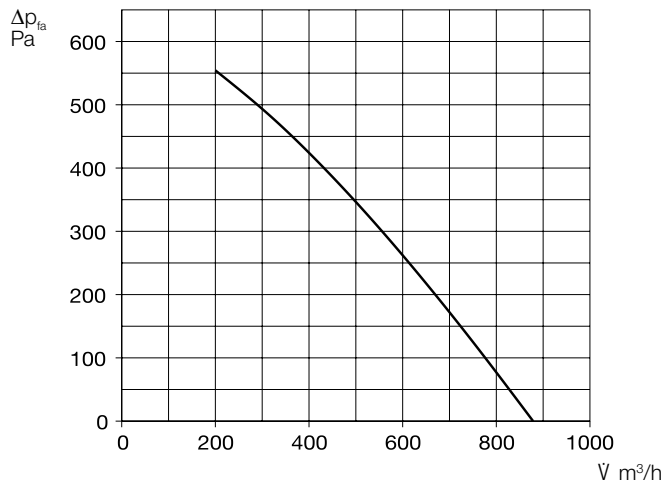
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 800 S

Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k
L_{WA}	Extract air	dB(A)	70	65	68	54	49	43	34
L_{WA}	Supply air	dB(A)	78	76	73	67	63	55	55
L_{PA} at 1 m	Radiation	dB(A)	54	50	50	42	42	31	25



■ Included in delivery:

Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).
Dim. mm (WxHxD) 115x80x25



Control element with connection cable (10 m) included in the scope of delivery.
Dim. mm (WxHxD) 115 x 80 x 25

■ Accessories for Type Pro WW

Hydraulic unit

WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.



■ Accessories for all types

Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27



Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25



Transition piece – Symmetrical

KWL-ÜS 800 S No. 08339

From unit flange to round duct systems.

Flexible connecting sleeve

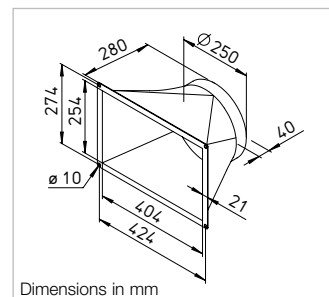
FM 250 No. 01672

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 250 No. 02576

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 250 No. 01203

Made of galvanised steel sheet, for duct connection.

Base cover

KWL-SB 800 S No. 09315

Made of galvanised steel sheet.



Technical data	KWL EC 800 S			KWL EC 800 S, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For floor-standing installation	KWL EC 800 S Pro	08327		KWL EC 800 S Pro WW	08328	
Flow rate at level¹⁾	③	②	①	③	②	①
Supply air/extract V m³/h approx.	600	490	325	600	490	325
Noise dB(A) at 620 m³/h and 195 Pa						
Supply air L_{WA} (sound power)	78	n/a	n/a	78	n/a	n/a
Extract air L_{WA} (sound power)	70	n/a	n/a	70	n/a	n/a
Radiation L_{PA} at 1 m	54	n/a	n/a	54	n/a	n/a
Power consumption fans 2xW	140	94	65	140	94	65
Standby power consumption	< 1 W			< 1 W		
Voltage/Frequency	1~ , 230 V, 50 Hz			1~ , 230 V, 50 Hz		
Rated current A – Ventilation	3.0			3.0		
– Preheating	11.0			11.0		
– max. total	14.0			14.0		
Electric preheater kW	2.4			2.4		
Heat output/post-heating element 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.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Installation temperature	+5 °C to +40 °C			+5 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	172			175		

¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

KWL EC 1200 S



KWL EC 1200 S with base cover (accessories)



Central units with heat recovery for compact and space-saving floor installation (floor standing).

With a wide range of residential, commercial and industrial applications.

Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022. Optionally available with integrated warm water heating element.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides.

Inspection openings for filter replacement fastened to both side panels with screws.

Both side walls can be completely dismantled for free access to all components.

The unit is suitable for floor installation (standing) indoors.

Vibration dampers can be underlaid (on-site) to prevent the direct transmission of vibrations and structure-borne noise to building parts.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 355 mm. The floor-standing unit can be rotated 180° for installation so that intake air and exhaust air as well as extract air and supply air connections can be on the left or right sides.

■ Condensate connection

The unit contains a stainless steel condensate tray with a condensate drain below. Ball siphon included in delivery. On-site connection to drain pipe.

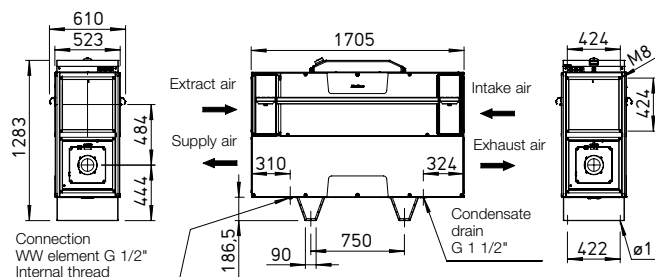
■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁, 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

Dimensions KWL EC 1200 S



Dimensions in mm

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Building control system via ModBus (RS 485, TCP/IP).
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels.

■ Electrical connection

Easily accessible terminal box on top of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WHSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 1200 S/5 VDI No.08347
- 1 pc. ISO ePM₁, 55% (F7)
ELF-KWL 1200 S/7 VDI No.08348

■ Other accessories Page

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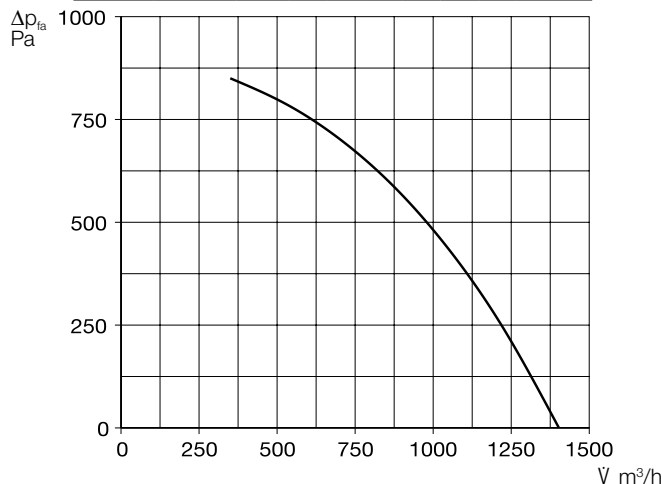
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 1200 S

Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k
L_{WA}	Extract air	dB(A)	62	46	55	60	53	53	42
L_{WA}	Supply air	dB(A)	76	53	63	71	69	73	66
L_{PA} at 1 m	Radiation	dB(A)	53	40	47	48	49	47	30


Included in delivery:
Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).

Dim. mm (WxHxD) 115x80x25


Accessories for Type Pro WW
Hydraulic unit
WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.


Accessories for all types
Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27


Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25


Transition piece – Symmetrical

KWL-ÜS 1200 S No. 08349

From unit flange to round duct systems.

Flexible connecting sleeve

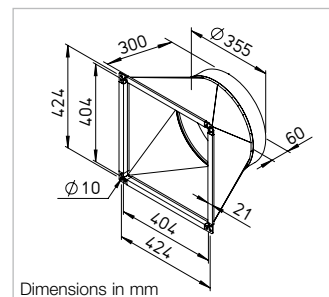
FM 355 No. 01675

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 355 No. 02579

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.


Angle flange ring

FR 355 No. 01205

Made of galvanised steel sheet, for duct connection.

Base cover

KWL-SB 1200 S No. 09316

Made of galvanised steel sheet.



Technical data	KWL EC 1200 S		KWL EC 1200 S, with warm water post-heater	
	Type	Ref. no.	Type	Ref. no.
For floor-standing installation	KWL EC 1200 S Pro	08345	KWL EC 1200 S Pro WW	08346
Flow rate at level¹⁾				
Supply air/extract $V \text{ m}^3/\text{h}$ approx.	1300	350	1300	350
Noise dB(A) at 1300 m³/h and 75 Pa				
Supply air L_{WA} (sound power)	76	n/a	76	n/a
Extract air L_{WA} (sound power)	62	n/a	62	n/a
Radiation L_{PA} at 1 m	53	n/a	53	n/a
Power consumption fans 2xW	375	80	375	80
Standby power consumption	< 1 W		< 1 W	
Voltage/Frequency	3N~, 400 V, 50 Hz		3N~, 400 V, 50 Hz	
Rated current A – Ventilation	5.0 / – / –		5.0 / – / –	
– Preheating	– / 12.1 / 12.1		– / 12.1 / 12.1	
– max. total	5.0 / 12.1 / 12.1		5.0 / 12.1 / 12.1	
Electric preheater kW	4.2		4.2	
Heat output/post-heating element 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.	1370		1370	
Temperature operating range	–20 °C to +40 °C		–20 °C to +40 °C	
Installation temperature	+5 °C to +40 °C		+5 °C to +40 °C	
Connection PWW heating element	–		IG 1/2"	
Weight approx. kg	250		256	

¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

KWL EC 1800 S



KWL EC 1800 S with base cover (accessories)



Central units with heat recovery for compact and space-saving floor installation (floor standing).

With a wide range of residential, commercial and industrial applications.

Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022. Optionally available with integrated warm water heating element.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides.

Inspection openings for filter replacement fastened to both side panels with screws.

Both side walls can be completely dismantled for free access to all components.

The unit is suitable for floor installation (standing) indoors.

Vibration dampers can be underlaid (on-site) to prevent the direct transmission of vibrations and structure-borne noise to building parts.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 400 mm. The floor-standing unit can be rotated 180° for installation so that intake air and exhaust air as well as extract air and supply air connections can be on the left or right sides.

■ Condensate connection

The unit contains a stainless steel condensate tray with a condensate drain below. Ball siphon included in delivery. On-site connection to drain pipe.

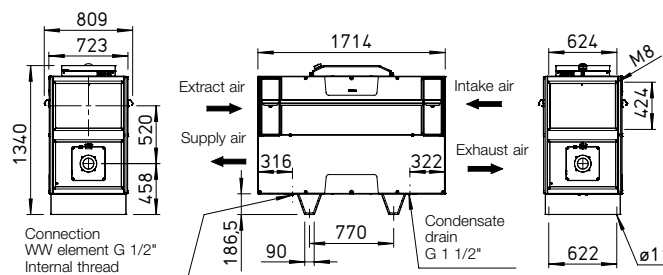
■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁, 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

Dimensions KWL EC 1800 S



Dimensions in mm

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Building control system via ModBus (RS 485, TCP/IP).
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels.

■ Electrical connection

Easily accessible terminal box on top of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WHSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 1800 S/5 VDI No.08258
- 1 pc. ISO ePM₁, 55% (F7)
ELF-KWL 1800 S/7 VDI No.08259

■ Other accessories

Other accessories	Page
KWL peripherals	68 ff.
– Air distribution systems	84 ff.
– Further overview, control lines	88 ff.

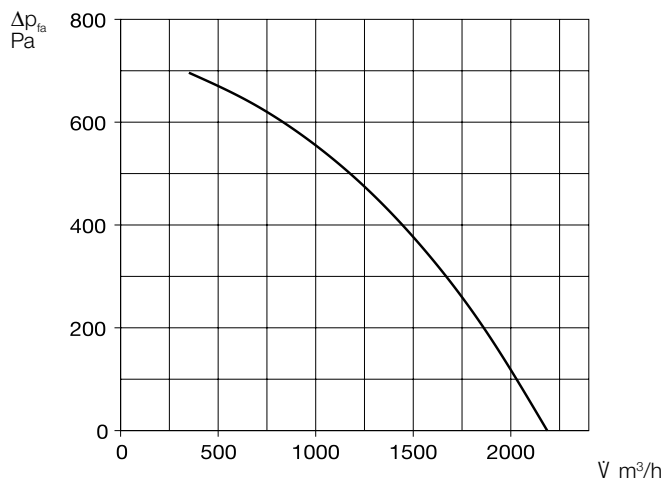
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 1800 S

Frequency		Hz	Tot.	125	250	500	1k	2k	4k	8k
L_{WA}	Extract air	dB(A)	61	54	58	51	52	49	38	14
L_{WA}	Supply air	dB(A)	72	61	66	63	65	64	56	56
L_{PA} at 1 m	Radiation	dB(A)	52	35	47	43	47	47	37	28


Included in delivery:
Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).

Dim. mm (WxHxD) 115x80x25



Control element with connection cable (10 m) included in the scope of delivery. Dim. mm (WxHxD) 115 x 80 x 25

Accessories for Type Pro WW
Hydraulic unit
WHSH HE 24 V (0-10V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL-/RL temperature display, circulating pump and flexible connection hoses.


Accessories for all types
Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.

Dim. mm (W x H x D) 85 x 85 x 27


Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.

Dim. mm (W x H x D) 80 x 80 x 25


Transition piece – Symmetrical

KWL-ÜS 1800 S No. 08340

From unit flange to round duct systems.

Flexible connecting sleeve

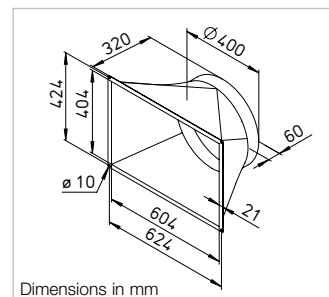
FM 400 No. 01676

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 400 No. 02580

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 400 No. 01206

Made of galvanised steel sheet, for duct connection.

Base cover

KWL-SB 1800 S No. 09317

Made of galvanised steel sheet.



Technical data	KWL EC 1800 S			KWL EC 1800 S, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For floor-standing installation	KWL EC 1800 S Pro	08329		KWL EC 1800 S Pro WW	08330	
Flow rate at level¹⁾	③	②	①	③	②	①
Supply air/extract $V \text{ m}^3/\text{h}$ approx.	1400	1070	810	1400	1070	810
Noise dB(A) at 1400 m³/h and 245 Pa						
Supply air L_{WA} (sound power)	72	n/a	n/a	72	n/a	n/a
Extract air L_{WA} (sound power)	61	n/a	n/a	61	n/a	n/a
Radiation L_{PA} at 1 m	52	n/a	n/a	52	n/a	n/a
Power consumption fans 2xW	315	225	165	315	225	165
Standby power consumption	< 1 W			< 1 W		
Voltage/Frequency	3N~, 400 V, 50 Hz			3N~, 400 V, 50 Hz		
Rated current A – Ventilation	3.9 / – / –			3.9 / – / –		
– Preheating	6.6 / 6.6 / 6.6			6.6 / 6.6 / 6.6		
– max. total	10.5 / 6.6 / 6.6			10.5 / 6.6 / 6.6		
Electric preheater kW	4.5			4.5		
Heat output/post-heating element kW	–			5.2 (at 60/40 °C) / 4.9 (at 50/40 °C) / 3.0 (at 40/30 °C)		
Summer bypass	automatic (adjustable), with heat exchanger cover			automatic (adjustable), with heat exchanger cover		
Wiring diagram no.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Installation temperature	+5 °C to +40 °C			+5 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	290			295		

¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

KWL EC 2600 S



KWL EC 2600 S with base cover (accessories)



Central units with heat recovery for compact and space-saving floor installation (floor standing).

With a wide range of residential, commercial and industrial applications.

Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022. Optionally available with integrated warm water heating element.

■ Casing

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides.

Inspection openings for filter replacement fastened to both side panels with screws.

Both side walls can be completely dismantled for free access to all components.

The unit is suitable for floor installation (standing) indoors.

Vibration dampers can be underlaid (on-site) to prevent the direct transmission of vibrations and structure-borne noise to building parts.

■ Heat exchanger

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

■ Fans

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

■ Ducts

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 560 mm. The floor-standing unit can be rotated 180° for installation so that intake air and exhaust air as well as extract air and supply air connections can be on the left or right sides.

■ Condensate connection

The unit contains a stainless steel condensate tray with a condensate drain below. Ball siphon included in delivery. On-site connection to drain pipe.

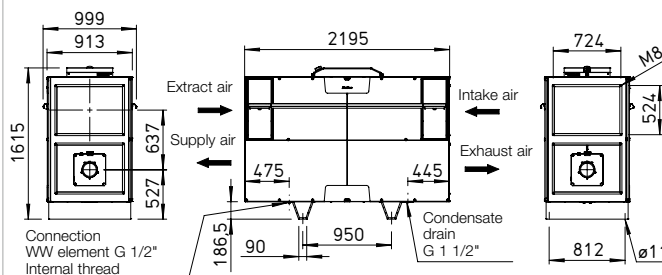
■ Air filter

Standard equipment: Clean intake air supply via ISO ePM₁, 55% filter (F7). The heat exchanger requires a ISO ePM₁₀ 50% filter (M5) on the extract air side. All filters are pressure-controlled and exchangeable in just a few simple steps.

■ Summer operation

Standard equipment with automatic bypass function for maximum comfort.

Dimensions KWL EC 2600 S



Dimensions in mm

■ Heat exchanger anti-icing protection

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

■ Power control

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO₂, VOC (mixed gas) or humidity sensor.
- ☐ Building control system via ModBus (RS 485, TCP/IP).
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels.

■ Electrical connection

Easily accessible terminal box on top of the casing. The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

■ Post-heating Type KWL EC Pro WW

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WSH HE 24 V (0-10 V), accessories) is recommended for controlling the warm water heat exchanger.

■ Reference

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters. The use of original replacement air filters is therefore mandatory.

■ Replacement air filter

- 1 pc. ISO ePM₁₀ 50% (M5)
ELF-KWL 2600 S/5 VDI No.08308
- 1 pc. ISO ePM₁, 55% (F7)
ELF-KWL 2600 S/7 VDI No.08325

■ Other accessories Page

KWL peripherals	68 ff.
– Air distribution systems	84 ff.
– Further overview, control lines	88 f.

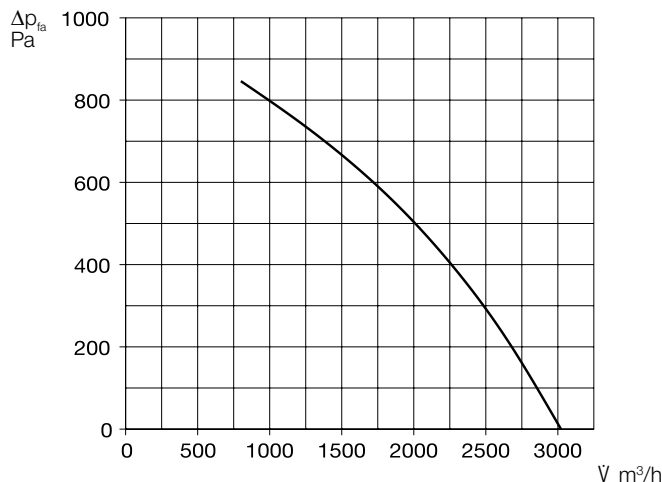
Accessory details

Ventilation grilles, ducts, fittings, roof outlets, extract air elements

Standard range catalogue

Performance curve KWL EC 2600 S

Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k
L _{WA}	Extract air	dB(A)	62	52	58	56	54	49	27
L _{WA}	Supply air	dB(A)	77	67	69	69	72	67	51
L _{PA} at 1 m	Radiation	dB(A)	52	37	48	46	43	36	23


Included in delivery:
Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).
 Dim. mm (WxHxD) 115x80x25



Control element with connection cable (10 m) included in the scope of delivery.
 Dim. mm (WxHxD) 115 x 80 x 25

Accessories for Type Pro WW
Hydraulic unit
WHSH HE 24 V (0-10 V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL- /RL temperature display, circulating pump and flexible connection hoses.


Accessories for all types
Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.
 Dim. mm (W x H x D) 85 x 85 x 27


Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.
 Dim. mm (W x H x D) 80 x 80 x 25


Transition piece – Symmetrical

KWL-ÜS 2600 S No. 08341

From unit flange to round duct systems.

Flexible connecting sleeve

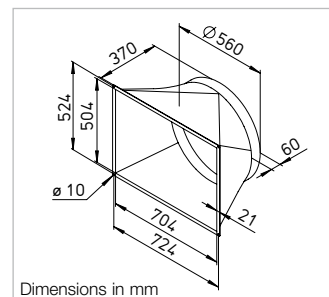
FM 560 No. 01679

For acoustic decoupling, incl. 2 pcs. hose clamps.

Duct shutter, motorised

RVM 560 No. 02583

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

Angle flange ring

FR 560 No. 01209

Made of galvanised steel sheet, for duct connection.

Base cover

KWL-SB 2600 S No. 09318

Made of galvanised steel sheet.



Technical data	KWL EC 2600 S			KWL EC 2600 S, with warm water post-heater		
	Type	Ref. no.		Type	Ref. no.	
For floor-standing installation	KWL EC 2600 S Pro	08331		KWL EC 2600 S Pro WW	08332	
Flow rate at level¹⁾	③	②	①	③	②	①
Supply air/extract V m³/h approx.	2065	1450	840	2065	1450	840
Noise dB(A) at 2100 m³/h and 275 Pa						
Supply air L _{WA} (sound power)	77	n/a	n/a	77	n/a	n/a
Extract air L _{WA} (sound power)	62	n/a	n/a	62	n/a	n/a
Radiation L _{PA} at 1 m	52	n/a	n/a	52	n/a	n/a
Power consumption fans 2xW	450	295	175	450	295	175
Standby power consumption	< 1 W			< 1 W		
Voltage/Frequency	3N~, 400 V, 50 Hz			3N~, 400 V, 50 Hz		
Rated current A – Ventilation	2.3 / 2.3 / 2.3			2.3 / 2.3 / 2.3		
– Preheating	10.05 / 10.05 / 10.05			10.05 / 10.05 / 10.05		
– max. total	12.35 / 12.35 / 12.35			12.35 / 12.35 / 12.35		
Electric preheater kW	6.8			6.8		
Heat output/post-heating element 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.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Installation temperature	+5 °C to +40 °C			+5 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	490			500		

¹⁾ Values based on operating ranges defined according to PHI (Passive House Institute).

Relaxed ventilation with KWL® YOGA.



Are your buildings fit for the future? Whether at school or in public buildings, at work or in leisure time – our new, decentralised ventilation units with heat recovery KWL Yoga make it easy to achieve the best indoor air quality.

The compact design and simple installation without an air distribution system also make KWL Yoga perfect for renovation projects. Three available unit sizes for flow rates up to 400, 700 and 1000 m³/h and various equipment versions are only some of the highlights of KWL Yoga.

All advantages at a glance:



- Practical: Simple **maintenance** through freely accessible inspection flaps on the underside of the unit.
- Flexible: Three available unit sizes for flow rates up to **400, 700 and 1000 m³/h.**
- Diverse: Ideal for use in **schools, offices and public facilities.**
- Guaranteed: **Best air quality** with low CO₂ concentration promotes receptiveness and performance.
- Customised: 12 different **equipment options.**
- **Note:** Types "ET" are equipped with highly efficient **enthalpy heat exchanger.**

■ KWL Yoga Style

Compact wall units from
400 to 1000 m³/h.



60ff

KWL YOGA Style 400



Decentralised compact ventilation units with heat recovery for the supply and extract ventilation of individual rooms, such as classrooms, recreation rooms, offices, commercial units, medical practices and many more. Equipped with highly-efficient aluminium heat exchangers and energy-saving EC motors. Automatic shutters for intake and exhaust prevent cold draughts when the fans are deactivated. The flow-optimised supply air grille allows draught-free ventilation, even in large rooms, through the optimal use of the Coanda effect. Includes a touch control element for easy operation and configuration of unit functions.

■ Casing

Made of galvanised steel sheet, the casing parts are painted white/powder-coated. The double-walled unit casing is equipped with 40 mm thermal and sound insulation on all sides. Easy installation and maintenance due to large inspection panel.

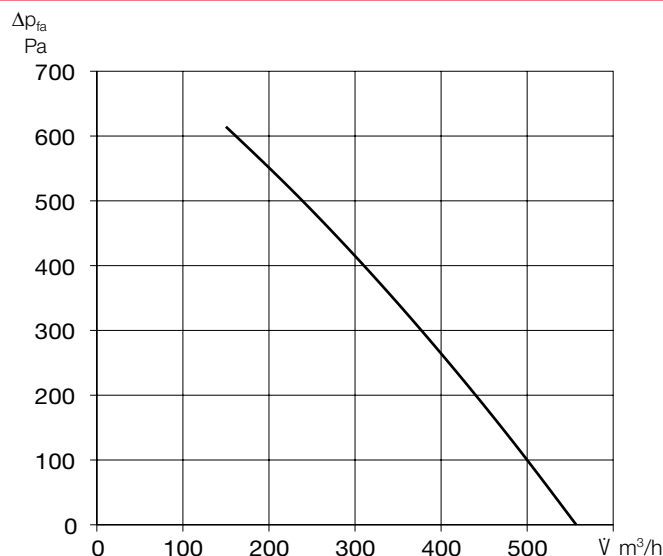
■ Installation

Ceiling installation is carried out using the vibration-damping fastening elements included in the scope of delivery.

■ Heat exchanger

Large aluminium cross counterflow heat exchanger with up to 90 % heat recovery efficiency. Dismantling is possible in a few steps. Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional humidity recovery of up to 50%.

Performance curve KWL YOGA Style 400



■ Fans

Two low-noise, high-performance EC fans with backward curved impellers for maximum energy efficiency.

■ Sensor system

Integrated CO₂ sensor system. Alternatively, this can be replaced by an external sensor (VOC, CO₂ or humidity) positioned in the room. KWL Yoga can also be controlled with a motion sensor (combination not possible!) instead of the sensors.

■ Air flow

Supply air on front side, two extract air openings on the underside of the unit. Intake and exhaust air connectors are equipped with spring-loaded shutters.

■ Condensate connection

Condensate connection horizontal (wall side), optionally via ball siphon in surface-mounted or flush-mounted design or via condensate pump.

■ Air filter, VDI-certified

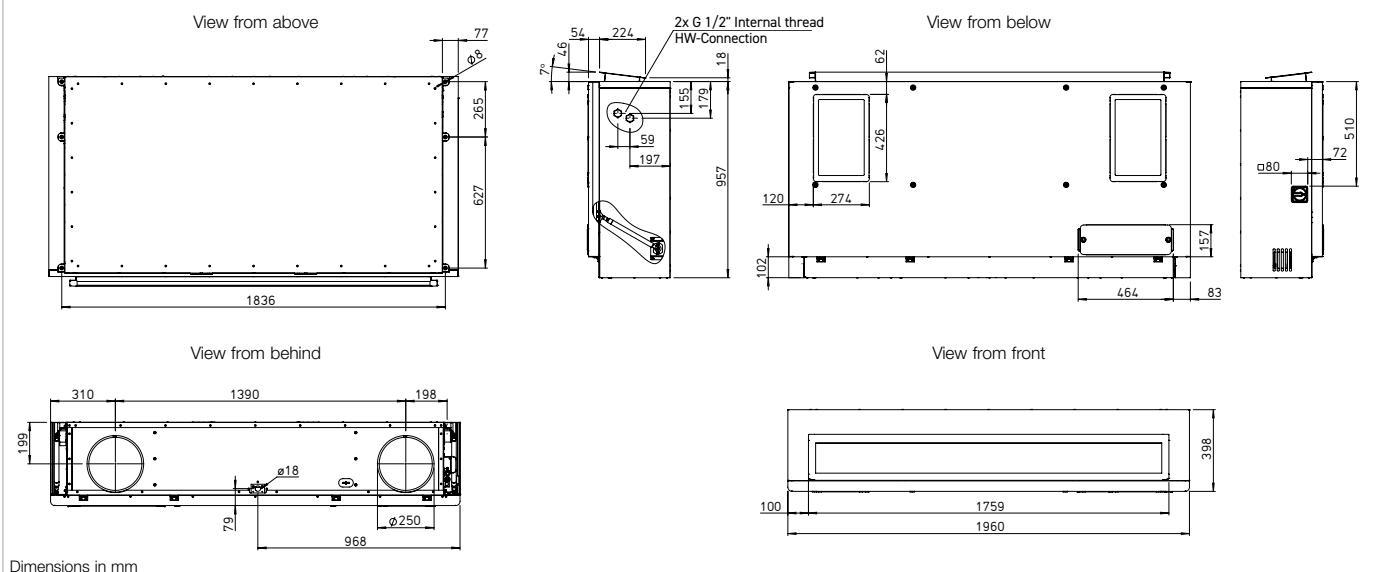
Clean intake air flow via ISO ePM₁ 60 % filter (F7). Two filters for extract air: ISO Coarse 60 % (G4); optionally available: ISO ePM₁₀ 60 % (M5).

■ Summer operation

Equipped with automatic bypass function (bypassing the heat exchanger to use the cool night air for controlling the room temperature) as standard.

	Without electrical preheater/ without electrical after-heater	Without electrical preheater/ with electrical after-heater	Without electrical preheater/ with warm water after-heater	With electrical preheater/ without after-heater	With electrical preheater/with electrical after-heater	
	KWL YOGA Style 400 Ref. no. 40008	KWL YOGA Style 400 EN Ref. no. 40010	KWL YOGA Style 400 WW Ref. no. 40012	KWL YOGA Style 400 EV Ref. no. 40014	KWL YOGA Style 400 EV/EN Ref. no. 40016	
	KWL YOGA Style 400 ET Ref. no. 40667	KWL YOGA Style 400 EN ET Ref. no. 40668	KWL YOGA Style 400 WW ET Ref. no. 40669	KWL YOGA Style 400 EV ET Ref. no. 40670	KWL YOGA Style 400 EV/EN ET Ref. no. 40671	
Intake/exhaust air connector diameter	250	250	250	250	250	
Air volume V m³/h (Min. - Max.)	150 - 560	150 - 560	150 - 560	150 - 560	150 - 560	
Radiation L _{pa} dB(A) in 1 m / 3 m (at 0 Pa)						
– 150 m³/h	26 / 20	26 / 20	26 / 20	26 / 20	26 / 20	
– 200 m³/h	28 / 22	28 / 22	28 / 22	28 / 22	28 / 22	
– 300 m³/h	31 / 25	31 / 25	31 / 25	31 / 25	31 / 25	
– 560 m³/h	38 / 32	38 / 32	38 / 32	38 / 32	38 / 32	
Maximum power consumption total (incl. control) W	350	1850	350	1850	3350	
Rated current total (incl. control) A	2.45	9.0	2.45	9.0	15.51	
Voltage / frequency	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	
Protection category IP	20	20	20	20	20	
Temperature operating range °C	-10 to+40	-10 to+40	-10 to+40	-20 to+40	-20 to+40	
Installation temperature °C	+5 to+40	+5 to+40	+5 to+40	+5 to+40	+5 to+40	
Weight approx. kg	167	169	169	169	171	
Wiring diagram no.	1500	1500	1500	1500	1500	

Dimensions KWL YOGA Style 400



Heat exchanger frost protection

The standard frost monitoring automatically regulates the supply air flow and the built-in electrical preheater, depending on the selected equipment.

After-heater

Unit variants with integrated post-heating (warm water or electrical after-heater) ensure the comfortable and energy-efficient post-heating of supply air. The target supply air temperature is set on the control element. The use of hydraulic unit type WHSH HE 24 V (0-10V), (accessories) is recommended for controlling the warm water heating element.

Power control

The included comfort control element with touch functionality and easy menu navigation provide the following functions:

- ☐ Demand-oriented ventilation, optionally with CO₂, VOC, or humidity sensor (1 sensor can be connected).
- ☐ Initial commissioning (automatic determination of system characteristic curve).
- ☐ Fire alarm contact connection.
- ☐ Weekly or daily programme.
- ☐ Automatic bypass (summer operation: use of cool night air).
- ☐ Pressure monitoring of filter contamination.
- ☐ Displays required filter replacement.
- ☐ 5 password-protected function levels can be configured.
- ☐ Control via central building control system possible (ModBus RTU and ModBus TCP, BACnet).
- ☐ Including control line cable (10 m)

Electrical connection

After removing the left side panel, the connection box is easily accessible on the outside of the casing. The isolator/main switch is located on the outside of the unit for easy maintenance. It can be locked using a padlock to prevent unauthorised access.

Sensors

Infrared motion sensor for detecting the presence of people in the room.

BWM Ref. no. 08323

CO₂ sensor for measuring the CO₂ concentration.

AIR1/KWL-VOC 0-10V No. 20250

VOC sensor for measuring the mixed gas concentration (VOC).

AIR1/KWL-CO₂ 0-10V No. 20251

Humidity-temperature sensor for measuring the relative air humidity.

AIR1/KWL-FTF 0-10V No. 20252

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

Control line cables in 5 or 10 meters for sensors.

Installation accessories

Flush-mounted/wall-mounted siphon

KWL-KS WE Ref. no. 40064

Ball-tube siphon

KWL-KS Ref. no. 40065

Condensate submersible pump

KWL-KP-I Ref. no. 40472

Hydraulic unit

WHSH HE 24V (0-10V) No. 08318

Facade grille, circular

FGR 250 Ref. no. 40181

Filter, VDI-certified

Spare air filter (extract air)*

ISO Coarse 60% (G4). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/Coarse 60%

Ref. no. 40687

Spare air filter (extract air)*

ISO ePM₁₀ 60% (M5). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/ePM10 60%

Ref. no. 40690

Spare air filter (intake air)

ISO ePM₁ 60% (F7). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/ePM1 60%

Ref. no. 40693

*2 extract air filters are required per unit.

Attention: For spare air filters of older unit generations (orders before March 2023): Please contact us at export@heliosventilatoren.de

With electrical preheater/ with warm water after-heater
KWL YOGA Style 400 EV/WW Ref. no. 40018
KWL YOGA Style 400 EV/WW ET Ref. no. 40672
250
150 - 560
26 / 20
28 / 22
31 / 25
38 / 32
1850
9.0
1~, 230 V, 50 Hz
20
-20 to+40
+5 to+40
171
1500

Important note

Further information on accessories can be found on page 66.

KWL YOGA Style 700



Decentralised compact ventilation units with heat recovery for the supply and extract ventilation of individual rooms, such as classrooms, recreation rooms, offices, commercial units, medical practices and many more. Equipped with highly-efficient aluminium heat exchangers and energy-saving EC motors. Automatic shutters for intake and exhaust prevent cold draughts when the fans are deactivated. The flow-optimised supply air grille allows draught-free ventilation, even in large rooms, through the optimal use of the Coanda effect. Includes a touch control element for easy operation and configuration of unit functions.

■ Casing

Made of galvanised steel sheet, the casing parts are painted white/powder-coated. The double-walled unit casing is equipped with 40 mm thermal and sound insulation on all sides. Easy installation and maintenance due to large inspection panel.

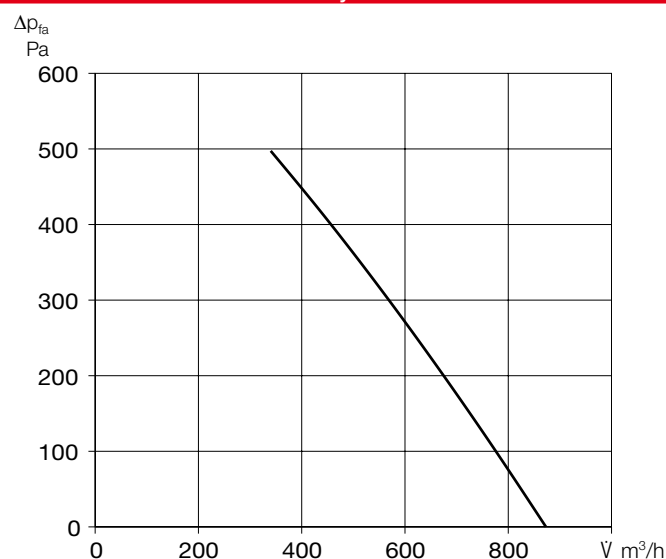
■ Installation

Ceiling installation is carried out using the vibration-damping fastening elements included in the scope of delivery.

■ Heat exchanger

Large aluminium cross counterflow heat exchanger with up to 90 % heat recovery efficiency. Dismantling is possible in a few steps. Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional humidity recovery of up to 50%.

Performance curve KWL YOGA Style 700



■ Fans

Two low-noise, high-performance EC fans with backward curved impellers for maximum energy efficiency.

■ Sensor system

Integrated CO₂ sensor system. Alternatively, this can be replaced by an external sensor (VOC, CO₂ or humidity) positioned in the room. KWL Yoga can also be controlled with a motion sensor (combination not possible!) instead of the sensors.

■ Air flow

Supply air on front side, two extract air openings on the underside of the unit. Intake and exhaust air connectors are equipped with spring-loaded shutters.

■ Condensate connection

Condensate connection horizontal (wall side), optionally via ball siphon in surface-mounted or flush-mounted design or via condensate pump.

■ Air filter, VDI-certified

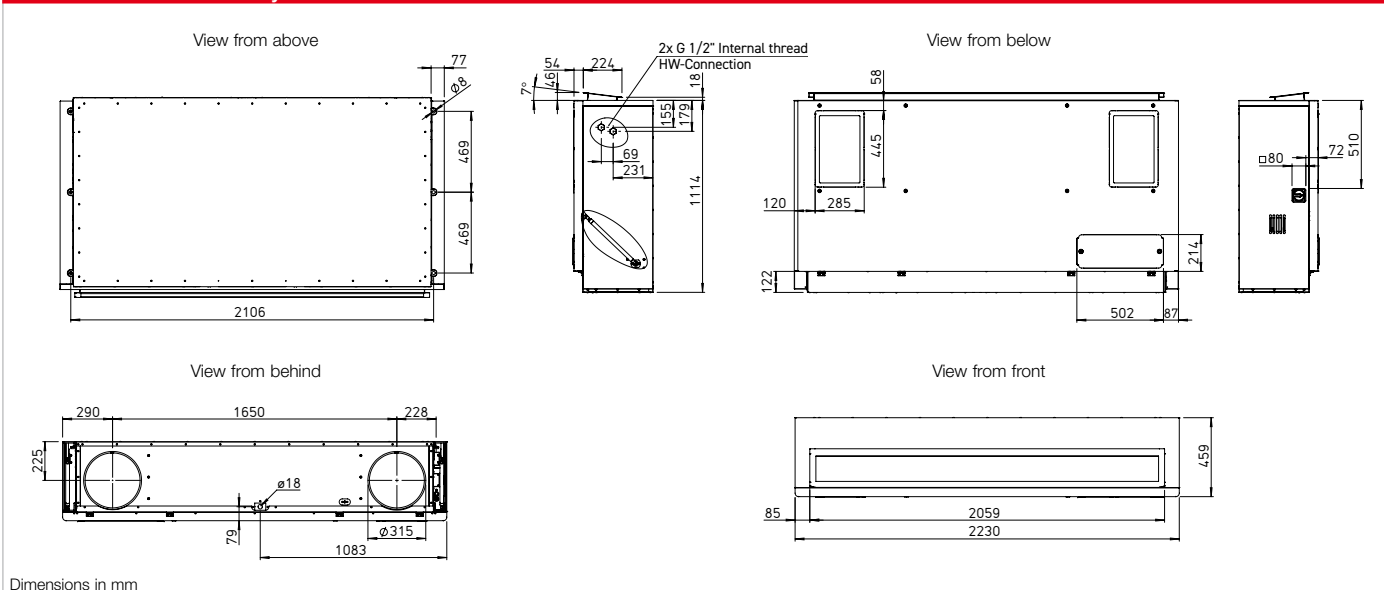
Clean intake air flow via ISO ePM₁ 60 % filter (F7). Two filters for extract air: ISO Coarse 60 % (G4); optionally available: ISO ePM₁₀ 60 % (M5).

■ Summer operation

Equipped with automatic bypass function (bypassing the heat exchanger to use the cool night air for controlling the room temperature) as standard.

	Without electrical preheater/ without electrical after-heater	Without electrical preheater/ with electrical after-heater	Without electrical preheater/ with warm water after-heater	With electrical preheater/ without after-heater	With electrical preheater/with electrical after-heater	
	KWL YOGA Style 700 Ref. no. 40020	KWL YOGA Style 700 EN Ref. no. 40022	KWL YOGA Style 700 WW Ref. no. 40024	KWL YOGA Style 700 EV Ref. no. 40026	KWL YOGA Style 700 EV/EN Ref. no. 40028	
	KWL YOGA Style 700 ET Ref. no. 40673	KWL YOGA Style 700 EN ET Ref. no. 40674	KWL YOGA Style 700 WW ET Ref. no. 40675	KWL YOGA Style 700 EV ET Ref. no. 40676	KWL YOGA Style 700 EV/EN ET Ref. no. 40677	
Intake/exhaust air connector diameter	315	315	315	315	315	
Air volume V m³/h (Min. - Max.)	340 - 870	340 - 870	340 - 870	340 - 870	340 - 870	
Radiation L _{pa} dB(A) in 1 m / 3 m (at 0 Pa)						
– 340 m³/h	23 / 17	23 / 17	23 / 17	23 / 17	23 / 17	
– 500 m³/h	28 / 22	28 / 22	28 / 22	28 / 22	28 / 22	
– 700 m³/h	33 / 27	33 / 27	33 / 27	33 / 27	33 / 27	
– 870 m³/h	35 / 29	35 / 29	35 / 29	35 / 29	35 / 29	
Maximum power consumption total (incl. control) W	350	2600	350	2350	4600	
Rated current total (incl. control) A	2.45	12.3	2.45	11.2	9.8	
Voltage / frequency	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	3~, 400 V, 50 Hz	
Protection category IP	20	20	20	20	20	
Temperature operating range °C	-10 to +40	-10 to +40	-10 to +40	-20 to +40	-20 to +40	
Installation temperature °C	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	
Weight approx. kg	200	202	202	202	204	
Wiring diagram no.	1500	1500	1500	1500	1500	

Dimensions KWL YOGA Style 700



Heat exchanger frost protection

The standard frost monitoring automatically regulates the supply air flow and the built-in electrical preheater, depending on the selected equipment.

After-heater

Unit variants with integrated post-heating (warm water or electrical after-heater) ensure the comfortable and energy-efficient post-heating of supply air. The target supply air temperature is set on the control element. The use of hydraulic unit type WHSH HE 24 V (0-10V), (accessories) is recommended for controlling the warm water heating element.

Power control

The included comfort control element with touch functionality and easy menu navigation provide the following functions:

- ☐ Demand-oriented ventilation, optionally with CO₂, VOC, or humidity sensor (1 sensor can be connected).
- ☐ Initial commissioning (automatic determination of system characteristic curve).
- ☐ Fire alarm contact connection.
- ☐ Weekly or daily programme.
- ☐ Automatic bypass (summer operation: use of cool night air).
- ☐ Pressure monitoring of filter contamination.
- ☐ Displays required filter replacement.
- ☐ 5 password-protected function levels can be configured.
- ☐ Control via central building control system possible (ModBus RTU and ModBus TCP, BACnet).
- ☐ Including control line cable (10 m)

Electrical connection

After removing the left side panel, the connection box is easily accessible on the outside of the casing. The isolator/main switch is located on the outside of the unit for easy maintenance. It can be locked using a padlock to prevent unauthorised access.

Sensors

Infrared motion sensor for detecting the presence of people in the room.

BWM Ref. no. 08323

CO₂ sensor for measuring the CO₂ concentration.

AIR1/KWL-VOC 0-10V No. 20250

VOC sensor for measuring the mixed gas concentration (VOC).

AIR1/KWL-CO2 0-10V No. 20251

Humidity-temperature sensor for measuring the relative air humidity.

AIR1/KWL-FTF 0-10V No. 20252

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

Control line cables in 5 or 10 meters for sensors.

Installation accessories

Flush-mounted/wall-mounted siphon

KWL-KS WE Ref. no. 40064

Ball-tube siphon

KWL-KS Ref. no. 40065

Condensate submersible pump

KWL-KP-I Ref. no. 40472

Hydraulic unit

WHSH HE 24V (0-10V) No. 08318

Facade grille, circular

FGR 315 Ref. no. 40182

Filter, VDI-certified

Spare air filter (extract air)*

ISO Coarse 60% (G4). Unit = 1 pc.

ELF-KWL YOGA 700/VDI/Coarse 60%

Ref. no. 40688

Spare air filter (extract air)*

ISO ePM₁₀ 60% (M5). Unit = 1 pc.

ELF-KWL YOGA 700/VDI/ePM10 60%

Ref. no. 40691

Spare air filter (intake air)

ISO ePM₁ 60% (F7). Unit = 1 pc.

ELF-KWL YOGA 700/VDI/ePM1 60%

Ref. no. 40694

*2 extract air filters are required per unit.

Attention: For spare air filters of older unit generations (orders before March 2023): Please contact us at export@heliosventilatoren.de

With electrical preheater/ with warm water after-heater
KWL YOGA Style 700 EV/WW Ref. no. 40030
KWL YOGA Style 700 EV/WW ET Ref. no. 40678
315
340 - 870
23 / 17
28 / 22
33 / 27
35 / 29
2350
11.2
1~, 230 V, 50 Hz
20
-20 to +40
+5 to +40
204
1500

Important note

Further information on accessories can be found on page 66.

KWL YOGA Style 1000



Decentralised compact ventilation units with heat recovery for the supply and extract ventilation of individual rooms, such as classrooms, recreation rooms, offices, commercial units, medical practices and many more. Equipped with highly-efficient aluminium heat exchangers and energy-saving EC motors. Automatic shutters for intake and exhaust prevent cold draughts when the fans are deactivated. The flow-optimised supply air grille allows draught-free ventilation, even in large rooms, through the optimal use of the Coanda effect. Includes a touch control element for easy operation and configuration of unit functions.

■ Casing

Made of galvanised steel sheet, the casing parts are painted white/powder-coated. The double-walled unit casing is equipped with 40 mm thermal and sound insulation on all sides. Easy installation and maintenance due to large inspection panel.

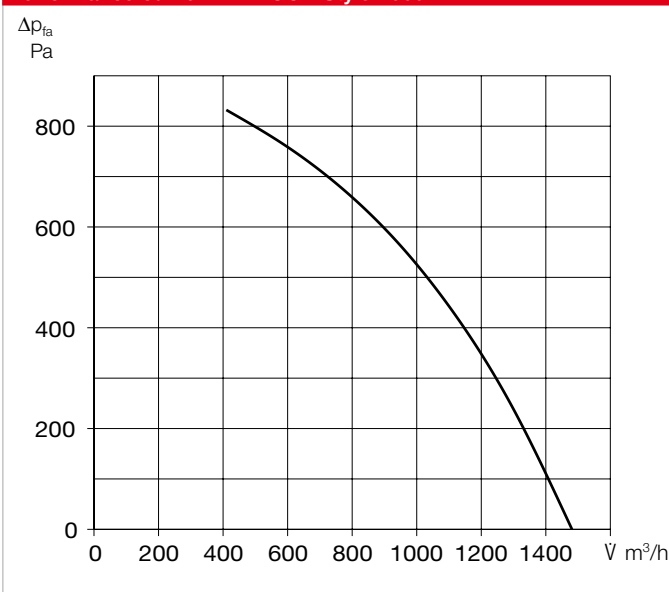
■ Installation

Ceiling installation is carried out using the vibration-damping fastening elements included in the scope of delivery.

■ Heat exchanger

Large aluminium cross counterflow heat exchanger with up to 90 % heat recovery efficiency. Dismantling is possible in a few steps. Types "ET" are equipped with highly efficient enthalpy heat exchanger for additional humidity recovery of up to 50%.

Performance curve KWL YOGA Style 1000



■ Fans

Two low-noise, high-performance EC fans with backward curved impellers for maximum energy efficiency.

■ Sensor system

Integrated CO₂ sensor system. Alternatively, this can be replaced by an external sensor (VOC, CO₂ or humidity) positioned in the room. KWL Yoga can also be controlled with a motion sensor (combination not possible!) instead of the sensors.

■ Air flow

Supply air on front side, two extract air openings on the underside of the unit. Intake and exhaust air connectors are equipped with spring-loaded shutters.

■ Condensate connection

Condensate connection horizontal (wall side), optionally via ball siphon in surface-mounted or flush-mounted design or via condensate pump.

■ Air filter, VDI-certified

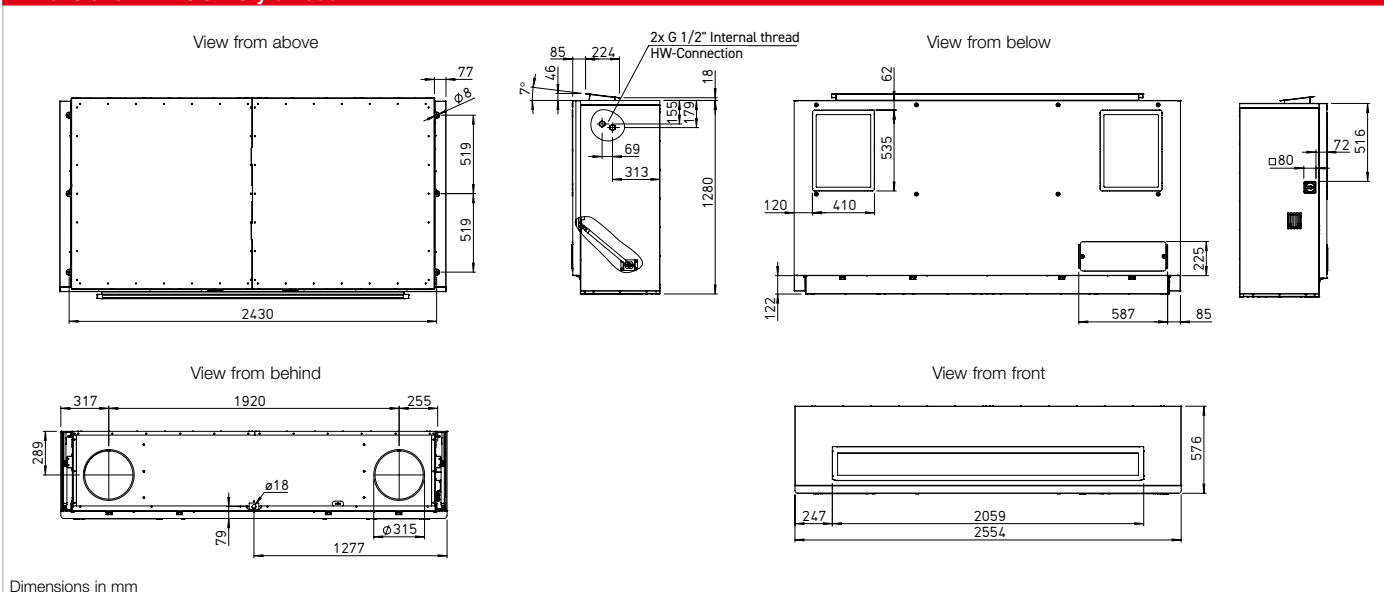
Clean intake air flow via ISO ePM₁ 60 % filter (F7). Two filters for extract air: ISO Coarse 60 % (G4); optionally available: ISO ePM₁₀ 60 % (M5).

■ Summer operation

Equipped with automatic bypass function (bypassing the heat exchanger to use the cool night air for controlling the room temperature) as standard.

	Without electrical preheater/ without electrical after-heater	Without electrical preheater/ with electrical after-heater	Without electrical preheater/ with warm water after-heater	With electrical preheater/ without after-heater	With electrical preheater/ with electrical after-heater	
	KWL YOGA Style 1000 Ref. no. 40032	KWL YOGA Style 1000 EN Ref. no. 40034	KWL YOGA Style 1000 WW Ref. no. 40036	KWL YOGA Style 1000 EV Ref. no. 40203	KWL YOGA Style 1000 EV/EN Ref. no. 40040	
	KWL YOGA Style 1000 ET Ref. no. 40679	KWL YOGA Style 1000 EN ET Ref. no. 40680	KWL YOGA Style 1000 WW ET Ref. no. 40681	KWL YOGA Style 1000 EV ET Ref. no. 40682	KWL YOGA Style 1000 EV/EN ET Ref. no. 40683	
Intake/exhaust air connector diameter	315	315	315	315	315	
Air volume V m³/h (Min. - Max.)	410 - 1480	410 - 1480	410 - 1480	410 - 1480	410 - 1480	
Radiation L _{pa} dB(A) in 1 m / 3 m (at 0 Pa)						
– 410 m³/h	24 / 18	24 / 18	24 / 18	24 / 18	24 / 18	
– 800 m³/h	30 / 24	30 / 24	30 / 24	30 / 24	30 / 24	
– 1000 m³/h	34 / 28	34 / 28	34 / 28	34 / 28	34 / 28	
– 1480 m³/h	42 / 36	42 / 36	42 / 36	42 / 36	42 / 36	
Maximum power consumption total (incl. control) W	900	3900	900	2900	6900	
Rated current total (incl. control) A	4.0	8.3	4.0	12.7	12.7	
Voltage / frequency	1~, 230 V, 50 Hz	3~, 400 V, 50 Hz	1~, 230 V, 50 Hz	1~, 230 V, 50 Hz	3~, 400 V, 50 Hz	
Protection category IP	20	20	20	20	20	
Temperature operating range °C	-10 to +40	-10 to +40	-10 to +40	-17 to +40	-20 to +40	
Installation temperature °C	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	
Weight approx. kg	267	270	270	270	273	
Wiring diagram no.	1500	1500	1500	1500	1500	

Dimensions WL YOGA Style 1000



Heat exchanger frost protection

The standard frost monitoring automatically regulates the supply air flow and the built-in electrical preheater, depending on the selected equipment.

After-heater

Unit variants with integrated post-heating (warm water or electrical after-heater) ensure the comfortable and energy-efficient post-heating of supply air. The target supply air temperature is set on the control element. The use of hydraulic unit type WHSH HE 24 V (0-10V), (accessories) is recommended for controlling the warm water heating element.

Power control

The included comfort control element with touch functionality and easy menu navigation provide the following functions:

- ☐ Demand-oriented ventilation, optionally with CO₂, VOC, or humidity sensor (1 sensor can be connected).
- ☐ Initial commissioning (automatic determination of system characteristic curve).
- ☐ Fire alarm contact connection.
- ☐ Weekly or daily programme.
- ☐ Automatic bypass (summer operation: use of cool night air).
- ☐ Pressure monitoring of filter contamination.
- ☐ Displays required filter replacement.
- ☐ 5 password-protected function levels can be configured.
- ☐ Control via central building control system possible (ModBus RTU and ModBus TCP, BACnet)
- ☐ Including control line cable (10 m)

Electrical connection

After removing the left side panel, the connection box is easily accessible on the outside of the casing. The isolator/main switch is located on the outside of the unit for easy maintenance. It can be locked using a padlock to prevent unauthorised access.

Sensors

Infrared motion sensor for detecting the presence of people in the room.

BWM Ref. no. 08323

CO₂ sensor for measuring the CO₂ concentration.

AIR1/KWL-VOC 0-10V No. 20250

VOC sensor for measuring the mixed gas concentration (VOC).

AIR1/KWL-CO2 0-10V No. 20251

Humidity-temperature sensor for measuring the relative air humidity.

AIR1/KWL-FTF 0-10V No. 20252

Control line cable

KWL-SL eC 5m Ref. no. 40179

KWL-SL eC 10m Ref. no. 40180

Control line cables in 5 or 10 meters for sensors.

Installation accessories

Flush-mounted/wall-mounted siphon

KWL-KS WE Ref. no. 40064

Ball-tube siphon

KWL-KS Ref. no. 40065

Condensate submersible pump

KWL-KP-I Ref. no. 40472

Hydraulic unit

WHSH HE 24V (0-10V) No. 08318

Facade grille, circular

FGR 315 Ref. no. 40182

Filter, VDI-certified

Spare air filter (extract air)*

ISO Coarse 60% (G4). Unit = 1 pc.

ELF-KWL YOGA 1000/VDI/Coarse 60%

Ref. no. 40689

Spare air filter (extract air)*

ISO ePM₁₀ 60% (M5). Unit = 1 pc.

ELF-KWL YOGA 1000/VDI/ePM10 60%

Ref. no. 40692

Spare air filter (intake air)

ISO ePM₁ 60% (F7). Unit = 1 pc.

ELF-KWL YOGA 1000/VDI/ePM1 60%

Ref. no. 40695

*2 extract air filters are required per unit.

Attention: For spare air filters of older unit generations (orders before March 2023): Please contact us at export@heliosventilatoren.de

Important note

Further information on accessories can be found on page 66.

KWL-KS WE



■ Flush-mounted/wall-mounted siphon

Flush-mounted condensate siphon for ventilation units, for odourless discharge of condensate in the sewage system. Desiccation-safe and cleanable by removing siphon cartridge. Incl. plug-in seal (rubber) for Ø 20 – 32 mm. Vertical outlet connector DN32. Structural protection can be cut to installation depth. Incl. odour barrier, pursuant to EN 681, DIN 19541.

Technical data	KWL-KS WE Ref. no. 40064
Material	Polypropylene (PP) and ABS
Drainage capacity l/s	0.15
Min. - max. duct length (feed) in m	0.2 – 3.5
Minimum installation depth in mm	60
Condensate line connection	External Ø 20 – 32 mm / Internal Ø 18 mm
Dimensions (L x W x H) in mm	110 x 110 x 60
Weight approx. kg	0.25

KWL-KS



■ Ball-tube siphon

Ball-tube siphon for ventilation units, for odourless discharge of condensate in the sewage system. Desiccation-safe. Incl. plug-in seal (rubber) for Ø 9 – 29 mm. Horizontal outlet connector DN40.

Technical data	KWL-KS Ref. no. 40065
Material	Polypropylene (PP)
Drainage capacity l/s	0.6
Drain connection	DN40

KWL-KP-I



■ Condensate submersible pump

Condensate pump for unit-integrated use in ventilation units, if the condensate connection with a downward slope to a waste water pipe is not possible. The submersible pump is placed directly in the condensate pan. The maximum flow rate is 12 l/h at 0 m delivery height. 9 l/h at 5 m delivery head. Protection class: IP68. Incl. alarm circuit.

KWL-KP-I	Ref. no. 40472
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WHSHE 24 V (0-10V)



■ Hydraulic unit

Controls the water temperature of the PWW heater element by means of three point valve actuator 24 V (0-10 V) and thus the thermal output which is conveyed to the air. Delivered as complete unit, incl. flow/return temperature display, circulation pump and flexible connecting pipes.

WHSHE 24V (0-10V)	Ref. no. 08318
-------------------	----------------

AIR1/KWL-VOC 0-10V / -CO₂ 0-10V / -FTF 0-10V



■ **Room sensor**

For measuring the CO₂, mixed gas (VOC) concentration or relative humidity. Dim. mm (W x H x D) 85 x 85 x 27

VOC sensor for measuring the mixed gas concentration (VOC).

AIR1/KWL-VOC 0-10V Ref. no. 20250

CO₂ sensor for measuring the CO₂ concentration.

AIR1/KWL-CO₂ 0-10V Ref. no. 20251

Humidity-temperature sensor for measuring the relative air humidity.

AIR1/KWL-FTF 0-10V Ref. no. 20252

BWM



■ **Infrared motion sensor**

Motion sensor for detecting the presence of people in the room. Wall installation (surface mounted) (cable entry at top or bottom) or installation in flush-mounted box Ø 55 mm (cable entry at back).

Technical data	BWM Ref. no. 08323
Material casing	ABS plastic, white (similar RAL 9010)
Protection class	III
Protection category	IP30
Electrical connection	0.14 – 1.5 mm ² (screw terminals)
Dimensions in mm (W x H x D)	85 x 85 x 27

FGR



■ **Facade grille, circular**

For flush covering of ventilation openings on the facade. Can be used for circular outdoor and exhaust air ducts. Two holes in the pipe spigot allow secure fastening with screws, to be provided by customer.

Solid aluminium construction. Fixed blades with stainless steel wire mesh behind, mesh size 10 x 10 mm.

FGR 250 Ref. no. 40181

FGR 315 Ref. no. 40182

ELF-KWL YOGA



Intake air filter

Extract air filter*

■ **Filter, VDI-certified**

Spare air filter (extract air)* ISO Coarse 60% (G4). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/Coarse 60% Ref. no. 40687

ELF-KWL YOGA 700/VDI/Coarse 60% Ref. no. 40688

ELF-KWL YOGA 1000/VDI/Coarse 60% Ref. no. 40689

Spare air filter (extract air)* ISO ePM₁₀ 60% (M5). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/ePM10 60% Ref. no. 40690

ELF-KWL YOGA 700/VDI/ePM10 60% Ref. no. 40691

ELF-KWL YOGA 1000/VDI/ePM10 60% Ref. no. 40692

Spare air filter (intake air) ISO ePM₁ 60% (F7). Unit = 1 pc.

ELF-KWL YOGA 400/VDI/ePM1 60% Ref. no. 40693

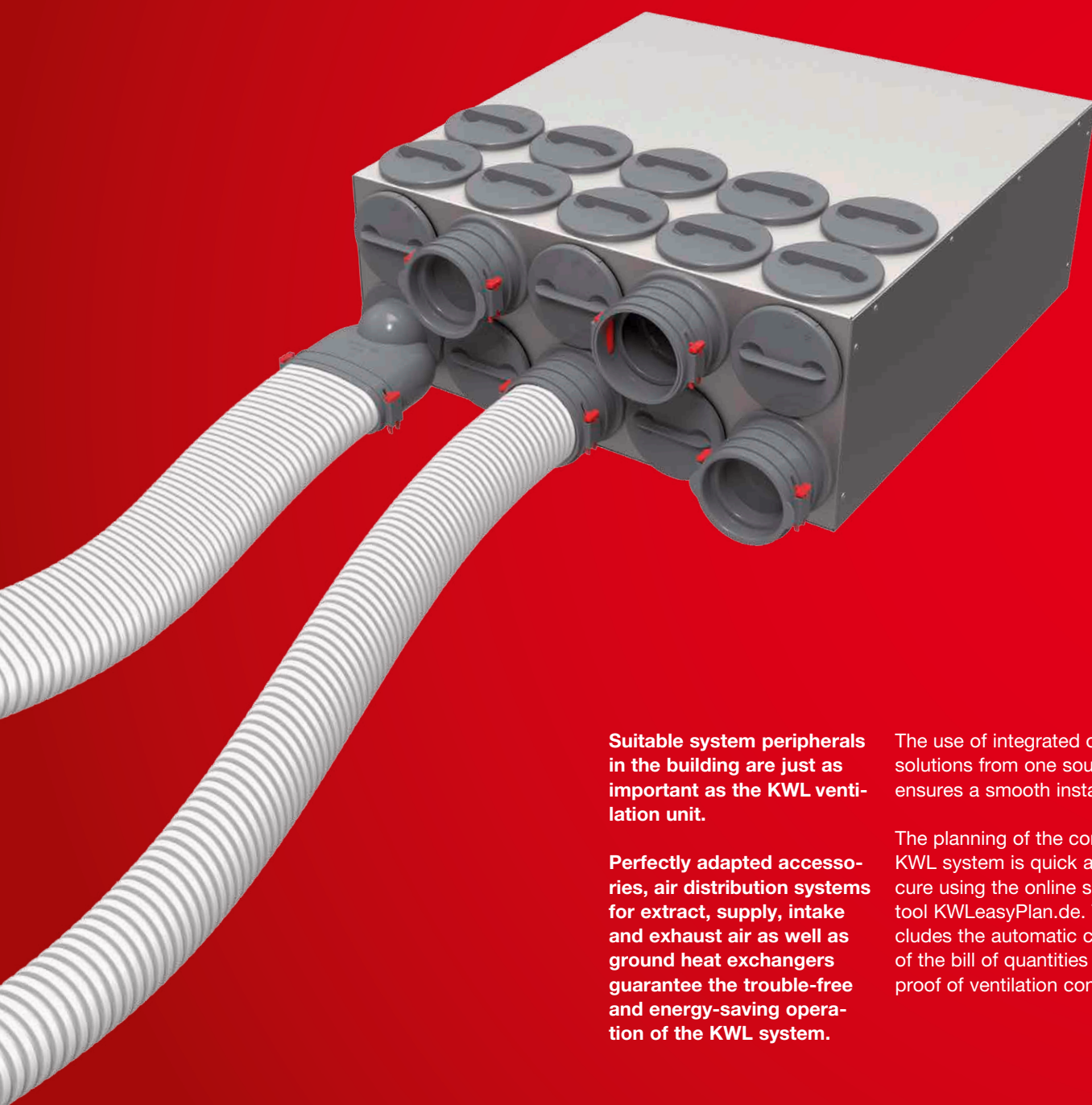
ELF-KWL YOGA 700/VDI/ePM1 60% Ref. no. 40694

ELF-KWL YOGA 1000/VDI/ePM1 60% Ref. no. 40695

* 2 extract air filters are required per unit.

Attention: For spare air filters of older unit generations (orders before March 2023): Please contact us at export@heliosventilatoren.de

Everything from one source. For the perfect functioning of the KWL® system.



Suitable system peripherals in the building are just as important as the KWL ventilation unit.

Perfectly adapted accessories, air distribution systems for extract, supply, intake and exhaust air as well as ground heat exchangers guarantee the trouble-free and energy-saving operation of the KWL system.

The use of integrated overall solutions from one source ensures a smooth installation.

The planning of the complete KWL system is quick and secure using the online software tool KWLeasyPlan.de. This includes the automatic creation of the bill of quantities and proof of ventilation concept.

■ Flexible duct system FlexPipe

The right solution for every type of installation. FlexPipe^{plus} combines the proven round duct concept with oval components.

This makes the planning and installation of complete ventilation systems with heat recovery much easier and DIN-compliant.

FlexPipe^{plus} provides the greatest possible flexibility with low parts diversity.

70ff

■ Duct system IsoPipe and air distribution system RenoPipe

IsoPipe is the practical alternative to spiral duct installation with subsequent thermal insulation. Since it is already fully insulated, IsoPipe is ideally suitable for intake air and exhaust air ducting as well as supply air and extract air ducting in basements or low-temperature zones.

RenoPipe is the perfect solution for energy-saving renovations and it is simply surface-mounted to the ceiling or wall.

82ff

■ KWL MultiZoneBox

When combined with a central building KWL unit from Helios, the MultiZoneBox ensures demand-oriented ventilation in multi-floor buildings.

Supply/extract air-side volume flow control, sound insulation, air distribution and intelligent system control – the KWL MultiZoneBox combines all seven components in one unit.

78f

■ KWL HygroBox and ground heat exchanger

As an active humidification unit, the **HygroBox** ensures a health room air humidity throughout the year and prevents expensive damage to furniture, floor coverings, etc.

Optional **ground-to-brine or ground-to-air heat exchangers** guarantee that the intake air is always energy-optimised when it flows into the ventilation unit. This saves even more energy in winter and results in intake air temperature reduction in summer.

90ff

■ Accessories

88f

flexpipe®plus round and oval ducting system. Arbitrarily combinable.


flexpipe®plus is the further development of the successful flexpipe air distribution system and it combines round and oval ducts in one smart system package with all conceivable round-oval combinations.

The oval duct has the identical hydraulic cross-section and pressure loss as the round duct as well as a point-symmetric design.

This results in 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 circumstances, the optional change between round and oval ducts is possible using adapters, both in line and away from the distribution box. This provides the greatest possible planning and installation freedom.

- The ideal, economical option can be selected at any time. The space-saving oval duct is mainly used if low installation heights are required.
- The round-oval compatibility results in low parts diversity. The stocking and consultation processes are greatly simplified. The installation is almost intuitive.
- The point-symmetric oval design allows installation from horizontal to vertical without the use of adapters for position correction.

Reference

flexpipe round duct system with ext. Ø 63 mm, int. 52 mm
for volume flows up to 20 m³/h
see page 80

flexpipe®plus is available in two designs which can be combined as required:

- FRS 75, round:
External Ø: 75 mm, internal: 63 mm for volume flows up to 30 m³/h. For installation in concrete ceilings. High ring strength (STIS ≥ 10 kN/m² according to DIN EN 9969). Bending radius horizontal and vertical 150 mm.
- FRS 51, oval:
51 x 114 mm, for volume flows up to 30 m³/h, ideal for space-saving installation e.g. on unfinished floors or in walls. Bending radius horizontal 300 mm, vertical 200 mm.

Installation, handling, commissioning

- Ultra-simple planning thanks to identical duct cross-sections and pressure losses.
- Quick installation due to radial, flexible endless installation from the roll.
- Construction site-compliant handling due to its low weight.
- Quick commissioning due to minimal adjustment effort.
- Uniform air distribution.
- Hygienically optimal and easy to clean.

Duct properties and advantages

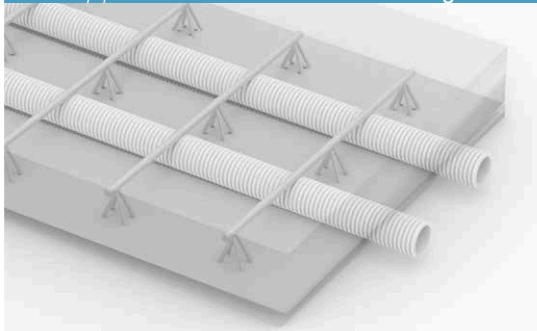
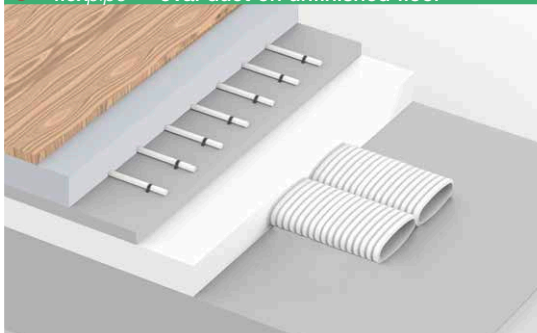
- Special round and oval ventilation duct made of hygienically safe PE-HD new material.
- Two-layer design – externally corrugated and internally

smooth and antistatic. This minimises the pressure losses and prevents flow noises and dirt deposits.

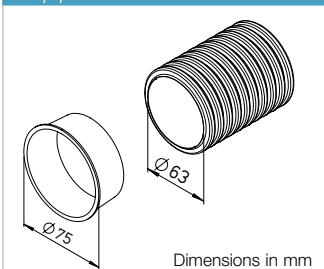
- The extreme horizontal and vertical bending elasticity of both duct geometries minimises the number of necessary moulded parts.
- The point-symmetric design allows the installation of the oval duct from horizontal to vertical, upwards or downwards, without the use of adapters.

Duct concept, installation

- Mounting clips on all moulded parts for secure fixation to floors, walls or ceilings.
- Detachable mounting brackets guarantee quick, tear-proof duct fixation to all connection points.
- No additional cross talk silencer due to sound-insulating distribution box.
- Precision-fit seal system on all moulded parts for leak-free air transportation.
- Aerodynamically optimised ceiling and floor boxes as well as wall outlets are available for the use of room-side inlet and outlet elements at the duct ends. These have two parallel duct connections for delivering the volume flows required according to DIN 1946-6 with low pressure loss.

flexpipe®plus round duct in concrete ceiling

flexpipe®plus oval duct on unfinished floor

flexpipe®plus allows any round-oval combination


flexpipe vent. duct round ○

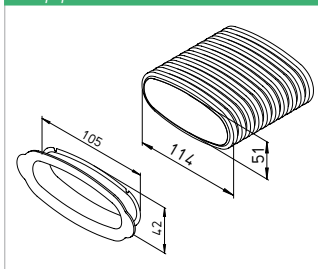


flexpipe vent. duct (bundle = 50 lin. m)

Type	Ref. no.	Dim. in mm
FRS-R 75 ○	02913	75 63
Hygiene duct shutter cover		
FRS-VD 75 ○	02915	10 pcs.

Flexible round duct made of PE-HD, ideal for installation in concrete ceiling. Includes two hygiene duct shutter covers, can also be ordered separately.

flexpipe vent. duct oval ○

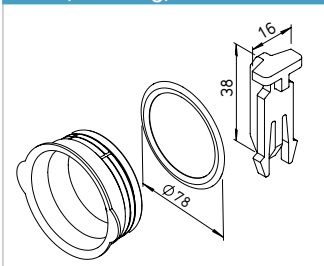


flexpipe vent. duct (bundle = 20 lin. m)

Type	Ref. no.	Dim. in mm
FRS-R 51 ○	03850	114 51
Hygiene duct shutter cover		
FRS-VD 51 ○	03866	10 pcs.

Flexible oval duct made of PE-HD, for space-saving installation on unfinished floors, installation in walls or suspended ceilings. Includes two hygiene duct shutter covers, can also be ordered separately.

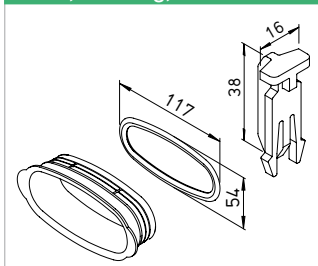
Cover, seal ring, bracket ○



Connector cover / seal ring / bracket

Type	Ref. no.	Unit
Ø 75 mm		
Connector shutter cover with seal ring		
FRS-VDS 75 ○	03855	1 pc.
Seal ring		
FRS-DR 75 ○	02916	10 pcs.
Bracket, detachable		
FRS-FK ○ ○	03854	10 pcs.

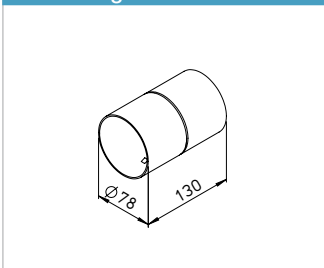
Cover, seal ring, bracket ○



Connector cover / seal ring / bracket

Type	Ref. no.	Unit
114 x 51 mm		
Connector shutter cover with seal ring		
FRS-VDS 51 ○	03856	1 pc.
Seal ring		
FRS-DR 51 ○	03864	10 pcs.
Bracket, detachable		
FRS-FK ○ ○	03854	10 pcs.

Connecting sleeve ○

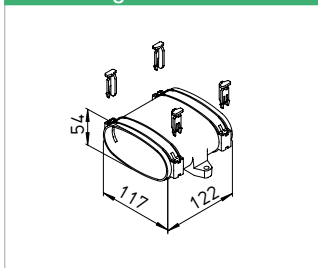


Connecting sleeve

Type	Ref. no.
Ø 75 mm	
FRS-VM 75 ○	02914

Connecting sleeve for round duct FRS-R 75 with tear-off protection on both sides, made of polyethylene.

Connecting sleeve ○

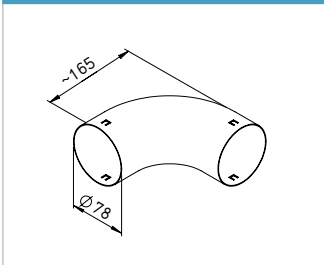


Connecting sleeve

Type	Ref. no.
114 x 51 mm	
FRS-VM 51 ○	03862

Connecting sleeve for oval duct FRS-R 51. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Short bend 90° ○

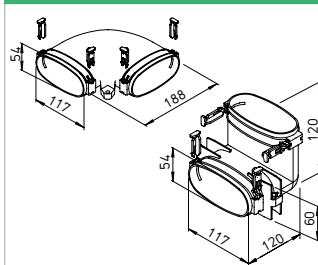


Short bend 90°

Type	Ref. no.
Ø 75 mm	
FRS-B 75 ○	02994

Short bend 90° for bending radii < 2 x round duct external diameter. Horizontal and vertical application with tear-off protection on both sides. Made of galvanised steel sheet.

Bend horizontal / vertical ○



Bend horizontal / vertical

Type	Ref. no.
114 x 51 mm	
FRS-BH 51 ○	03863
FRS-BV 51 ○	03859

Horizontal or vertical bend 90°. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Optional possibility to combine round and oval ducts

- With flexpipe® plus from Helios, you rely on one system and you have the ideal solution at your fingertips at all times, depending on building requirements.
- The ultra-flat (only 51 mm) oval duct is used if low installation heights are required. The proven duct lends itself for direct embedding in concrete ceilings.
- Thanks to the identical hydraulic cross-sections and pressure losses of the two ducts and due to well-conceived system components, round and oval ducts can be combined in any way – both in line and away from the distribution box.

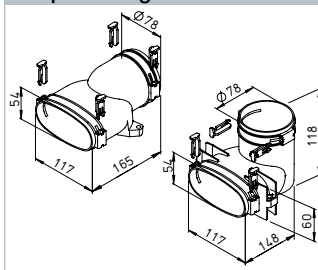


Vertical and horizontal adapters allow any round/oval, oval/oval and round/round combination.



The distribution boxes can be equipped with round and oval single connectors and mixed connectors.

Adapter straight / vertical ○ ○

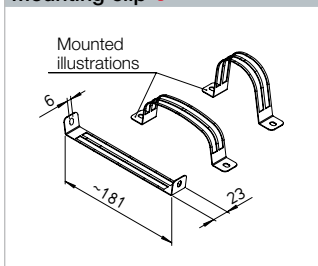


Adapter straight / vertical

Type	Ref. no.
Ø 75 mm / 114 x 51 mm	
Adapter straight	
FRS-ÜG 51-75 ○ ○	03861
Adapter vertical	
FRS-ÜV 51-75 ○ ○	03860

Horizontal and vertical adapter from round duct FRS-R 75 to oval duct FRS-R 51. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Mounting clip ○ ○

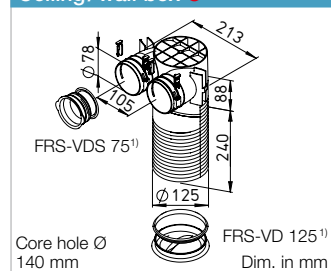


Mounting clip

Type	Ref. no.	Unit
Ø 75 mm / 114 x 51 mm		
FRS-BS ○ ○	03869	10 pcs.

Mounting clip for round duct FRS-R 75 and oval duct FRS-R 51. For non-slip duct fixation. Made of galvanised steel sheet.

Ceiling/wall box ○

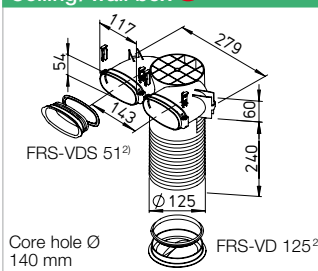


Ceiling / wall box

Type	Ref. no.
Type Ø 75 mm	
FRS-DWK 2-75/125 ○	03857
Extension for ceilings > 240 mm	
FRS-VV 125 ○ ○	03906

Ceiling / wall box for max. 2 round ducts FRS-R 75. For connection of supply / extract air valves DN 125. Height marks can be shortened to fit. Per 1 pc. connector blind cover DN 75, DN 125.
¹⁾ Integr. mounting clips, duct mounting brackets (4 pcs.), made of impact-resistant polypropylene.

Ceiling/wall box ○

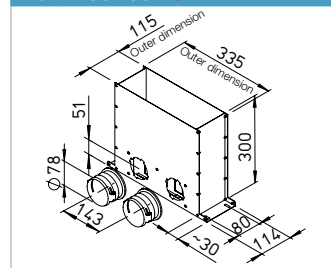


Ceiling / wall box

Type	Ref. no.
Type 114 x 51 mm	
FRS-DWK 2-51/125 ○	03858
Extension for ceilings > 240 mm	
FRS-VV 125 ○ ○	03906

Ceiling / wall box for max. 2 oval ducts FRS-R 51. For connection of supply / extract air valves DN 125. Height marks can be shortened to fit. Per 1 pc. connector blind cover 51 mm, DN 125.
²⁾ Integr. mounting clips, duct mounting brackets (4 pcs.), made of impact-resistant polypropylene.

Multi-floor box ○

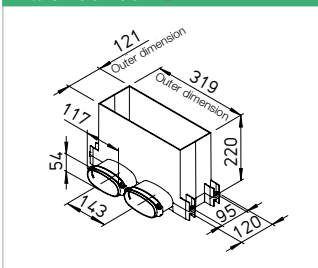


Multi-floor box

Type	Ref. no.
Type Ø 75 mm	
FRS-MBK 2-75 ○	03872

Multi-floor box for connection of max. 2 round ducts FRS-R 75. Suitable for embedding in concrete ceiling, consists of:
 – Floor box with air volume control insert in robust sheet metal design
 – 2 pcs. connectors (round) and 1 pc. connector cover with seal (round)

Wall/floor box ○

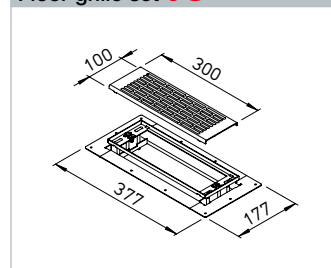


Wall / floor box

Type	Ref. no.
Type 114 x 51 mm	
FRS-WBK 2-51 ○	03877

Wall / floor box for connection of max. 2 oval ducts FRS-R 51. Installation in walls or on unfinished floor, consists of:
 – Plastic box made of impact-resistant polypropylene with air volume control insert. For use with FRS-WGS or FRS-BGS.
 – 1 pc. connector cover with seal (oval).

Floor grille set ○ ○

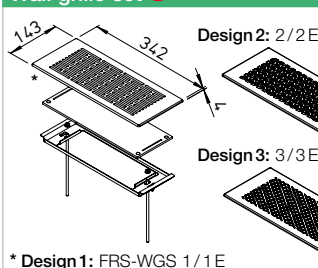


Floor grille set

Type	Ref. no.
Type	
FRS-BGS 1 ○ ○	03878

Floor grille set made of stainless steel for multi-floor box FRS-MBK 2-75 and wall / floor box FRS-WBK 2-51, consists of:
 – Grille frame with height adjustment for barrier-free installation in the floor covering
 – Anti-puncture design floor grille
 – Insert filter (replacement filter mats ELF-BGS, Ref. no. 03914, unit = 2 pcs.)

Wall grille set ○

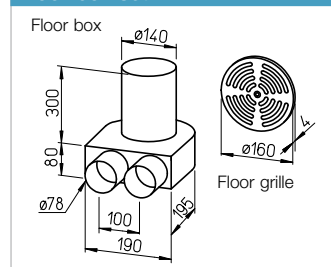


Wall grille set

Type	Ref. no.	
Type		
FRS-WGS 1 ○	03881	white
FRS-WGS 2 ○	03882	white
FRS-WGS 3 ○	03883	white
FRS-WGS 1 E ○	03886	Stainl. steel
FRS-WGS 2 E ○	03892	Stainl. steel
FRS-WGS 3 E ○	03904	Stainl. steel

Wall grille set with installation frame and insert filter for FRS-WBK 2-51. See p. 76 for grille designs.

Floor box set ○

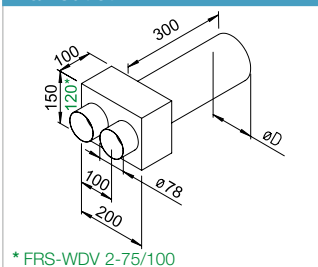


Floor box set

Type	Ref. no.
Type Ø 75 mm	
FRS-BKGS 2-75 ○	09992

Floor box set consists of:
 – 1 pc. floor box for grille connection DN 160
 – 1 pc. floor grille made of brushed stainless steel with adjustable volume flow
 – 1 pc. cover

Wall outlet ○

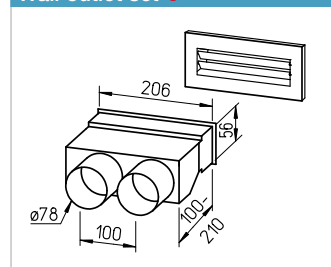


Wall outlet for valve connection

Type	Ref. no.	Ø D mm
Type Ø 75 mm		
FRS-WDV 2-75/100 ○	09621	100
FRS-WDV 2-75/125 ○	09622	125

Wall outlet incl. plaster / formwork lid and cover (1 pc.). For connection of supply air or extract air valves DN 100 or DN 125.

Wall outlet set ○

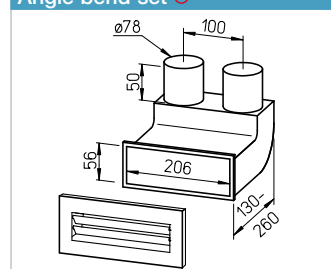


Wall outlet set, straight

Type	Ref. no.
Type Ø 75 mm	
FRS-WDS 2-75 ○	09994

Wall outlet set consists of:
 – Wall outlet with sliding connector
 – Wall outlet white (FK-WA 200 W), 250 x 103 mm
 – 1 pc. cover

Angle bend set ○



Angle bend set, 90°

Type	Ref. no.
Type Ø 75 mm	
FRS-WBS 2-75 ○	09996

Angle bend set consists of:
 – Angle bend with sliding connector
 – Wall outlet white (FK-WA 200 W), 250 x 103 mm
 – 1 pc. cover

Basic set package ○



Basic set package

Type	Ref. no.	Ø D mm
Type		
FRS-RP 75 ○	09397	75

flexpipe basic set package consists of:

- 3 pcs. FRS-R 75 (Ref. no. 02913)
- 2 pcs. FRS-VK 10-75/160 (Ref. no. 03847)
- 8 pcs. FRS-DWK 2-75/125 (Ref. no. 03857)
- 7 pcs. FRS-B 75 (Ref. no. 02994)
- 7 pcs. FRS-VM 75 (Ref. no. 02914)
- 4 units FRS-DR 75 (Ref. no. 02916)
- 1 units FRS-VD 75 (Ref. no. 02915)
- 1 pcs. cold shrink tape KSB (Ref. no. 09343)

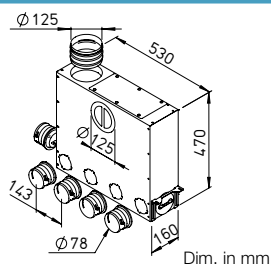
By choosing the Helios basic set package, you can save

- money due to the discounted package price.
- time, because everything is included to get started right away. There is no need for time consuming, annoying additional trips because little things are missing.

¹⁾ Cover with integrated seal FRS-VDS 75, Ref. no. 03855 and -VD 125, Ref. no. 03865. Cover can be used for the connector or duct connection opening on distribution box.

²⁾ Cover with integrated seal FRS-VDS 51, Ref. no. 03856 and -VD 125, Ref. no. 03865. Can also be used as cover for the connector or duct connection opening on distribution box.

Multi-distribution box 4+1x Ø



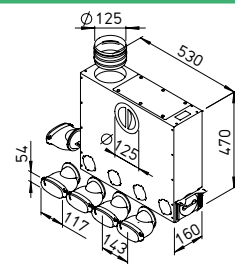
Dim. in mm

Multi-distribution box 4+1x ¹⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-MVK 4+1-75/125	03843	125

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 ventilation ducts FRS-R 75. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 4+1x



Multi-distribution box 4+1x ¹⁾

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-MVK 4+1-51/125	03841	125

For universal installation on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 5+2x Ø

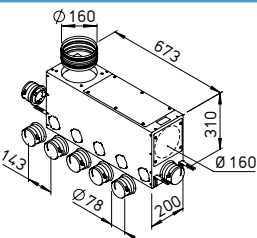


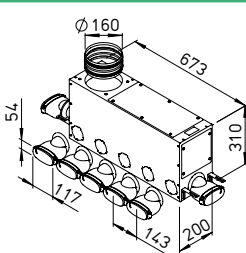
Fig.: FRS-MVK 5+2-75/160

Multi-distribution box 5+2x ¹⁾

Type	No.	Ø NW mm
Type Ø 75 mm		
FRS-MVK 5+2-75/160	03836	160
FRS-MVK 5+2-75/160 H	03835	160

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. Type FRS-MVK 5+2-75/160 H with 380 mm casing height and 3 x duct connection DN 160. 12 connection options for up to 7 ventilation ducts FRS-R 75.

Multi-distribution box 5+2x

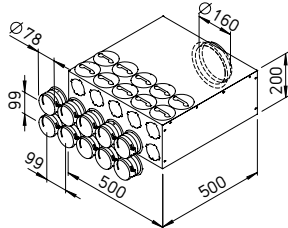


Multi-distribution box 5+2x ¹⁾

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-MVK 5+2-51/160	03838	160

For universal installation on unfinished concrete flooring or as floor distributor. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. 12 connection options for up to 7 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Distribution box 10x Ø

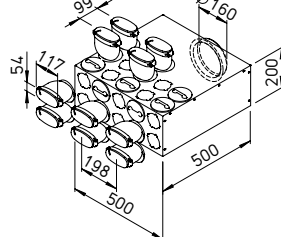


Distribution box 10-75 ²⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 10-75/160	03847	160

20 connection options for up to 10 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 10x

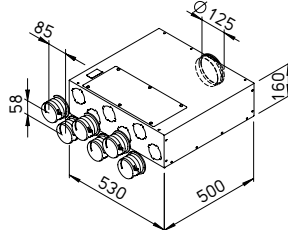


Distribution box 10-51 ²⁾

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-VK 10-51/160	03849	160

20 connection options for up to 10 oval ventilation ducts FRS-R 51. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with round connectors possible (Type FRS-ES 75, Ref. no. 03852). With sound-absorbing cladding and large inspection opening.

Flat distribution box 6x Ø

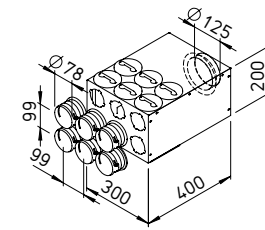


Distribution box 6-75, flat design ¹⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-FVK 6-75/125	03845	125

For connection of up to 6 ventilation ducts FRS-R 75. Installation as straight distributor. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 6x

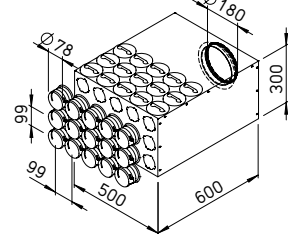


Distribution box 6-75 ¹⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 6-75/125	03846	125

12 connection options for up to 6 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 15x Ø



Distribution box 15-75 ²⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 15-75/180	03848	180

30 connection options for up to 15 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Combination distribution box Ø

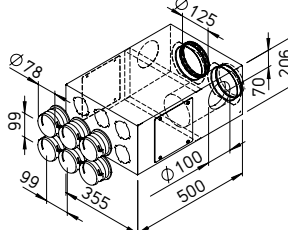


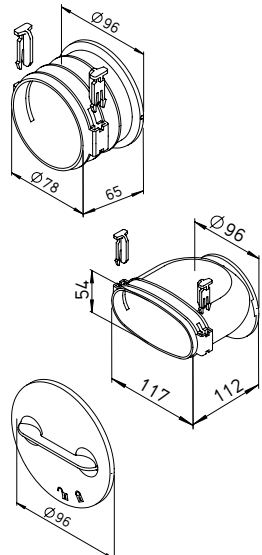
Fig.: Type L

Combination distribution box ¹⁾

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-KVK 6-75/125 L*	03873	125
FRS-KVK 6-75/125 R*	03874	125

* Supply air connection on left or right. Compact distribution box, ideal for adjoining extract air rooms. 2 x DN 100 for direct insertion of extract air valves DLV (see accessories). Supply air distribution via connection of up to 6 ventilation ducts FRS-R 75.

Connector, cover



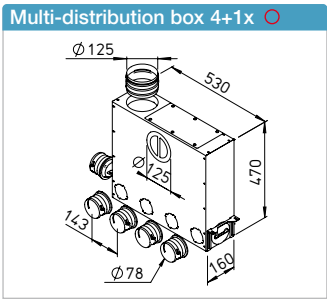
Connector, bayonet cap

Type	Ref. no.	Unit
Connector, Ø 75 mm		
FRS-ES 75	03852	1 pc.
Connector, 114 x 51 mm		
FRS-ES 51	03851	1 pc.
Bayonet cap		
FRS-VDB	03853	1 pc.

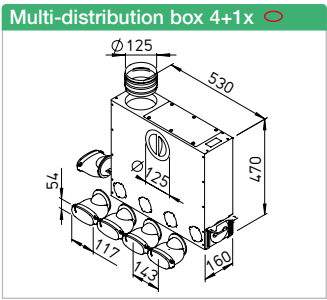
Additional connectors for connection of round ventilation duct FRS-R 75 or oval ventilation duct FRS-R 51 to distribution box. Easy and variable positioning using bayonet closure. Tight-closing, includes duct mounting brackets (2 pcs.), made of impact-resistant polypropylene. Bayonet cap for the connector openings on the distribution box.

¹⁾ incl. 2 pcs. connector cover.

²⁾ incl. 4 pcs. connector cover.

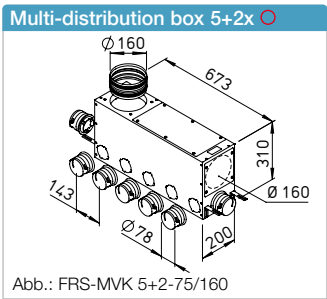


Type Ø 75 mm No. Ø NW mm
FRS-MVK 4+1-75/125 03843 125

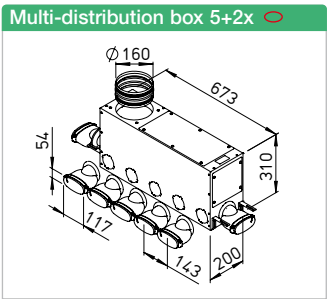


Type 114 x 51 mm No. Ø NW mm
FRS-MVK 4+1-51/125 03841 125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.5	30.6
250	24.2	25.3
500	19.3	18.3
1000	28.7	25.3
2000	30.8	39.0
4000	36.6	42.9
8000	38.3	40.8

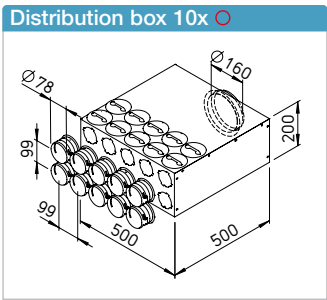


Type Ø 75 mm No. Ø NW mm
FRS-MVK 5+2-75/160 03836 160
FRS-MVK 5+2-75/160 H 03835 160

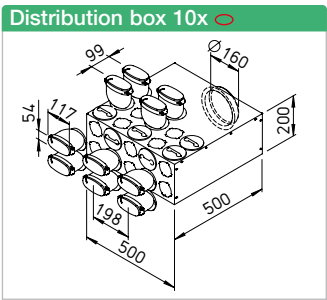


Type 114 x 51 mm No. Ø NW mm
FRS-MVK 5+2-51/160 03838 160

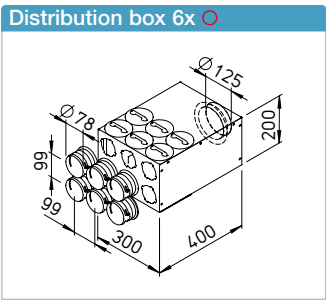
Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	21.0	28.8
250	16.5	24.7
500	24.6	28.0
1000	36.3	34.4
2000	35.2	40.2
4000	43.8	45.0
8000	46.1	41.1



Type Ø 75 mm No. Ø NW mm
FRS-VK 10-75/160 03847 160

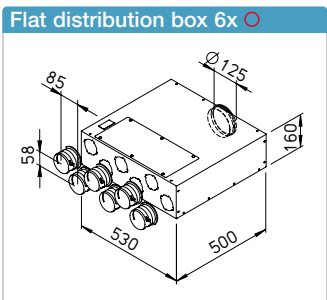


Type 114 x 51 mm No. Ø NW mm
FRS-VK 10-51/160 03849 160



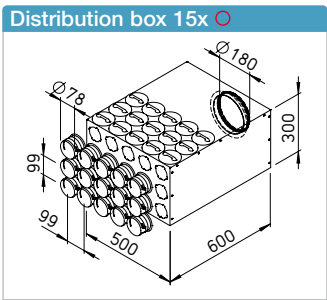
Type Ø 75 mm No. Ø NW mm
FRS-VK 6-75/125 03846 125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.0	34.4
250	21.8	33.1
500	36.2	27.4
1000	29.4	26.9
2000	28.9	38.7
4000	34.4	44.2
8000	36.1	44.0



Type Ø 75 mm No. Ø NW mm
FRS-FVK 6-75/125 03845 125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	22.6	27.4
250	21.3	21.4
500	27.7	20.4
1000	28.8	20.2
2000	30.6	33.6
4000	42.6	40.1
8000	43.2	40.2



Type Ø 75 mm No. Ø NW mm
FRS-VK 15-75/180 03848 180

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	26.8	30.9
250	19.4	30.2
500	28.4	25.3
1000	25.4	29.0
2000	30.8	39.8
4000	34.7	49.1
8000	34.9	53.0

Measured in accordance with DIN EN ISO 7235 and DIN EN ISO 11820.

flexpipe®plus ceiling-integrated distribution element



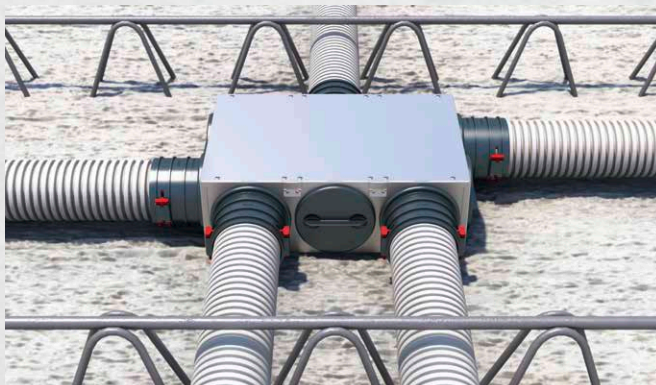
With the ceiling-integrated distribution element, we are making it even easier for you to realise the perfect KWL ventilation system quickly and easily in the future. The distribution element is not only flexible in application due to its compact dimensions, but it also saves you the complicated duct insertion and removal from the concrete ceiling.

Highlights:

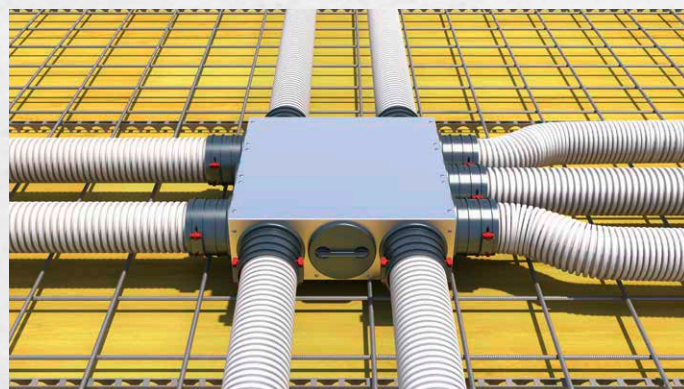
- Intelligent and almost invisible solution for the simple and safe air distribution of **flexpipe®plus** ducts in concrete ceilings – both in single-family houses and apartment buildings.
- Integrated height adjustment which allows installation in all common filigree ceilings of different thicknesses and in cast-in-situ concrete ceilings.

- The installation without destruction of the formwork and the tool-free duct connection with the click system saves your time and therefore money on the construction site.
- Very good accessibility of the individual ventilation ducts for easy cleaning thanks to the extra-large duct connection (DN 160 mm), which also serves as an inspection opening.
- The distribution element remains closed until the finished installation. The contamination of all air-ducting components is effectively prevented.
- Robust components which can be integrated into the construction process quickly, easily and cost-effectively.

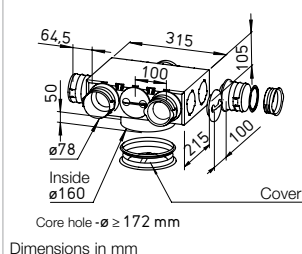
1 Installation in filigree ceiling



2 Installation in raw concrete ceiling



Distribution element 5x

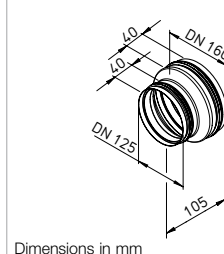


flexpipe distribution element 5x

Type	Ref. no.	Ø NW mm
FRS-VE 5-75/160	40161	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this). 10 connection options for up to 5 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

Fitting for duct connection

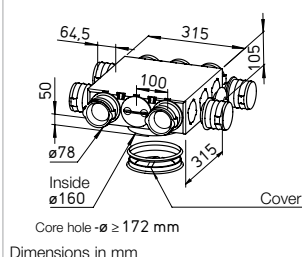


Duct connector

Type	Ref. no.
RVBD 160/125	40165

Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 125.

Distribution element 9x

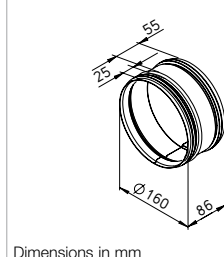


flexpipe distribution element 9x

Type	Ref. no.	Ø NW mm
FRS-VE 9-75/160	40162	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this). 12 connection options for up to 9 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

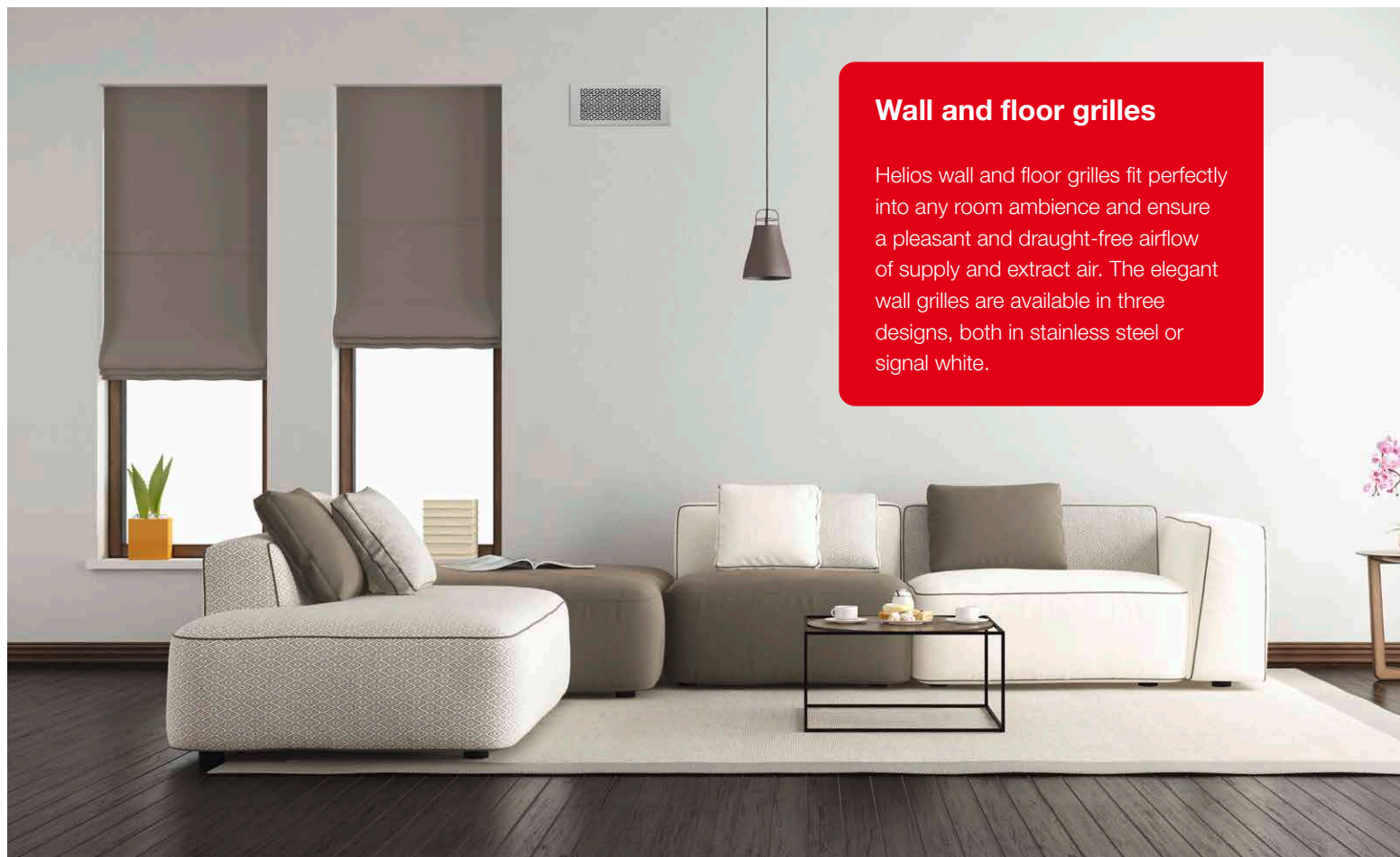
Fitting for duct connection



Duct connector long

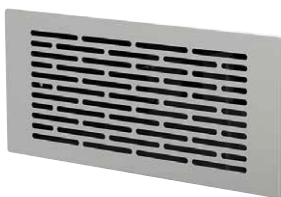
Type	Ref. no.
RVBD 160 L	40164

Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 160.



Design grilles for walls and floors

Design 1
(wall and floor)



Design 2
(wall)



Design 3
(wall)



Stainless steel version

The elegant wall grilles in three high-quality designs (stainless steel or signal white coating) blend perfectly into any room atmosphere and guarantee the pleasant draught-free flow of supply air.

■ Description Wall grille set

Grille for wall/floor box FRS-WBK 2-51.

- Set consists of:
Metal wall grille with installation frame and insert filter.

■ Surfaces/Colours

- Powder coating in white:
FRS-WGS 1, FRS-WGS 2 and FRS-WGS 3.
- High-quality stainless steel: FRS-WGS 1 E, FRS-WGS 2 E and FRS-WGS 3 E.

Floor grille set for floor level installation. Three-dimensional adjustable compensation mechanism for adapting the grille to different floor covering heights or for alignment to a wall or window.

■ Description Floor grille set

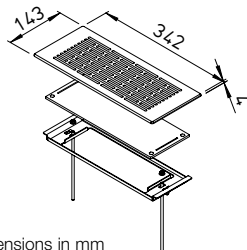
Grille for multi-floor box FRS-MBK 2-75 and wall/floor box FRS-WBK 2-51.

- Set consists of:
Grille frame, design floor grille and insert filter.

■ Surfaces/Colours

- High-quality stainless steel:
FRS-BGS 1.

Wall grille set / Design 1



Dimensions in mm

Wall grille set

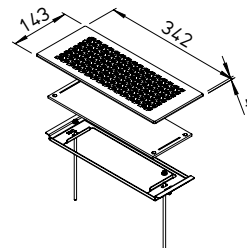
Type	Ref. no.	
FRS-WGS 1	03881	White
FRS-WGS 1 E	03886	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.



- Wall grille set FRS-WGS 1 E with additional wall/floor box FRS-WBK 2-51.

Wall grille set / Design 2



Dimensions in mm

Wall grille set

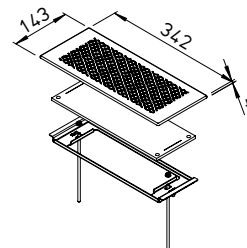
Type	Ref. no.	
FRS-WGS 2	03882	White
FRS-WGS 2 E	03892	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.



- Wall grille set FRS-WGS 2 E with additional wall/floor box FRS-WBK 2-51.

Wall grille set / Design 3



Dimensions in mm

Wall grille set

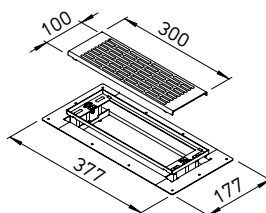
Type	Ref. no.	
FRS-WGS 3	03883	White
FRS-WGS 3 E	03904	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.



- Wall grille set FRS-WGS 3 E with additional wall/floor box FRS-WBK 2-51.

Floor grille set



Floor grille set

Type	Ref. no.	
FRS-BGS 1	03878	Stainl. steel

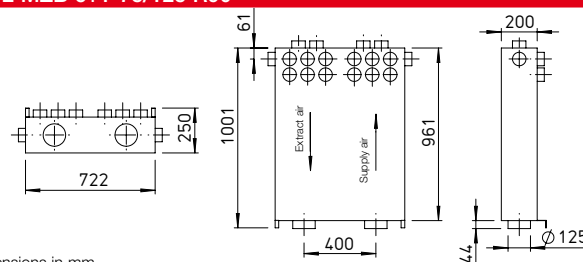
Replacement filter mat for insert filter:
Type ELF-BGS, Ref. no. 03914, unit = 2 pcs.



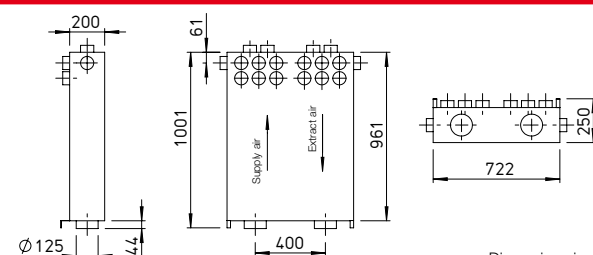
- Floor grille set FRS-BGS 1 with additional wall/floor box FRS-WBK 2-51. Also suitable for multi-floor box FRS-MBK 2-75.

KWL-MZB 6+1-75/125 R90 and KWL-MZB 6+1-75/125 L90


Compact unit for connection of supply and extract air DN 125 and 2 x 7 connectors DN 75 with supply air on right or left side.

KWL-MZB 6+1-75/125 R90


Dimensions in mm

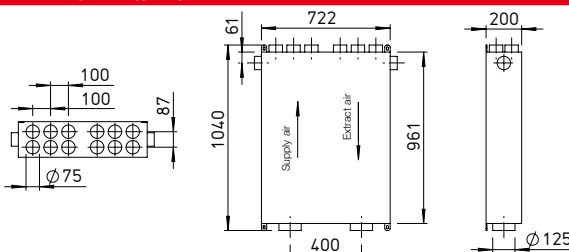
KWL-MZB 6+1-75/125 L90


Dimensions in mm

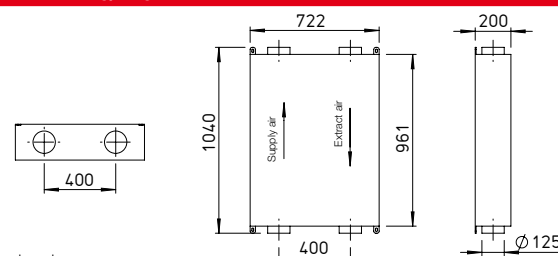
KWL-MZB 6+1-75/125 and KWL-MZB 125/125


Compact unit for the connection of supply and extract air DN 125 and 2 x 7 connectors DN 75.

Box with one connection each for supply and extract air on each side DN 125.

KWL-MZB 6+1-75/125


Dimensions in mm

KWL-MZB 125/125


Dimensions in mm

Volume flow control, sound insulation, air distribution and system control – solve seven problems at once with the new KWL MultiZoneBox.

When combined with a central building KWL unit, the MultiZoneBox ensures the silent, demand-oriented supply and extract ventilation of residential and commercial units.

Advantages

- ☐ The installation and commissioning are particularly simple and safe.
- ☐ Spiral ducts can also be connected just as easily as the flexible plastic duct system **flexpipeplus**.
- ☐ Reliable air distribution for almost all areas of application.
- ☐ Practical advantages include freedom from maintenance,

maximum functional reliability and whisper-quiet operation.

- ☐ When multiple KWL MultiZoneBoxes are used to ventilate a large unit, e.g. a doctor's surgery, different zones can be supplied with varying air volumes independently and according to demand.
- ☐ Whether the ventilation system is installed in the basement or on the roof, indoors or outdoors.
- ☐ The KWL MultiZoneBox always ensures an ideal air distribution.

Special features

- ☐ Large sound insulation elements guarantee silent operation.
- ☐ The optional room air sensor makes the MultiZoneBox a complete demand-controlled ventilation unit.
- ☐ Only one single, compact box is installed.

- ☐ Expendable parts and wear parts were dispensed with completely in the design of the KWL MultiZoneBox.
- ☐ Revolutionary technology safely guarantees the predefined volume flow.

Functional principle

Thanks to the intuitive PC software, the commissioning of the KWL MultiZoneBox is convenient and fast:

- ☐ Start software > enter air volumes > done!
- There is no need for elaborate, time-consuming pressure differential measurements.
- ☐ A variety of other configuration options are available, if required.
- ☐ Once set, the defined parameters can be stored on a computer and transferred to other boxes.

The box in the network

All boxes can be combined to form a network and operated centrally (using a central controller, KWL-ZR, accessories): The KWL MultiZoneBox software allows the central commissioning of all boxes in the network. Optionally on-site or via the internet.

The ultimate solution

This technology is used to constantly coordinate the performance of the central ventilation unit with the changing conditions for each KWL MultiZoneBox. The unit supplies the exact air volume individually required for every moment. This reduces energy consumption without comprising on comfort.

Control element Touch

KWL-MZB-BET Ref. no. 04214

Description

- ☐ Touch display made of glass for controlling the boxes.
- ☐ Dimensions (WxHxD) 110x93x19 mm.
- ☐ 3.9 inch display including temperature sensor, flush-mounted version.

KWL-MZB-BET



KWL-MZB-ZR



Central controller

KWL-MZB-ZR Ref. no. 04215

Description

- ☐ Central control, configuration and management of all connected boxes.
- ☐ Networking of up to 256 boxes.
- ☐ Fan optimiser function.
- ☐ Suitable switching power supply: KWL 45 SNH, No. 03001.

Control element ECO

KWL-MZB-BE Ref. no. 04213

Description

- ☐ Manual 4-step operation or automatic mode. For flush-mounted installation.
- ☐ Dimensions (WxHxD) 80x80x10 mm.
- ☐ 4-step with LED, flush-mounted version.

KWL-MZB-BE



KWL-MZB-AP



Connection plate

KWL-MZB-AP Ref. no. 04217

Description

- ☐ For installation in concrete ceilings.
- Dimensions (WxHxD) 776x50x255 mm.
- 2 x 6 connectors DN 75.
- For direct box connection to the duct system in the ceiling.

Pipe support

KWL-MZB-RH13 Ref. no. 04249

Description

- ☐ Pipe supports for one-sided connection of **flexpipeplus**.
- ☐ Consists of 1 connection plate with 13 supports.

KWL-MZB-RH13



KWL-MZB-VOC-F



Combi-sensor

KWL-MZB-VOC-F No. 04216

Description

- ☐ Combi-sensor (air humidity and VOC) for installation in MZB.
- ☐ VOC-humidity sensor.
- ☐ Installation in KWL MultiZone-Box.

Pipe support

KWL-MZB-RH7 Ref. no. 04236

Description

- ☐ Pipe supports for two-sided connection of **flexpipeplus**.
- ☐ Set consists of 2 connection plates each with 7 supports.

KWL-MZB-RH7



KWL-MZB-F



Humidity sensor

KWL-MZB-F Ref. no. 04250

Description

- ☐ Air humidity sensor for installation in KWL MultiZoneBox.

Connection set

KWL-MZB-VSAP Ref. no. 04219

Description

- ☐ For ceiling installation with connection plate. Set with 12 connectors and mounting bracket.
- ☐ Includes 12 connectors for connection plate.

KWL-MZB-VSAP



KWL-MZB-KSS



Plastic connectors DN 75

KWL-MZB-KSS Ref. no. 04253

Description

- ☐ Set consists of 2 pcs., for the optional, side connection of a ventilation duct DN 75 to KWL-MZB 125/125 (Ref. no. 04053), included in delivery for boxes 04050, 04051, 04052.

Technical data MultiZoneBox			
Type	Ref. no.	Type	Ref. no.
KWL-MZB 6+1-75/125 R90	04050	KWL-MZB 6+1-75/125*	04052
KWL-MZB 6+1-75/125 L90	04051	KWL-MZB 125/125*	04053
Range of application			40–220 m³/h
Measurement accuracy			+/-10 m³/h
Voltage / Frequency			1~, 230 V, 50 Hz
Max. power consumption			6 Watt
Protection category			IP40
Weight			25 kg

* Supply air and extract air flow directions freely selectable.
Individual type details at www.HeliosSelect.de.

Reference

Suitable revision solution for drywall construction on request.

flexpipe is embedded directly in concrete or on/under ceilings,

- Simple planning and quick installation due to star-shaped, flexible continuous installation from the roll.
- Construction site-compliant handling due to low weight.
- Quick commissioning, uniform air distribution.
- Easy to clean.

Available in two sizes and designs

flexpipe FRS 63

External Ø: 63 mm, internal: 52 mm for vol. flows up to 20 m³/h.

flexpipe^{plus}

External Ø: 75 mm, internal: 63 mm for vol. flows up to 30 m³/h. Can be combined with oval duct FRS-R 51 and oval components, see page 70 ff.

Properties and advantages

- Special ventilation duct made of hygienically safe PE-HD new material, odourless.
- The two-layer design (externally corrugated and internally smooth and antistatically treated) guarantees:
 - Low flow resistances and high sound insulation.
 - Minimal dirt deposits.
 - Easy to clean.

Installation

- The flexpipe plastic corrugated pipe has high ring strength ($S_{R24} > 8 \text{ kN/m}^2$) and it can be installed directly in, on or under concrete ceilings due to its high flexibility in the desired system.
- Airtight and watertight connection simply through the use of FRS seal rings.

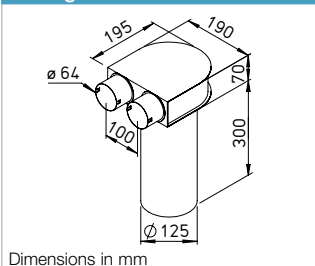
flexpipe vent. duct round



flexpipe vent. duct (bundle = 50 lin. m)

Type	Ref. no.	Dim. in mm	
Ø 63 mm		Ext. Ø	Int. Ø
FRS-R 63	09327	63	52

Ceiling box

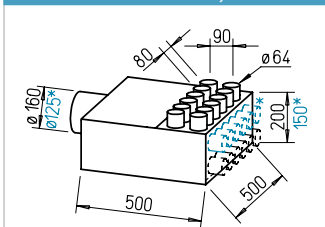


Ceiling box²⁾ for valve connection DN 125

Type	Ref. no.
Ø 63 mm	
FRS-DKV 2-63/125	09430

Ceiling box incl. plaster/formwork lid. For connection of supply or extract air valves DN 125 (accessories, see page 88).

Distribution box 6-63, 12-63



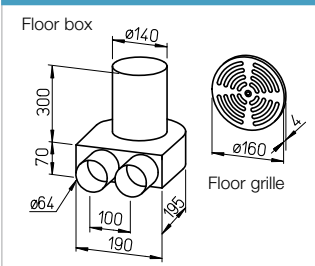
Distribution box 6-63, 12-63¹⁾

Type	Ref. no.	Ø NW mm
Ø 63 mm		
FRS-VK 6-63/125	09355	125
FRS-VK 12-63/160	09336	160

For connection of up to 6 or 12 ventilation ducts FRS-R 63, with sound-absorbing cladding. The connector plate can be replaced with the inspection opening and rotated 90° for type 12-63.

* FRS-VK 6-63/125

Floor box set



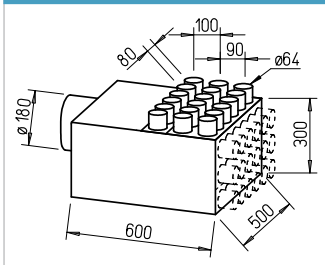
Floor box set²⁾

Type	Ref. no.
Ø 63 mm	
FRS-BKGS 2-63	09991

Floor box set consists of:

- 1 pc. floor box for grille connection DN 160
- 1 pc. floor grille made of brushed stainless steel with adjustable volume flow.

Distribution box 18-63

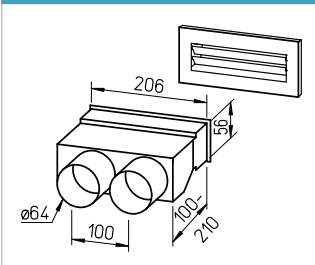


Distribution box 18-63¹⁾

Type	Ref. no.	Ø NW mm
Ø 63 mm		
FRS-VK 18-63/180	09364	180

For connection of up to 18 ventilation ducts FRS-R 63, with sound-absorbing cladding. The connector plate with the connectors can be replaced with the inspection opening and rotated 90°. This allows installation as a straight or 90° distributor.

Wall outlet set



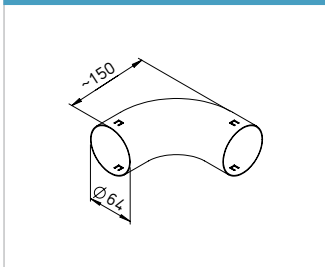
Wall outlet set, straight²⁾

Type	Ref. no.
Ø 63 mm	
FRS-WDS 2-63	09993

Wall outlet set consists of:

- Wall outlet with sliding connector
- Wall outlet white (FK-WA 200 W), 250 x 103 mm

Short bend 90°

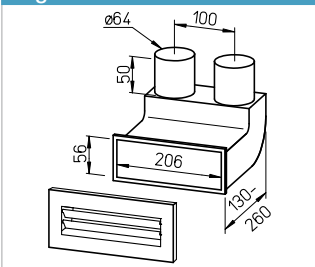


Short bend 90°

Type	Ref. no.
Ø 63 mm	
FRS-B 63	09348

Short bend 90° for bending radius < 2 x external duct diameter.

Angle bend set



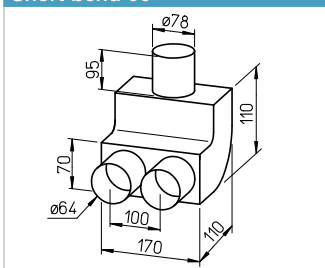
Angle bend set, 90°²⁾

Type	Ref. no.
Ø 63 mm	
FRS-WBS 2-63	09995

Angle bend set consists of:

- Angle bend with sliding connector
- Wall outlet white (FK-WA 200 W), 250 x 103 mm

Short bend 90°

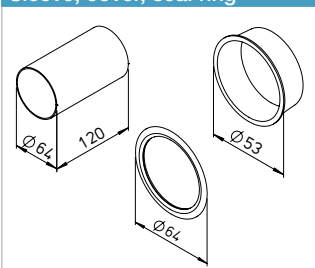


Short bend 90°

Type	Ref. no.
Ø 63 mm	
FRS-B 75/2-63	09341

Short bend 90° as transition from 1 x 75 mm to 2 hoses with 63 mm.

Sleeve, cover, seal ring



Sleeve, cover, seal ring

Type	Ref. no.	Unit
Ø 63 mm		
FRS-VM 63 Sleeve	09329	
FRS-VD 63 Cover	09330	10 pcs.
FRS-DR 63 Seal ring	09331	10 pcs.

Note: A seal ring (for IP66) must be used at every connection point (duct/duct, duct/moulded part). Please order corresponding number separately. Coating with lubricant is recommended for installation.

¹⁾ Incl. 6 pcs. cover.

²⁾ Incl. 1 pcs. cover.

IsoPipe facade panels



IsoPipe facade panels made of stainless steel for connection to intake air and exhaust air ducts.

Properties

All IsoPipe facade panels are made of high-quality stainless steel.
Also available in coated version (types B) for use in environments with severe air pollution or high salt concentration in the air (near the coast).

Application and installation

Facade combination panel IP-FKB

Designed for the compact installation of IsoPipe intake air and exhaust air ducts with just one facade panel. Universally applicable for horizontal or vertical installation.
Exhaust connectors can be positioned on the right, left or top.

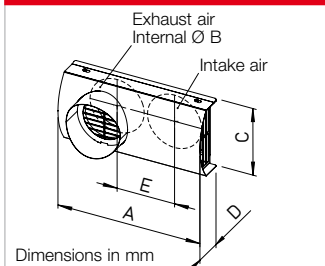
Exhaust air facade panel IP-FBF

For the IsoPipe duct system. Horizontal installation position. The exhaust air is discharged directly and horizontally through the duct connectors.

Intake air facade panel IP-FBA

For the IsoPipe duct system. Horizontal installation position. The intake air is taken in through the side on both sides.

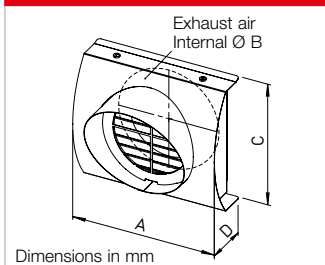
IP-FKB



IsoPipe Ø 125 mm					IsoPipe Ø 160 mm					IsoPipe Ø 180 mm				
Type	Ref. no.				Type	Ref. no.				Type	Ref. no.			
Facade combination panel – Stainless steel														
IP-FKB 125	02689				IP-FKB 160	02694				IP-FKB 180	02695			
Dim. in mm	A	Ø B	C	D E	Dim. in mm	A	Ø B	C	D E	Dim. in mm	A	Ø B	C	D E
	420	157	200	100 170		480	192	240	118 210		520	212	290	150 230
Facade combination panel – Stainless steel with additional coating														
IP-FKB 125 B	02661				IP-FKB 160 B	02662				IP-FKB 180 B	02663			
Dim. in mm	A	Ø B	C	D E	Dim. in mm	A	Ø B	C	D E	Dim. in mm	A	Ø B	C	D E
	420	157	200	100 170		480	192	240	118 210		520	212	290	150 230
Exhaust air outlet on the right, left or top														

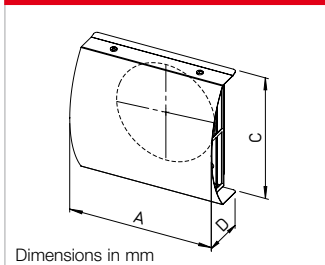
Exhaust air outlet on the right, left or top.

IP-FBF



IsoPipe Ø 125 mm					IsoPipe Ø 160 mm					IsoPipe Ø 180 mm				
Type	Ref. no.				Type	Ref. no.				Type	Ref. no.			
Facade panel – Stainl. steel, for exh. air														
IP-FBF 125	03126				IP-FBF 160	03128				IP-FBF 180	03131			
Dim. in mm	A	ØB	C	D	Dim. in mm	A	ØB	C	D	Dim. in mm	A	ØB	C	D
	230	157	200	78		265	192	240	97		285	212	260	126
Facade panel – Stainl. steel, for exh. air with additional coating														
IP-FBF 125 B	02901				IP-FBF 160 B	02902				IP-FBF 180 B	02903			
Dim. in mm	A	ØB	C	D	Dim. in mm	A	ØB	C	D	Dim. in mm	A	ØB	C	D
	230	157	200	78		265	192	240	97		285	212	260	126

IP-FBA



IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm			
Type	Ref. no.			Type	Ref. no.			Type	Ref. no.		
Facade panel – Stainl. steel, for intake air											
IP-FBA 125	03125			IP-FBA 160	03127			IP-FBA 180	03130		
Dim. in mm	A	B	C	Dim. in mm	A	B	C	Dim. in mm	A	B	C
	230	200	78		265	240	97		285	260	126
Facade panel – Stainl. steel, for intake air with additional coating											
IP-FBA 125 B	02664			IP-FBA 160 B	02665			IP-FBA 180 B	02666		
Dim. in mm	A	B	C	Dim. in mm	A	B	C	Dim. in mm	A	B	C
	230	200	78		265	240	97		285	260	126

Installation

- Types IP-FKB are universally applicable for horizontal or vertical installation. Exhaust air outlet on the right, left or top. The adjacent figure shows horizontal installation in an external wall.
- Types IP-FBF and IP-FBA for horizontal installation.



Insulated duct system IsoPipe



The innovative alternative to spiral duct installation with subsequent thermal insulation.

- The insulated round duct system IsoPipe
- prevents condensation,
- has a smooth, sound-absorbing inner surface and is easy to clean,
- saves an enormous amount of installation time,
- is the ideal solution for intake air and exhaust air ducting.

Installation

- All IsoPipe moulded parts, bends, wall outlets and roof outlets are precisely matched to each other and simply plugged into each other.
- IsoPipe is quick to install:
Compared to the use of insulated spiral duct, the result is work time savings of up to 70 %.

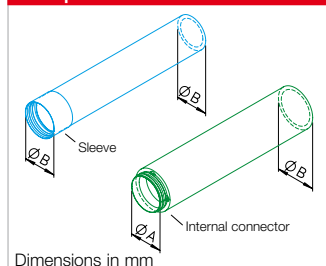
Properties

All pipe parts are fully insulated and consist of vapour-tight, anti-static EPE. Flame retardant according to fire class B1. Air flow temperature from –25 to +80 °C. $\lambda = 0.04 \text{ W/mK}$, $d = 16 \text{ mm}$.

Duct concept and installation

- IsoPipe is especially suitable for intake air and exhaust air ducting or supply air and extract air ducting in the basement or low-temperature zone of a KWL system.
- Can be used for volume flows up to 500 m³/h.
- IsoPipe is shock-proof, particularly lightweight and it can easily be shortened to the desired length with a knife.

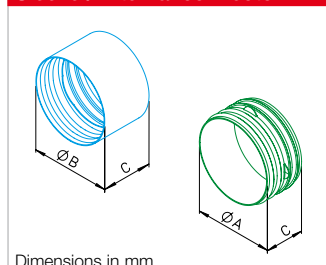
IsoPipe duct



Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	Ø A	Ø B	Type	Ref. no.	Ø A	Ø B	Type	Ref. no.	Ø A	Ø B	Type	Ref. no.	Ø A	Ø B
Duct with sleeve															
IP 125/2000 ¹⁾	09406	—	157	—	—	—	—	—	—	—	—	—	—	—	—
Duct with internal connector															
—	—	—	—	IP 160/2000 ²⁾	09447	160	192	IP 180/2000 ³⁾	09448	180	212	IP 200/2000 ⁴⁾	03810	200	232
¹⁾ Unit = 8 x 2 m				²⁾ Unit = 6 x 2 m				³⁾ Unit = 4 x 2 m				⁴⁾ Unit = 3 x 2 m			

Sleeve / Internal connector

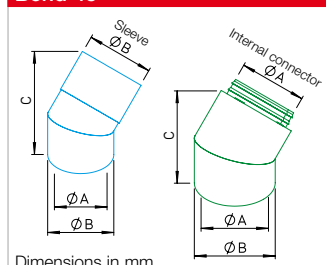


Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm					IsoPipe Ø 180 mm					IsoPipe Ø 200 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	Type	Ref. no.	Ø A	Ø B	C
Connecting sleeve																			
IP-MU 125	09394	—	157	104	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Internal connector																			
—	—	—	—	—	IP-IV 160	09453	160	—	80	IP-IV 180	09454	180	—	80	IP-IV 200	03811	200	—	80

Made of plastic.

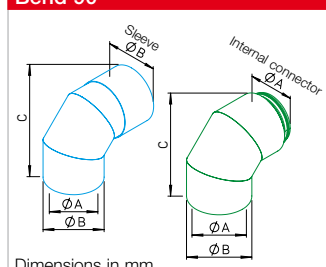
Bend 45°



Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm					IsoPipe Ø 180 mm					IsoPipe Ø 200 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	Type	Ref. no.	Ø A	Ø B	C																	
Bend 45° with sleeve																																				
IP-B 125/45					09399	125	157	255	—					—					—																	
Bend 45° with int. connector																																				
—					—					IP-B 160/45					09449	160	192	242	IP-B 180/45					09450	180	212	256	IP-B 200/45					03809	200	232	270

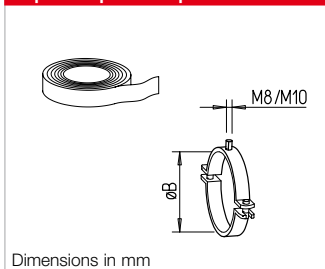
Bend 90°



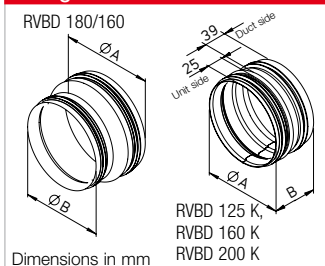
Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm					IsoPipe Ø 180 mm					IsoPipe Ø 200 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	Type	Ref. no.	Ø A	Ø B	C													
Bend 90° with sleeve																																
IP-B 125/90					09398	125	157	239	—	—	—	—	—	—	—	—	—	—	—													
Bend 90° with int. connector																																
—					—	IP-B 160/90					09451	160	192	272	IP-B 180/90					09452	180	212	292	IP-B 200/90					03808	200	232	312

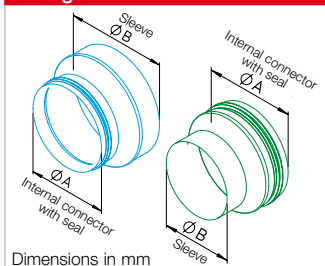
Tape / Pipe clamp



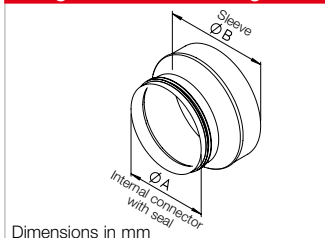
Fittings for unit connection



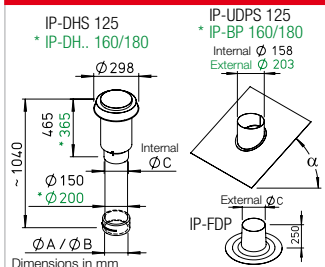
Fittings for distribution box



Fittings for KWL HygroBox and ground heat exchange



Roof outlets



Silencer



IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm			IsoPipe Ø 200 mm		
Type	Ref. no.	Ø B	Type	Ref. no.	Ø B	Type	Ref. no.	Ø B	Type	Ref. no.	Ø B
Tape, insulated, 50x3 mm, 15 lin. m											
IP-KLB	09643		IP-KLB	09643		IP-KLB	09643		IP-KLB	09643	
Pipe clamp											
IP-S 125	09395	157	IP-S 160	09392	192	IP-S 180	09421	212	IP-S 200	03812	232

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm			IsoPipe Ø 200 mm		
Type	Ref. no.	Ø A B	Type	Ref. no.	Ø A B	Type	Ref. no.	Ø A B	Type	Ref. no.	Ø A B
Connector with seal for connection to KWL units – with sleeve DN 125											
RVBD 125 K ¹⁾	03414	125 70	—	—	—	—	—	—	—	—	—
Connector with seal for connection to KWL units – with sleeve DN 160											
—	—	—	RVBD 160 K ²⁾	03415	160 70	RVBD 180/160 ²⁾	09589	180 160	—	—	—
Connector with seal for											
—	—	—	—	—	—	—	—	—	RVBD 200 K	03813	200 70

All fittings made of galvanised steel sheet.
¹⁾ Compatible with KWL EC 170 W, KWL EC 200 W, KWL EC 300 W and KWL EC 220 D.
²⁾ Compatible with KWL EC 500 W and KWL EC 340 D.

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm			IsoPipe Ø 200 mm		
Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B
Fitting for connection to distribution boxes – with connector DN 125											
Direct duct connection	—	—	IP-ARZ 125/160	09458	160 125	—	—	—	—	—	—
Fitting for connection to distribution boxes – with connector DN 160											
IP-ARZ 160/125	09358	125 160	Direct duct connection	—	—	IP-ARZ 160/180	09459	180 160	IP-ARZ 160/200	03816	200 160
Fitting for connection to distribution boxes – with connector DN 180											
IP-ARZ 180/125	09360	125 180	IP-ARZ 180/160	09455	160 180	Direct duct connection	—	—	IP-ARZ 180/200	03814	200 180

All fittings made of galvanised steel sheet.

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm			IsoPipe Ø 200 mm		
Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B	Type	Ref. no.	Ø A Ø B
Fitting for connection to KWL HygroBox – KWL HB 250, connec. DN 160											
IP-ARZ 160/125	09358	125 160	Direct duct connection	—	—	—	—	—	IP-ARZ160/200	03816	200 160
Fitting for connection to KWL HygroBox – KWL HB 500, connec. DN 250											
—	—	—	IP-ARZ 250/160	09590	160 250	IP-ARZ 250/180	09591	180 250	IP-ARZ 250/200	03815	200 250
Fitting for connection to ground heat exchanger – LEWT, connector DN 200											
IP-ARZ 200/125	09359	125 200	IP-ARZ 200/160	09456	160 200	IP-ARZ 200/180	09457	180 200	Direct duct connection	—	—
Fitting for connection to ground heat exchanger – SEWT, connector DN 180											
IP-ARZ 180/125	09360	125 180	IP-ARZ 180/160	09455	160 180	Direct duct connection	—	—	IP-ARZ 180/200	03814	200 180

All fittings made of galvanised steel sheet.

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm		
Type	Ref. no.	Ø B Ø C	Type	Ref. no.	Ø B Ø C	Type	Ref. no.	Ø A Ø C
Roof outlet, consisting of hood and pan tile* – Roof hood black								
IP-DHS 125	03541	157 160	IP-DHS 160	03542	192 250	IP-DHS 180	03542	180 210
Roof outlet, consisting of hood and pan tile* – Roof hood including duct red								
—	—	—	IP-DHR 160	03543	192 250	IP-DHR 180	03543	180 210
Roof outlet, consisting of hood and pan tile* – Roof pan tile for pitched roofs, with lead edge								
IP-UDPS 125	03546	α 25°– 45°	IP-BP 160/25	09384	α 20°– 30°	IP-BP 180/25	09384	α 20°– 30°
—	—	—	IP-BP 160/35	09385	α 30°– 40°	IP-BP 180/35	09385	α 30°– 40°
—	—	—	IP-BP 160/45	09386	α 40°– 50°	IP-BP 180/45	09386	α 40°– 50°
Roof outlet, consisting of hood and pan tile* – Roof pan tile for flat roof								
IP-FDP 125	03544	— 158	IP-FDP 160	03545	— 203	IP-FDP 180	03545	— 203

*Please order roof hoods and pan tiles separately.

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm		
Type	Ref. no.		Type	Ref. no.		Type	Ref. no.	
Flexible duct silencer, made of aluminium duct, Length approx. 1 m, elastic								
SDE 125	00789		SDE 160	00790		SDE 180	00499	
Type	Insulation mm	Insertion loss dB at Hz						
		125	250	500	1000	2000	4000	8000
SDE 125	50	32	42	45	46	50	42	41
SDE 160	50	23	40	43	46	46	31	29
SDE 180	50	20	39	43	47	46	28	29

Air distribution system renopipe



The smart solution, specifically developed for energy-saving renovation: **renopipe** combines ducting and ventilation duct cladding in one component.

- Quick, easy installation, even in occupied buildings.
- Installation without rework possible in drywall construction.
- Minimisation of material usage and costs.
- Cost-effective due to few components and elimination of exhaust air piping.

■ Installation

- The RP moulded parts can be easily shortened to the desired length with a fine-toothed saw.
- Visible installation in ceilings or walls by clicking the long connector into the mounting brackets included in the delivery.
- Free cuts in the duct compensate for unevenness, miter cuts are unnecessary due to precision-fit moulded parts. Fastening elements with longitudinal, lateral and height compensation guarantee a precise fit.

■ Properties and advantages

- Coatable components made of smooth, high-density EPS in white.
- Quick visible installation, without elaborate ceiling suspensions and drywall construction work.

■ Duct concept, installation

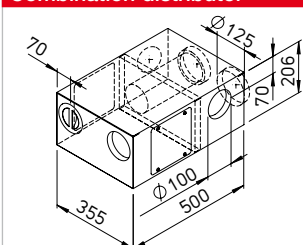
- The extract air from the adjoining extract air rooms is collected directly in the sound-insulated combination distributor. There is no extract air piping or separate silencers.
- Asymmetric lip seals ensure the leak tightness of the entire renopipe system.

Combination distribution box, supply air right

Compact distributor made of galvanised steel sheet with sound-absorbing lining of inner sides. Properties: Extract air collector, supply air distributor with sound insulation function. Unit connection 2 x DN 125, 2 x DN 100 for extract air, 2 x DN 100 for supply air. Incl. inspection opening and cover.

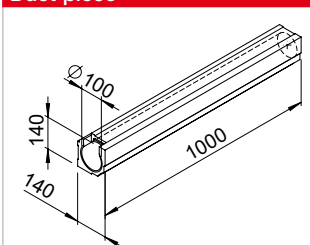
RP-KVK 3-100/125 R No. 03048

Combination distributor



Dimensions in mm

Duct piece



Duct Unit = 4 pcs.*

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

RP-K Ref. no. 03061

Duct with stucco profile

Unit = 4 pcs.*
Like above but with visually appealing stucco profile.

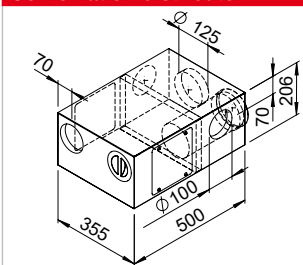
RP-SK Ref. no. 03065

Combination distribution box, supply air left

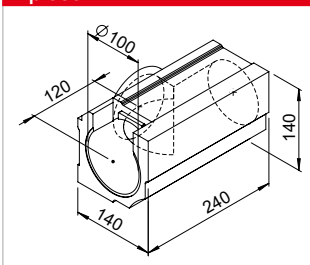
Compact distributor made of galvanised steel sheet with sound-absorbing lining of inner sides. Properties: Extract air collector, supply air distributor with sound insulation function. Unit connection 2 x DN 125, 2 x DN 100 for extract air, 2 x DN 100 for supply air. Incl. inspection opening and cover.

RP-KVK 3-100/125 L No. 03038

Combination distributor



T-piece



T-piece Unit = 4 pcs.*

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

RP-T Ref. no. 03062

T-piece with stucco

Unit = 4 pcs.*
Like above but with visually appealing stucco profile.

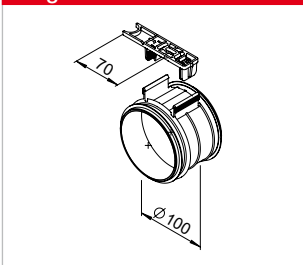
RP-ST Ref. no. 03066

Long connector set

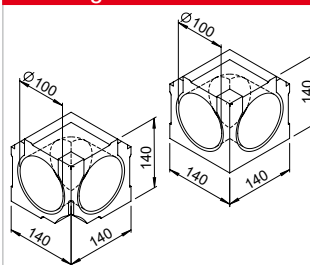
Consists of a connecting sleeve DN 100 made of impact-resistant polypropylene and two lip seals for airtight connection of the duct. Includes mounting bracket for simple click installation of the duct.

RP-LV Ref. no. 03029

Long connector set



Inner angle



Inner angle Unit = 2 pcs.*

90° inner angle with smooth, square profile. Internal diameter DN 100.

RP-IW Ref. no. 03075

Inner angle with stucco

Unit = 2 pcs.*
Like above but with visually appealing stucco profile.

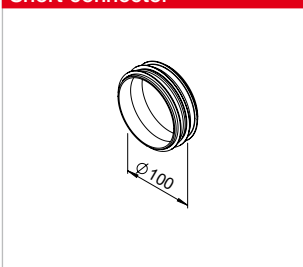
RP-SIW Ref. no. 03077

Long connector set

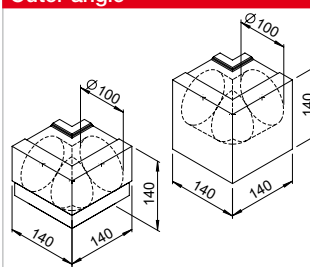
Consists of a connecting sleeve DN 100 made of impact-resistant polypropylene and two lip seals for airtight connection of the duct. Includes mounting bracket for simple click installation of the duct.

RP-KV Ref. no. 03030

Short connector



Outer angle



Outer angle Unit = 2 pcs.*

90° outer angle with smooth, square profile. Internal diameter DN 100.

RP-AW Ref. no. 03076

Outer angle with stucco

Unit = 2 pcs.*
Like above but with visually appealing stucco profile.

RP-SAW Ref. no. 03078

* Delivered in packaging units.

Design ventilation valve

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

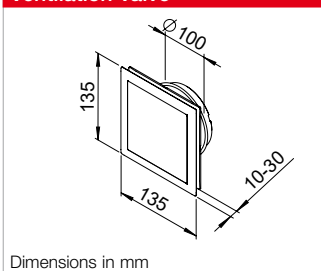
DLV 100 Ref. no. 03039

Replacement

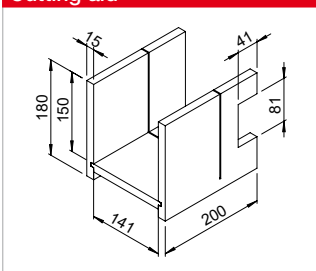
air filter Unit = 5 pcs.*

ELF-DLV 100 Ref. no. 03042

Ventilation valve



Cutting aid



Cutting aid

Stable cutting aid, beech multiplex 15 mm, for easy cutting of duct to length.

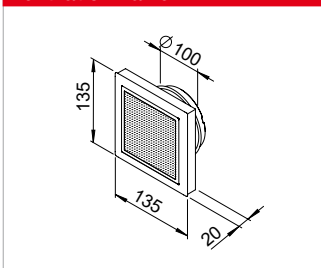
RP-SH Ref. no. 03036

Design ventilation valve, for supply air

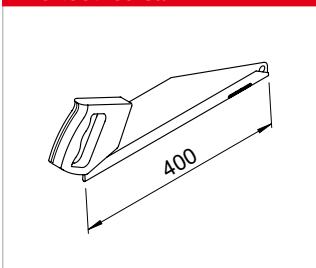
Design ventilation valve for supply air operation, DN 100.

DLVZ 100 Ref. no. 03040

Ventilation valve



Fine-toothed saw



Fine-toothed saw

Special fine-toothed handsaw for precise cuts.

RP-FS Ref. no. 03044

Facade combination panel

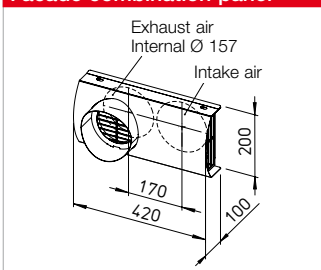
For intake air and exhaust air ducts. Universally applicable. Elegant, made of high-quality stainless steel. Connection DN 125.

IP-FKB 125 Ref. no. 02689

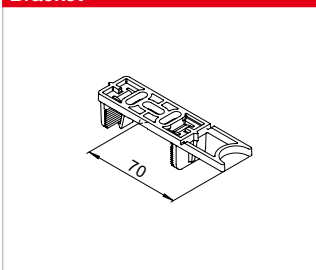
With additional coating for use in environments with severe air pollution or high salt concentration in the air.

IP-FKB 125 B Ref. no. 02661

Facade combination panel



Bracket



Mounting bracket

Unit = 5 pcs.*
Made of high-quality, impact-resistant plastic.

RP-BK Ref. no. 03031

Exhaust air panel

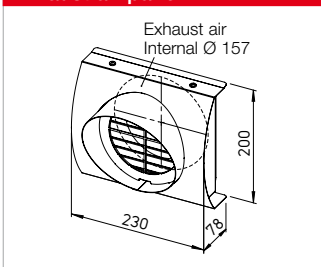
Elegant, made of high-quality stainless steel. Connection DN 125.

IP-FBF 125 Ref. no. 03126

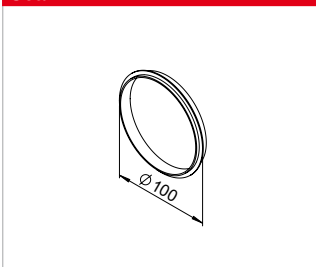
With additional coating for use in environments with severe air pollution or high salt concentration in the air.

IP-FBF 125 B Ref. no. 02901

Exhaust air panel



Seal



Lip seal

Unit = 10 pcs.*
DN 100 made of EPDM.

RP-LD Ref. no. 03033

Intake air panel

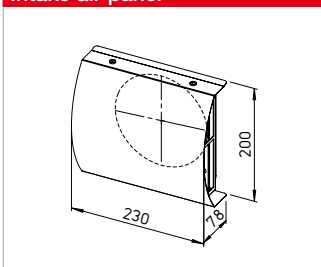
Elegant, made of high-quality stainless steel. Connection DN 125.

IP-FBA 125 Ref. no. 03125

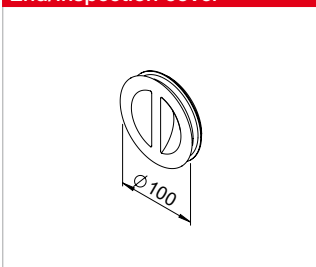
With additional coating for use in environments with severe air pollution or high salt concentration in the air.

IP-FBA 125 B Ref. no. 02664

Intake air panel



End/inspection cover



End/inspection cover

DN 100 made of high-quality plastic, with lip seal. For attachment to arm duct end piece.

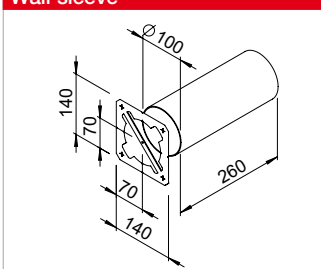
RP-RD Ref. no. 03037

Wall sleeve

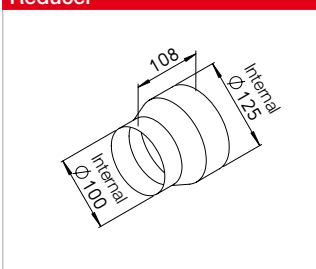
DN 100 made of PVC, incl. mounting template for simple wall outlet.

RP-WH Ref. no. 03035

Wall sleeve



Reducer



Reducer

Made of galvanised steel sheet.

RP-RZ 125/100 Ref. no. 03017

* Delivered in packaging units.

Flat duct system FK



Underfloor duct system made of galvanised steel sheet, specifically developed for domestic ventilation. The optimal solution for concealed air ducts; ideal for air distribution in new buildings.

Properties

- All components made of galvanised steel sheet, corrosion-resistant and non-flammable.

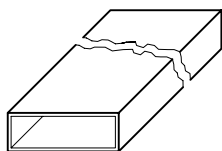
Available in two sizes

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

Duct concept and installation

- Flat design and rigid construction allow easy installation in unfinished flooring.
- Connection using external connector. Moulded parts with integrated sleeve (insertion depth approx. 35 mm). The smooth internal walls result in low flow resistances and do not create obstacles for dirt deposits. Cleaning (disinfection) is still possible.
- The distribution box, which must be installed per floor for extract and supply air delivery, simplifies the duct layout.
- Flat silencers (FK-SD) can be installed in the duct system to protect noise-sensitive rooms, e.g. bedrooms.

Flat duct

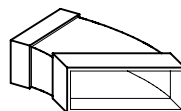


Dimensions in mm

Flat duct

Type	Ref. no.	Width	Height	Length
150 x 50 mm				
FK 150	02905	150	50	1500
200 x 50 mm				
FK 200	02906	200	50	1500

Bend, horizontal 45°



Bend, horizontal 45°

Type	Ref. no.	Width	Height	Radius
150 x 50 mm				
FK-BH 150/45	02910	153	53	45°
200 x 50 mm				
FK-BH 200/45	02912	203	53	45°

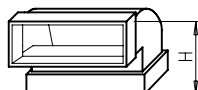
Connector



Connector

Type	Ref. no.	Width	Height	Length
150 x 50 mm				
FK-V 150	02941	153	53	200
200 x 50 mm				
FK-V 200	02942	203	53	200

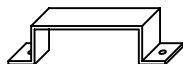
Bend, vertical 90°



Bend, vertical 90°

Type	Ref. no.	Width	Height	Radius
150 x 50 mm				
FK-BV 150/90	02919	153	103	90°
200 x 50 mm				
FK-BV 200/90	02920	203	103	90°

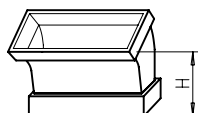
Mounting bracket



Mounting bracket

Type	Ref. no.	Width	Height	Length
150 x 50 mm				
FK-B 150	02907	151	52	30
200 x 50 mm				
FK-B 200	02908	201	52	30

Bend, vertical 45°



Bend, vertical 45°

Type	Ref. no.	Width	Height	Radius
150 x 50 mm				
FK-BV 150/45	02917	153	73	45°
200 x 50 mm				
FK-BV 200/45	02918	203	73	45°

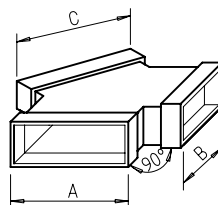
Bend, horizontal 90°



Bend, horizontal 90°

Type	Ref. no.	Width	Height	Radius
150 x 50 mm				
FK-BH 150/90	02909	153	53	90°
200 x 50 mm				
FK-BH 200/90	02911	203	53	90°

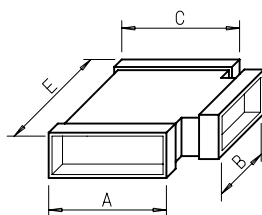
Y-branch



Y-branch

Type	Ref. no.	Dim. in mm	A	B	C
150 x 50 mm					
FK-Y 150/150/150	02927	153	153	153	
200 x 50 mm					
FK-Y 200/150/150	02929	153	153	203	

T-piece

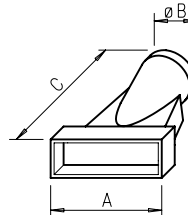


Dimensions in mm

T-piece

Type	Ref. no.	Dim. in mm	A	B	C	E
FK-T 150/150/150	02921	153	153	153	250	
FK-T 150/150/200	02923	153	153	203	390	
FK-T 150/200/150	02926	153	203	153	300	
FK-T 200/150/200	02925	203	153	203	250	
FK-T 150/200/200	02924	153	203	203	440	
FK-T 200/200/200	02922	203	203	203	300	

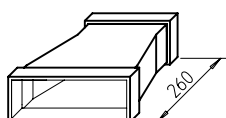
Transition piece



Transition piece

Type	Ref. no.	Dim. in mm	A	Ø B	C
150 x 50 mm					
FK-Ü 75/150	02948	153	78	260	
FK-Ü 100/150	02996	153	103	260	
200 x 50 mm					
FK-Ü 100/200	02997	203	103	260	
FK-Ü 125/200	02998	203	128	260	

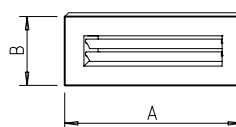
Reducers



Reducers

Type	Ref. no.	Dim. in mm	Length	Height
Reducer symmetrical				
FK-RS 200/150	02932	260	53	
Reducer asymmetrical				
FK-RA 200/150	02933	260	53	

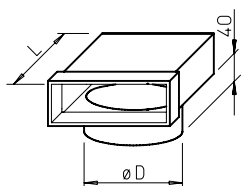
Outlet



Ceiling/wall outlet

Type	Ref. no.	Colour	Dim. in mm	A	B
200 x 50 mm					
FK-WA 200 W	09350	White	250	103	
FK-WA 200 AL	09351	Alum.	250	103	

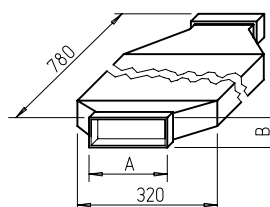
End piece – Spiral duct



End piece with connection for spiral duct

Type	Ref. no.	Dim. in mm	Ø D	L
150 x 50 mm				
FK-ER 150/100	02934	99	200	
FK-ER 150/125	02935	124	200	
200 x 50 mm				
FK-ER 200/160	02936	159	220	

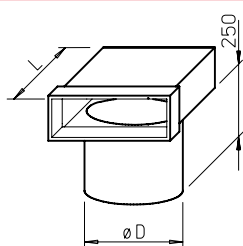
Silencer



Silencer

Type	Ref. no.	Dim. in mm	A	B
150 x 50 mm				
FK-SD 150	02945	153	53	
200 x 50 mm				
FK-SD 200	02946	203	53	

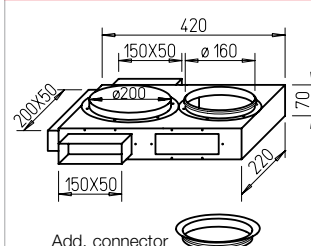
End piece – Valve



End piece with connection for spiral duct

Type	Ref. no.	Dim. in mm	Ø D	L
150 x 50 mm				
FK-EV 150/100	02937	102	200	
FK-EV 150/125	02938	127	200	
200 x 50 mm				
FK-EV 200/100	02939	102	200	
FK-EV 200/125	02940	127	200	

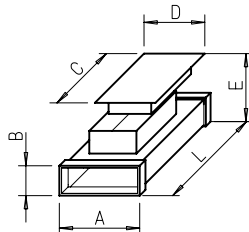
Distribution box



Distribution box

Type	Ref. no.
FK-VK	02987
Delivery FK-VK	
4 connectors 150 x 50 (2 enclosed loose),	
1 connectors 200 x 50 and 1 inspection panel.	
Add. connectors for straight distributor	
FK-ZS	02947

Inspection piece

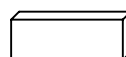


Inspection piece

Type	Ref. no.	Dim. in mm	A	B	C	D	L
150 x 50 mm							
FK-RZ 150	02930	153	53	347	137	500	
200 x 50 mm							
FK-RZ 200	02931	203	53	347	137	500	

Dim. E can vary from 105-130 mm.

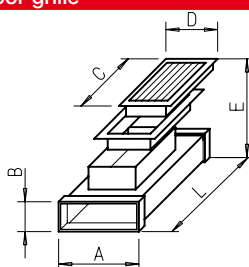
End cover



End cover

Type	Ref. no.
150 x 50 mm	
FK-ED 150	02943
200 x 50 mm	
FK-ED 200	02944

Floor grille

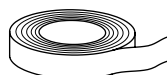


Aluminium floor grille with inst. casing

Type	Ref. no.	Dim. in mm	A	B	C	D	L
150 x 50 mm							
FK-BA 150	02986	153	53	348	152	500	

Dim. E can vary from 112-152 mm.

Sealing tape



Sealing tape/Tape

Type	Ref. no.
Cold shrink tape	
KSB	09343 50 mm wide, 15 lin. m
Aluminium cold shrink tape	
KSB ALU	09344 50 mm wide, 15 lin. m
Tape	
KLB	00619 50 mm wide, 20 lin. m

Extract air elements



Design ventilation valves and disc valves

For extract air delivery at high and low flow rates or resistances. DLV with visually closed front design and integrated filter.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Design ventilation valve DLV¹⁾ for extract air							
	DLV 100	03039		DLV 125	03049		
	ELF-DLV 100²⁾	03042		ELF-DLV 125²⁾	03058		
Plastic disc valve KTVA							
KTVA 75/80	00940	KTVA 100	00941	KTVA 125	00942	KTVA 160	00943
Metal disc valve for extract air (for areas where non-flammable components are compulsory)							
MTVA 75/80	08868	MTVA 100	08869	MTVA 125	08870	MTVA 160	08871

¹⁾ With integrated filter.

²⁾ Replacement air filter for DLV, unit = 5 pcs.

Supply air elements



Design ventilation valves and disc valves

For supply air delivery at high and low flow rates or resistances. DLV 125 with visually closed front design and integrated filter.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Ventilation grille LGK, Design ventilation valve DLV for supply air							
LGK 80	00259	DLVZ 100	03040	DLV 125	03049		
				ELF-DLV 125¹⁾	03058		
Plastic disc valve KTVZ							
KTVZ 80	02762	KTVZ 100	02736	KTVZ 125	02737	KTVZ 160	02738
Metal disc valve for supply air (for areas where non-flammable components are compulsory)							
MTVZ 75/80	09603	MTVZ 100	09604	MTVZ 125	09605	MTVZ 160	09606

¹⁾ Replacement air filter for DLV 125, unit = 5 pcs.

Supply air-extract air valve ZAV



Supply air-extract air valve ZAV

Elegant plastic valve for wall and ceiling installation. Can be used as a wall element with open front grille. Ceiling installation with closed front grille. Flexible application as supply air valve or extract air valve.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Plastic valve for supply and extract air ZAV							
ZAV 80	03079			ZAV 125	03080		

Attachment filter element VFE



Attachment filter element VFE

For installation in front of disc valves for greasy, contaminated room air. Prevents grease and dirt deposits. Casing made of galvanised steel sheet, white, plastic powder-coated. Filter made of dimensionally stable aluminium filter fabric with 324 cm² free filter surface and aluminium frame.

VFE 70	Ref. no. 02552
VFE 90	Ref. no. 02553
ELF/VFE	Ref. no. 02554

Replacement air filter, unit = 2 pcs.

Control lines



Control lines

8-pin AWG24 twisted pair cable for the control element for types KWL EC 700 D to KWL EC 2600 S and KWL YOGA from 400 to 1000.

For control element KWL EC 700 D - 2600 S and KWL YOGA 400 - 1000 (8-pin AWG24 twisted pair cable)		
Cable length	Type	Ref. no.
20 metres	ALB EC-SK 20	06816
40 metres	ALB EC-SK 40	06817

Adapter board



Adapter board

Adapter from flat ribbon cable to stranded wire or cable. For connection of KNX module and RJ10 control line. See KWL unit product pages for description of KNX module.

Type KWL-RJ10 KL No. 04277

Other accessories	Page
– Enthalpy heat exchanger	21
– Flexible duct system	70
– Insulated duct system	82 f.
– Air distrib. systems	84 ff.
– HygroBox	90 f.
– Ground heat exchang.	92 ff.
– Fire prot. elements	
Main Helios Catalogue.	

Accessory details

Dimensions, further technical information and other sizes:
Warm water heating elements and temp. control systems
Ventilation grilles, ducts, moulded parts, roof outlets

Extract air elements, attachment filter elements, Disc valves
Main Helios Catalogue

Shutters



Silencer



Warm water heating element



Door ventilation grilles



Cleaning set



Air temperature control



Hydraulic unit



Ø 100		Ø 125		Ø 160		Ø 200		Ø 250		Ø 315		Ø 355		Ø 400	
Flexible connecting sleeve – For acoustic decoupling, incl. 2 pcs. hose clamps															
FM 100	01681	FM 125	01682	FM 160	01684	FM 200	01670	FM 250	01672	FM 315	01674	FM 355	01675	FM 400	01676
Duct shutters – Self-actuating or **motorised, installed in pipeline, casing made of galvanised steel sheet or *plastic															
RSKK* 100	05106	RSKK* 125	05107	RSK 160	05669	RSK 200	05074	RSK 250	05673	RSK 315	05674	RSK 355	05650	RSK 400	05651
								RVM** 250	02576	RVM** 315	02578	RVM** 355	02579	RVM** 400	02580
KAK 100	04097	KAK 125	04098	KAK 160	04099	KAK 200	04100	Cold smoke shutter							
Flexible cross talk silencer FSD ¹⁾ , duct silencer RSD ¹⁾ – Galvanised steel sheet								Duct silencer SDE see page 83							
FSD 100	00676	FSD 125	00677	FSD 160	00678	FSD 200	00679	FSD 250	00680	FSD 315	00681	FSD 355	00682	FSD 400	00683
—	—	—	—	—	—	—	—	RSD 250	08739	RSD 315	08745	RSD 355	08748	RSD 400	08751

¹⁾ See product page for average insulation dimension.

Type	Ref. no.	Compatible with duct Ø mm	Air-side data					Water-side data ¹⁾		Weight approx. kg	Compatible temperature control system	
			Heat output	Δ T air	at V	Pressure loss	with water volume				Type	Ref. no.
			kW ¹⁾	K ¹⁾	m³/h	Δp _w kPa	l/h					
WHR 100	09479	100	1.9	0.9	35	17	150	1	84	3.2	WHST 300 T50	08820
WHR 125	09480	125	2.6	1.1	29	13	250	2	115	3.2	WHST 300 T50	08820
WHR 160	09481	160	5.5	3.1	38	22	400	11	245	4.9	WHST 300 T50	08820
WHR 200	09482	200	7.2	4.1	33	19	600	17	317	4.9	WHST 300 T50	08820
WHR 250	09483	250	10.7	6.0	37	21	800	8	470	6.9	WHSHE 24 V	08318
WHR 315	09484	351	18.3	10.4	36.2	21	1400	9	810	9.0	WHSHE 24 V	08318
WHR 400	09524	400	26.2	15.0	36	21	2000	11	1060	12.5	WHSHE 24 V	08318

Door ventilation grilles

Unobtrusive, sight screening ventilation grille made of break-resistant plastic for installation in door leaf.

See product page for detailed description.

LTGW Ref. no. 00246

Made of plastic, white.

LTGB Ref. no. 00247

Made of plastic, brown.

Cleaning set for air distribution systems flexpipe and renopipe.

The universal cleaning set KWL-RS is ideally suitable for cleaning the **flexpipe** duct systems (DN 75, DN 63) and the **renopipe** air distribution system (DN 100).

Application is possible either by pushing (for short distances) or pulling. In case of longer duct sections or narrow bends, the round nylon brush is simply pulled in the

direction of the distribution box, where the 90° bend is used for the intake connection. This is used to easily remove the dust loosened by the round nylon brush with a commercially available vacuum cleaner.

Delivered in a practical transport bag.

Delivery: Per 1 pc.

- Reel with flexible GFK wire (20 linear m.)
- Round brushes DN 63, 75, 100
- 90° bend and seal for intake connection DN 56
- Adapter DN 56/40, DN 56/32.

KWL-RS Ref. no. 02797

Air temperature control for KWL units with PWW post-heater.

For air heating control of the PWW post-heater integrated in KWL WW types. Consists of thermostat with remote adjustment and remote sensor. Simple, cost-effective and quick-to-install solution.

Temperature range 8 – 38 °C.
WHST 300 T38 Ref. no. 08817

Air temperature control



Air temperature control for warm water heating element WHR.

Ideal for use as supply air heater. Consists of thermostat incl. duct temperature sensor (with 2 m capillary tube) and valve. Provides a constant supply air temperature. Simple, cost-effective and quick-to-install solution.

Temperature range 20 – 50 °C.
WHST 300 T50 Ref. no. 08820

Hydraulic unit

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL-/RL temperature display, circulating pump and flexible connection hoses.

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

Weekly timer



Weekly timer

Digital timer with LCD display for autom. control of op. mode, programmable for every weekday. Surface and flush-mounted install. Dim. mm (WxHxD) 84 x 84 x 40
WSUP Ref. no. 09990

For switch cabinet installation (2 space units required).
Dim. mm ((WxHxD) 36 x 90 x 63
WSUP-S Ref. no. 09577

WHR: The values apply for supply air temp. 0 °C and flow/return temperatures: ¹⁾ 90/70 °C, ²⁾ 60/40 °C.

KWL HBX



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

Advantages

- ☐ Constant indoor climate with ideal moisture content.
- ☐ Prevention of expensive damage to furniture, wooden floor coverings and antiques.
- ☐ Alleviation of allergy symptoms and health impacts. Strengthening of the immune system by reducing the lifetime of bacteria and viruses.
- ☐ Reduction of fine dust and electrostatic charges.

Special HygroBox features

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

Functional principle

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

of natural evaporation. A bladed rotor rotates continuously in a water bath inside the unit and releases water molecules into the preheated supply air via the wetted blade surface. Regardless of the KWL unit operating level and external weather influences, the HygroBox constantly maintains the preselected relative air humidity and thus guarantees a healthy feel-good atmosphere with ideal moisture content.

Delivery

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

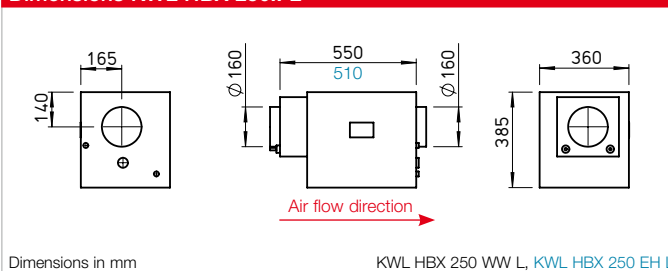
Heating element

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

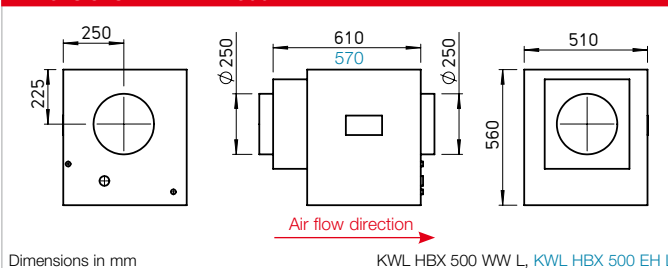
Summer operation

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

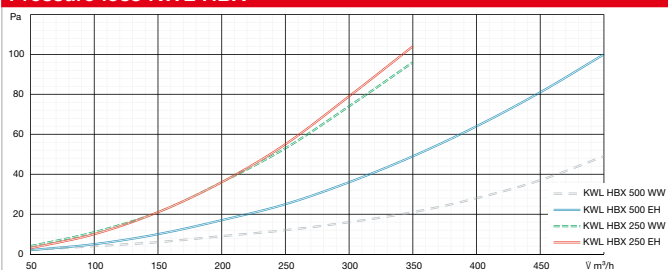
Dimensions KWL HBX 250.. L



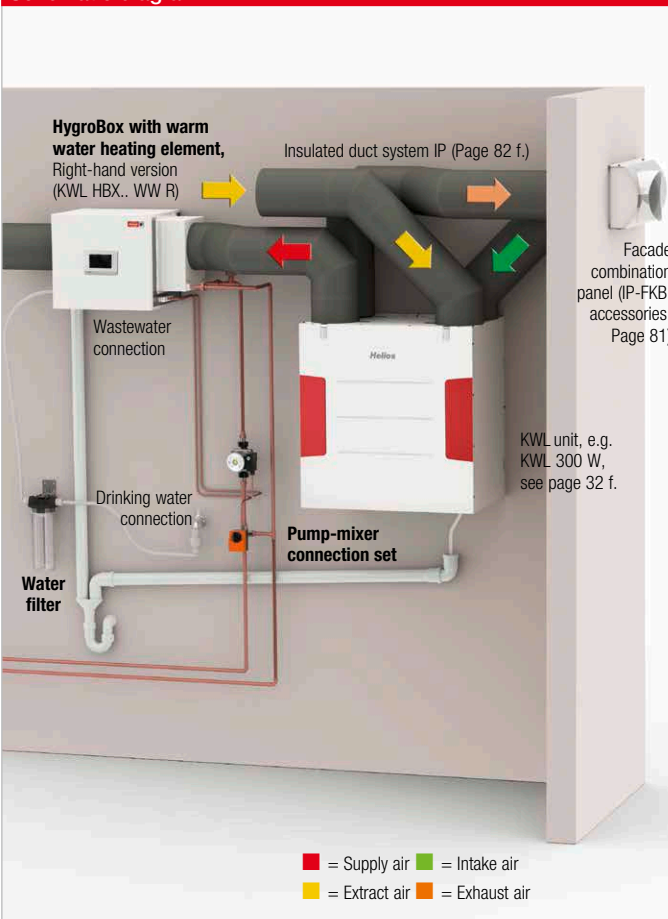
Dimensions KWL HBX 500.. L



Pressure loss KWL HBX



Schematic diagram KWL HBX.. WW R



KWL-NHR

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

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

Accessories
Low-temperature post-heating element

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

KWL-PMAS

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

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

Accessories
Pump-mixer connection set

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

KWL-UVR, KWL-OME

Replacement UVC ducts and osmosis membrane (for all types)
Description

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

Accessories
Replacement UVC ducts
KWL-UVR Ref. no. 05631

Replacement osmosis membrane
KWL-OME Ref. no. 05632

KWL-WF

Replacement water filter (for all types)

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

Accessories

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

KWL-WF Ref. no. 05630

Technical data

	With electric heating element For KWL units up to 250 m³/h flow rate		For KWL units up to 500 m³/h flow rate		With warm water heating element For KWL units up to 250 m³/h flow rate		For KWL units up to 500 m³/h flow rate	
	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Right-hand version (air outlet right)	KWL HBX 250 EH R	40188	KWL HBX 500 EH R	40192	KWL HBX 250 WW R	40186	KWL HBX 500 WW R	40190
Left-hand version (air outlet left)	KWL HBX 250 EH L	40187	KWL HBX 500 EH L	40191	KWL HBX 250 WW L	40185	KWL HBX 500 WW L	40189
Adjustable relative supply air humidity in %	40-60		40-60		40-60		40-60	
Adjustable supply air temperature °C	15-25		15-25		15-25		15-25	
Air volume flow m³/h	350		500		350		500	
Power consumption max. W	1450		2850		100		100	
Heat output W	1400		2800		2000		4200	
Voltage/Frequency	230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz	
Water connection	3/4"		3/4"		3/4"		3/4"	
Water drain Ø mm	40-50		40-50		40-50		40-50	
Weight (empty weight/operating weight) approx. kg	25		47		25/28		47/53	
Accessories								
Pump-mixer connection set	—		—		KWL-PMAS 250		KWL-PMAS 500	
Ref. no.	—		—		40193		40194	
Low-temperature post-heating element	—		—		KWL-NHR 250		KWL-NHR 500	
Ref. no.	—		—		05628		05633	
UVC ducts	KWL-UVR		KWL-UVR		KWL-UVR		KWL-UVR	
Ref. no.	05631		05631		05631		05631	
Water filter	KWL-WF		KWL-WF		KWL-WF		KWL-WF	
Ref. no.	05630		05630		05630		05630	
Osmosis membrane	KWL-OME		KWL-OME		KWL-OME		KWL-OME	
Ref. no.	05632		05632		05632		05632	

SEWT kit



The ground-to-brine heat exchanger SEWT significantly increases the efficiency of ventilation units with heat recovery! SEWT saves even more energy and minimises heating costs. The optimal addition for ventilation units with heat recovery.

Advantages

- ☐ Additional preheating and prevention of icing during the cold season.
- ☐ Pleasant "natural cooling" on hot days.
- ☐ Complete kit with coordinated components.

Functional principle

The ground-to-brine heat exchanger SEWT utilises the ground temperature which is relatively constant throughout the year. The ground collector pipe is installed and laid in the ground at a depth of approx. 1.2 m. The hydraulic unit ensures the circulation of the brine depending on the outdoor temperature. The brine serves as a heat transfer medium and releases the heat to the supply air through the heat exchanger module.

This results in the following:

- ☐ During the cold season
The preheating of cold intake air of up to 14 K. Thus, the intake air is normally at a temperature above 0 °C when it reaches the ventilation unit with heat recovery (anti-icing operation). This results in a higher supply air temperature and a positive effect on the total energy balance. Post-heating is only necessary in case of very low outdoor temperatures.

☐ On hot summer days

The ground-to-brine heat exchanger reduces the intake air temperature.

☐ During the transitional period

The brine is circulated depending on the outdoor temperature measured via the thermostats. The intake air is always energetically optimised when it reaches the ventilation unit, which additionally saves energy – the indoor climate is always comfortable.

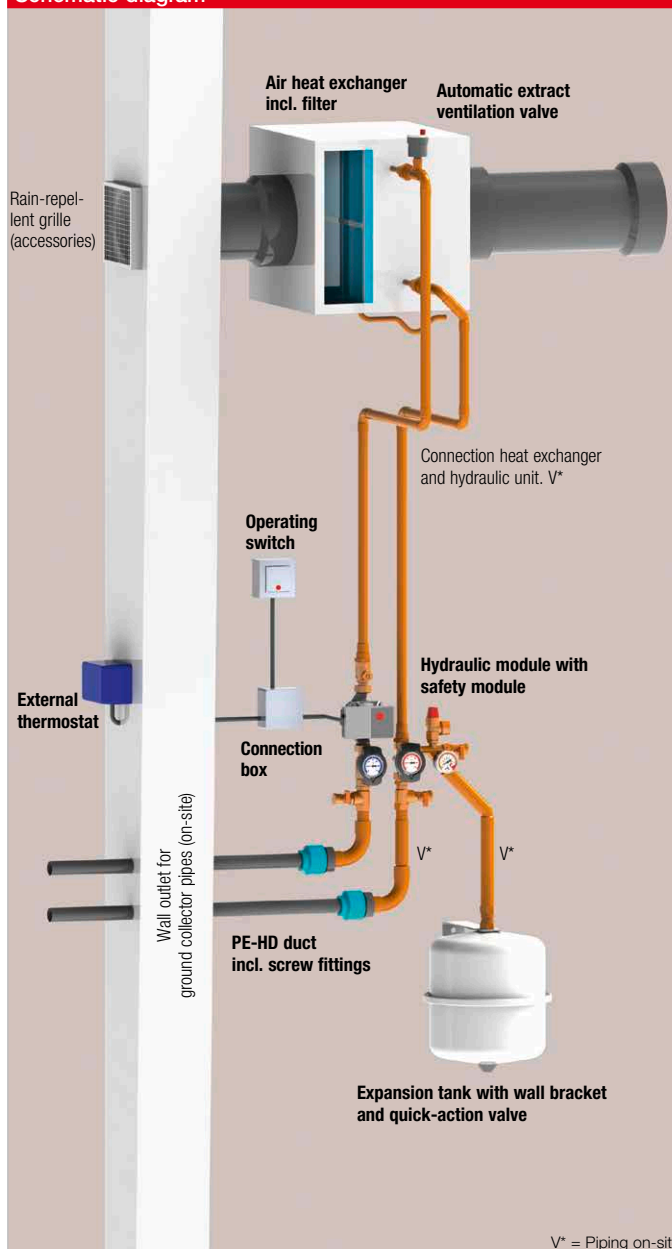
Planning information

- ☐ In order to maximise the heat transfer, the ground collector pipe should be laid at a depth of at least 1.2 m, since the temperature there is constantly approx. 8–12 °C throughout the year. The ground temperature increases and stabilises with installation depth.
- ☐ In order to increase the heat transfer, the pipe should be laid directly in the ground in a sand bed. Furthermore, if ground collector pipes are laid in parallel, the distance should not be less than 0.5 m (from pipe to pipe).
- ☐ There is also the option of probe drilling as an alternative to surface laying.

Delivery

- ☐ The ground-to-brine heat exchanger SEWT is delivered as a kit corresponding to the course of processing on-site and for optimised transportation. The complete set guarantees the absolute precision fit and functional reliability, because all individual components are matched to each other. The kit consists of three sets, which are described on the adjacent page.

Schematic diagram



SEWT kit

Ref. no. 02564

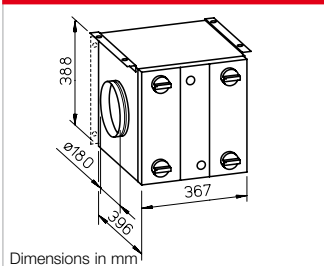
Pictorial schematic

The pre-insulated duct system IsoPipe should be used to prevent condensation. Alternative: Spiral duct with additional insulation.

SEWT-W



Dimensions SEWT-W



Heat exchanger module

Description

- ☐ Highly efficient ground-to-brine heat exchanger unit with aluminium blades for optimal heat transfer to the intake air. Connection duct Ø 12 mm made of copper.
- ☐ Double-walled, fully insulated casing made of steel sheet (20 mm insulation, white powder-coated). With mounting bracket for wall or ceiling mounting.
- ☐ Connector Ø 180 mm with double lip seal.
- ☐ Variable air flow direction through convertible air filter.
- ☐ With integrated air filter, class ISO Coarse 75% (G4). Prevents the ingress of dirt, insects, etc.
- ☐ Inspection panels are easy to open without tools for quick and easy access to the filter.
- ☐ Condensate drain connector incl. siphon, Ø 1/2".

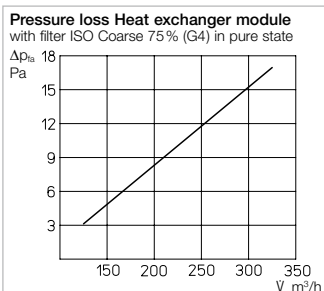
Accessories

Replacement air filter class ISO Coarse 75% (G4)

Unit = 3 pcs.

ELF-SEWT-F No. 02568

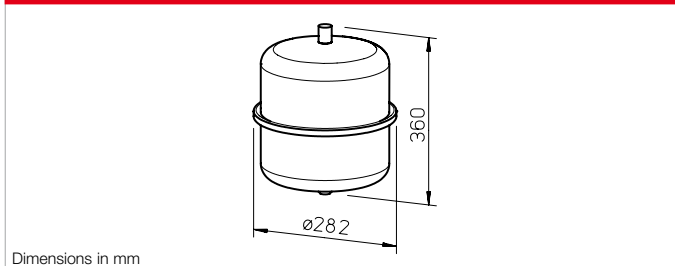
Technical data SEWT-W



SEWT-H



Dimensions SEWT-H



Hydraulic module and control

Description

- ☐ Complete hydraulic kit with all components necessary for the connection of the ground-to-brine heat exchanger system and the corresponding control unit for automatic or manual system operation.

Delivery

- ☐ Brine pump unit (230 V) incl. safety module.
- ☐ Flow and return temperature display.
- ☐ Automatic quick-vent valve with non-return valve.
- ☐ Membrane pressure expansion tank – 12 litre, connection 3/4", incl. wall bracket and quick-action valve.

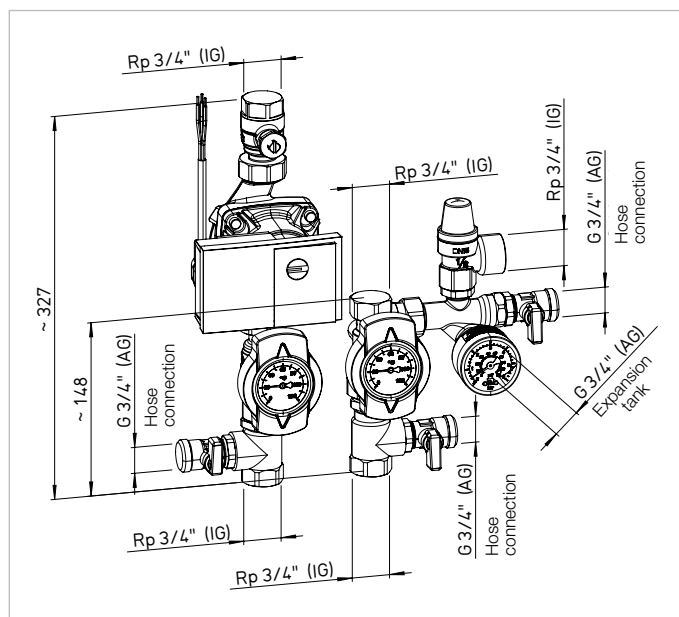
- ☐ Thermostat module with 2 setpoints for automatic control of the brine circuit in summer / winter operation.
- ☐ Switch unit for switching between automatic (thermostatic operation) and manual control of the brine circuit (incl. separate connection box – no Fig.)

Technical data Thermostat

Load capacity	16 A (4 A ind.)
Voltage	230V, 50/60Hz
Protection category	IP54
Wiring diagram no.	906
Temperature range (adjust.)	2 x 0 – 40 °C

Technical data Hydraulic module

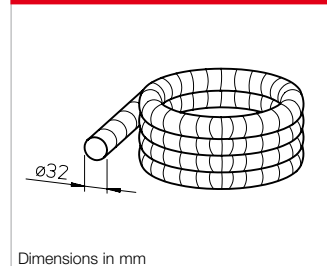
Current consumption max.	0.44 A
Voltage	230 V, 50 Hz
Power consumption	3 – 45 W
Protection category	IP44



SEWT-E



Dimensions SEWT-E



Ground installation set with screw fittings and 20 l ethylene glycol.

Description

- ☐ Flexible PE-HD ground collector pipe (PE-HD = polyethylene high-pressure pipe), wall thickness 2.9 mm, external Ø 32 mm. Delivered in 100 metre bundle.
- ☐ Specifically designed for ground installation.
- ☐ Screw fitting set made of high-quality polypropylene (PP) for connection of the ground collector pipe to the hydraulic unit.
- ☐ The screw fitting set (32-1") has an active seal system.
- ☐ 20 l canister of ethylene glycol, free from amines and nitrites. Sufficient for completely filling the duct system with a 25% glycol-water mixture.

Reference

The SEWT kit offers functional reliability and accuracy of fit in addition to the package price saving:

Type	Ref. no.
SEWT kit	02564
The individual components of the SEWT kit are to be ordered separately:	
Type	Ref. no.
SEWT-W	02566
SEWT-H	02566
SEWT-E	02567

LEWT kit



The ground-to-air heat exchanger LEWT further optimises the efficiency of ventilation units with heat recovery.

Advantages

- Additional preheating during the cold season without any additional energy requirements.
- Prevention of icing of the heat exchanger.
- Pleasant cooling on hot days.
- Additional post-heating of supply air is only necessary in case of very low outdoor temperatures.
- Complete kit with coordinated components.

Functional principle

The ground-to-air heat exchanger LEWT utilises the fact that the ground temperature remains relatively constant throughout the year. The intake air is drawn through an upstream ground collector pipe. This can be instal-

led in an existing construction pit at a depth of approx. 1.2 to 1.5 m; the total pipe length should be at least 40 m.

This results in the following:

- During the cold season
The preheating of cold intake air of up to 14 K. Thus, the intake air is normally at a temperature above 0 °C when it reaches the ventilation unit with heat recovery (anti-icing operation). This results in an increased heat recovery rate and a higher supply air temperature. Post-heating is only necessary in case of very low outdoor temperatures.
- On hot summer days
The ground-to-air heat exchanger reduces the intake air temperature.
- During the transitional period
Intake either through the ground collector or direct intake opening. This is dependent on the outdoor

temperature measured via the thermostats. The electric bypass shutter automatically controls the ideal intake volume. The intake air is always energetically optimised when it reaches the ventilation unit, which additionally saves energy – the indoor climate is always comfortable.

Delivery

- The ground-to-air heat exchanger LEWT is delivered as a kit corresponding to the course of processing on-site and for optimised transportation. It consists of three sets, which are described on the adjacent page.
- The individual components are perfectly matched to each other and form a system. This guarantees simple, quick and precise installation as well as high functional reliability.

Planning information

- In order to maximise the heat transfer, the ground collector pipe should be laid at a depth of at least 1.2 m, since the temperature there is constantly approx. 8 °C throughout the year. The ground temperature increases and stabilises with installation depth.
- During installation, it should be ensured that there is a gradient of at least 2% for the condensate drain.
- In order to increase the heat transfer, the pipe should be laid directly in the ground in a sand bed. Furthermore, if ground collector pipes are laid in parallel, the distance should not be less than 1 m (from pipe to pipe).
- A minimum bend radius of 1 m is recommended to minimise the air-side pressure loss.

Complete kit

consisting of ground collector pipe, outlet wall bushing, air intake column, control and pipe fittings.

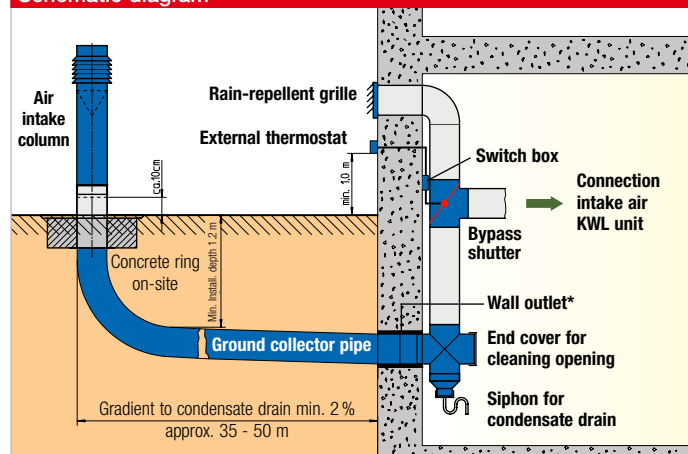
LEWT kit

Ref. no. 02977

Pictorial schematic for installation in buildings with basements

The ground collector pipe enters the building via an underground wall outlet.

Schematic diagram

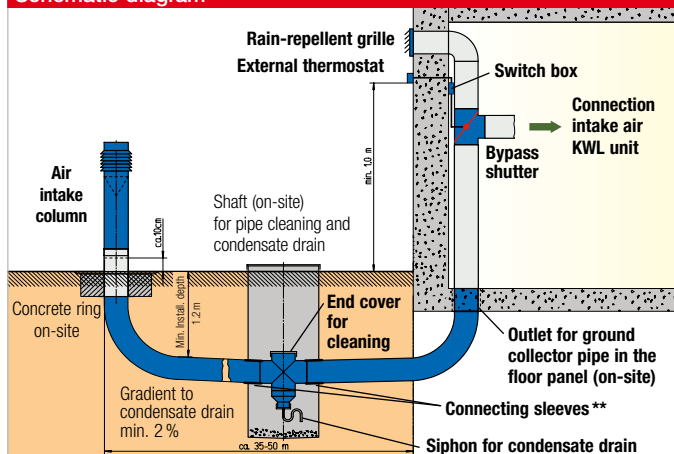


*not suitable for pressing water.

Pictorial schematic for installation in buildings without basements

The ground collector pipe is placed in the building via the floor panel. A shaft must be provided on-site for inspection purposes.

Schematic diagram

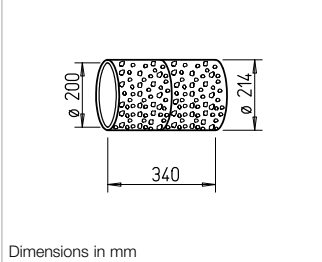


**in case of assembly with shaft please order additionally 1 pc. connecting sleeve LEWT-MU No. 02971.

LEWT-E+M



Outlet wall bushing



Ground collector pipe and wall outlet LEWT-E+M

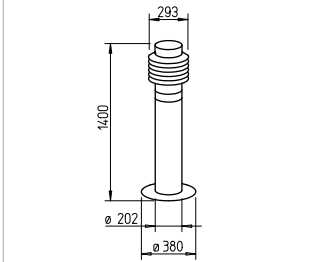
Description

- ☐ Flexible, externally corrugated and internally smooth ground collector pipe with low air resistance; external Ø 200 mm.
- ☐ Coextruded composite pipe made of physiologically and toxicologically safe polyethylene (PE-HD). Antibacterial, antistatic inner wall. Specifically developed as a ventilation duct for ground installation.
- ☐ Easy to clean, fulfils DIN 1946-6 (VDI 6022).
- ☐ 100% odourless, assured top quality level excludes the transmission of harmful substances and vapours.
- ☐ The PE-HD material achieves double the conductivity of PP with comparable wall thicknesses / pipe cross-sections. In comparison to PVC, the heat conductivity is two and a half times better.
- ☐ Delivered in bundle with 2 x 25 liner metres. Includes wall outlet DN 200 made of polypropylene (sanded), profile seal rings, connecting sleeve and seals.
- ☐ Ground collector pipe, wall outlet and profile seal rings comply with protection category IP 67 when processed according to instructions.

LEWT-A



Air intake column

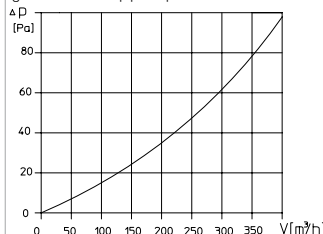


Air intake column LEWT-A with filter

Description

- ☐ Air intake column in modern design and aesthetic stainless steel look for supply air intake.
- ☐ Simple plug-in connection between the intake column and ground collector pipe.
- ☐ Fixation with support plate or bordering plate (on-site) in drywall construction or set in concrete.
- ☐ All parts made of stainless steel.
- ☐ With integrated cone air filter, class ISO Coarse 60% (G4). Prevents the ingress of dirt, insects and contaminants.
- ☐ Cone filter must be removed by hand for cleaning and replacement after removing the blade head.

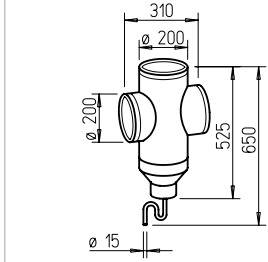
Pressure loss Air intake column with filter ISO Coarse 60% (G4) and 40 metre ground collector pipe in pure state



LEWT-S+F



Crosspiece

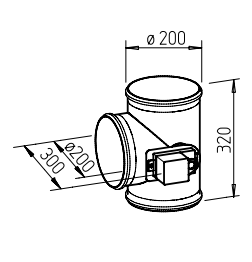


Control and moulded duct parts LEWT-S+F

Description

- ☐ Automatic control of air intake via the ground collector pipe or directly from the outdoor area depending on the outdoor temperature measured by the thermostat.
- ☐ Temperature range for direct intake individually adjustable at thermostat.
- ☐ The desired operating mode can be manually selected.
- Delivery**
- ☐ Bypass shutter NW 200 with actuator 230 V; for vertical installation using the crosspiece.
- ☐ Crosspiece for connection to the wall outlet. Includes cleaning opening, condensate collector, siphon and end cover.
- ☐ Rain-repellent grille (no Fig.) as wall cover for direct intake opening. Prevents the ingress of rain, small animals and insects into the intake air duct.

Bypass shutter



- ☐ Setpoint adjuster and thermostat for automatic and manual bypass shutter control.

For attachment in weatherproof location in the outdoor area on the north side of the building at a height of approx. 1 m.
Dim. in mm B 200 x H 90 x T 70

- ☐ Switch box with double toggle switch for following operating modes:

– Thermostatic operation, automatic
– Ground heat, manual
– Intake air, manual
Dim. in mm W 110 x H 180 x D 100

Accessories

Replacement air filter class ISO Coarse 60% (G4)

Unit = 3 pcs.

ELF-LEWT-A Ref. no. 02975

Additional connecting sleeve

Includes 2 pcs. seal rings.

LEWT-MU Ref. no. 02971

Technical data Thermostat

Load capacity	16 A (4 A ind.)
Voltage	230V, 50/60 Hz
Protection category	IP54
Wiring diagram no.	798.1
Temperature range (adjust.)	2 x 0 – 40 °C

Technical data Actuator

Voltage	230V, 50/60 Hz
Power consumption	1.5 W
Protection category	IP54

Reference

The individual components of the LEWT kit are to be ordered separately:

Type	Ref. no.
LEWT-E+M	02991
LEWT-S+F	02990
LEWT-A	02992
LEWT crosspiece	02967

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