

“All from a single source” for perfect KWL® system functionality.



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

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



kwl® flexpipe^{plus} isopipe renopipe

HYGROBOX AND UNDERSOIL HEAT EXCHANGER



Optional ground-to-brine or ground-to-earth heat exchanger increases the efficiency of the ventilation units with heat recovery. This saves even more energy in the winter and reduces the outside air temperature in the summer.

As an active humidification unit, the HygroBox ensures a healthy indoor climate throughout the year and prevents expensive damage to furniture, floor surfaces, etc.

116^{on}

INSULATED DUCTING SYSTEM IsoPipe®



IsoPipe® is the practical alternative to the spiral duct installation with additional thermal insulation. Already completely insulated IsoPipe® is perfect for intake- and exhaust air ducting as well as for the supply- and extract air pipe in lofts, basements or cool areas.

The insulated ducting system prevents condensation build-up and saves assembly time enormously.

122^{on}

AIR DISTRIBUTION SYSTEMS FlexPipe®, RenoPipe etc.



For every type of installation the suitable solution. FlexPipe® *plus* combines the proven round pipe concept with oval components. In any form, for even more flexibility in planning and installation.

RenoPipe is the perfect solution for the energetic renovation and is simply installed surface mounted to ceiling or wall.

There are also flat duct systems made of galvanised sheet steel or plastic available in flat construction and rigid construction.

126^{on}

ACCESSORIES



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

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

136^{on}



KWL HB ..



KWL HB .. WW L



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

Advantages

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

Special HygroBox characteristics

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

Functional principle

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

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

Delivery

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

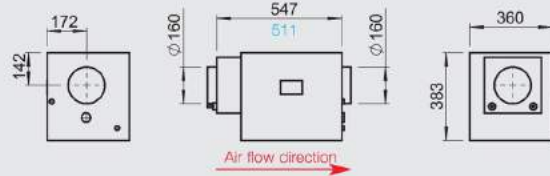
Heater battery

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

Summer operation

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

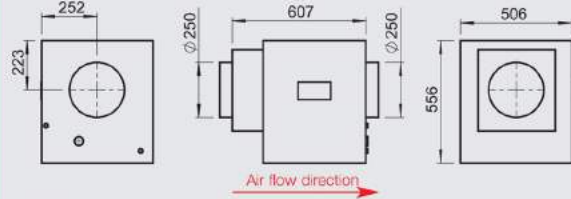
KWL HB 250 .. L



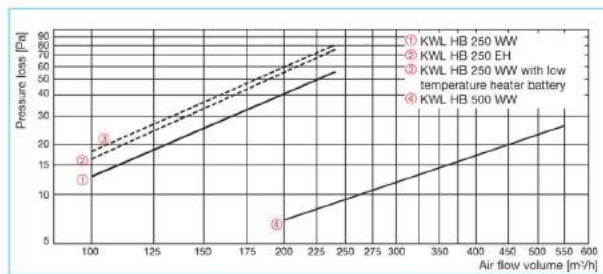
Dimensions in mm

KWL HB 250 WW L, KWL HB 250 EH L

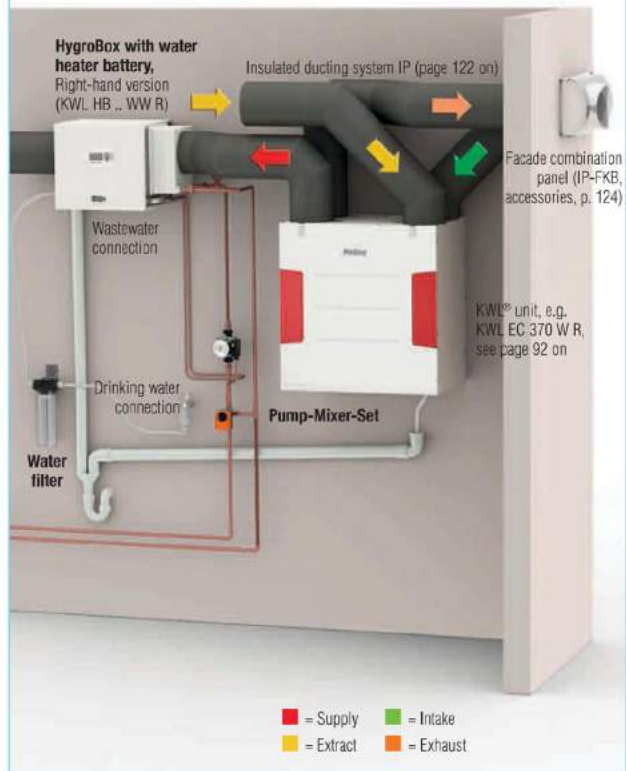
KWL HB 500 WW L



Dimensions in mm



Assembly scheme KWL HB .. WW R





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

■ **Description**

- In connection with low-temperature heater batteries the additional installation of a heater battery at the air outlet of the HygroBox is recommended in order to compensate the evaporation cooling.

- The external temperature sensor of the heater battery (included in delivery) is to be installed in a distance of approx. 50 cm after the heater battery in the supply air duct.

■ **Accessories**

Low temperature heater battery

- for KWL HB 250 WW
Type KWL-NHR 250 No. 5628
- for KWL HB 500 WW
Type KWL-NHR 500 No. 5633



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

■ **Description**

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

■ **Accessories**

Pump-Mixer-Set

- for KWL HB 250 WW
Type KWL-PMA 250 No. 5629
- for KWL HB 500 WW
Type KWL-PMA 500 No. 5634



KWL-UVR, KWL-OME
Spare-UVC-tube and -osmosis-membrane
(for all types)

■ **Description**

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

■ **Accessories**

Spare-UVC-tube

Type KWL-UVR Ref. no. 5631

Spare osmosis membrane

Type KWL-OME Ref. no. 5632



KWL-WF
Spare water filter
(for all types)

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

■ **Accessories**

Spare water filter

Type KWL-WF Ref. no. 5630

Technical data

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





The ground-to brine heat exchanger substantially increases the efficiency of the ventilation units. SEWT saves even more energy and reduces costs of heating to a minimum. The optimal add-on for ventilation systems with heat recovery.

Advantages

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

Operation

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

Effects:

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

Information on planning

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

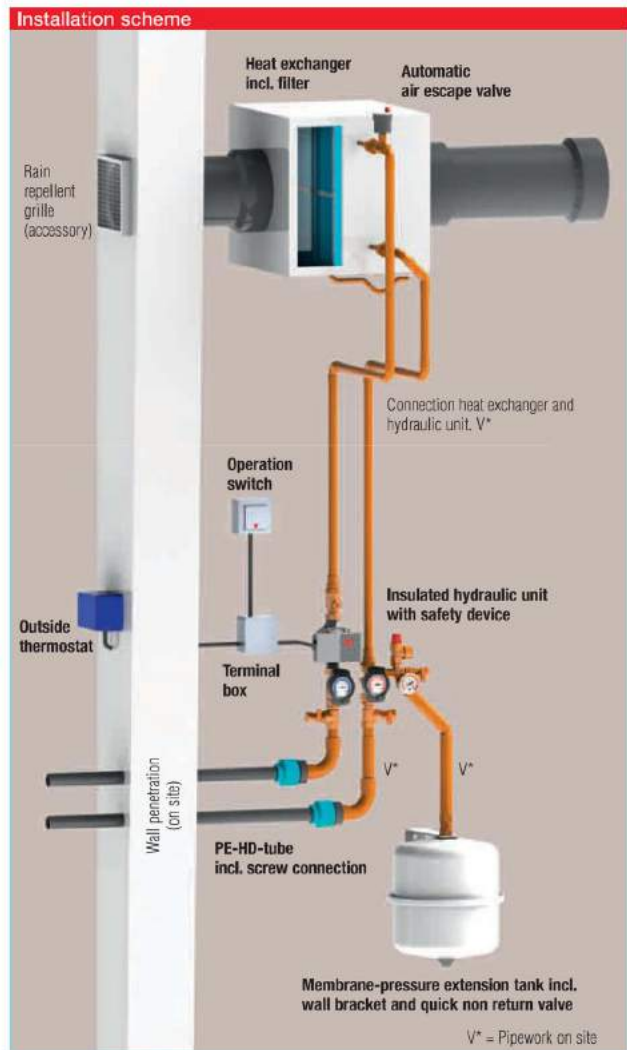
Delivery

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

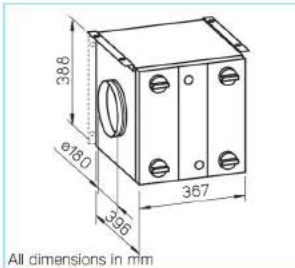
SEWT kit Ref. no. 2564

Basic scheme for the installation

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



SEWT-W



All dimensions in mm

Brine-to-air heat exchanger

■ Specification

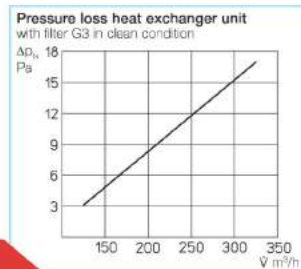
- Highly efficient brine-to-air heat exchanger with fins made from aluminium to ensure the best transfer to the intake air. Connection pipes made of copper Ø 12 mm.
- Double walled, completely insulated casing (20 mm insulation) made of steel, powder coated in grey. With mounting brackets for wall- and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

■ Accessories

Replacement air filters
(SU = 3 pcs.)

Type ELF-SEWT-F No. 2568

Technical data SEWT-W



SEWT-H



Hydraulic unit and control unit

■ Specification

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

■ Delivery

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

- Thermostat module with 2 set-points for automatic control of the closed brine loop in summer/winter operation.
- Control unit to change from automatic (thermostat operation) a manual operation of the closed brine loop (incl. separate terminal box – without figure).



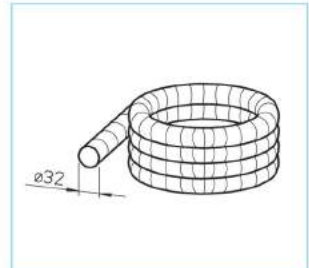
Technical data thermostat

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

Technical data hydraulic module

Current max.	0,44 A
Voltage	230 V, 50 Hz
Power consumption	3 – 45 W
Protection to	IP 44

SEWT-E



Undersoil hose set with screw connections and 20 l ethylene glycol.

■ Specification

- Flexible PE-HD undersoil hose (PE-HD = polyethylene high pressure hose), wall thickness 2,9 mm, outer-Ø 32 mm. Delivered as bundle with 100 running mtrs.
- Especially designed for undersoil laying.
- Screw connection set made from high class polymer (PP) to connect the undersoil hose to the hydraulic unit.
- Screw connection set (32-1") with active sealing system.
- 20 l canister with ethylene glycol, free of amine and nitrite. Adequate for one complete filling of the system with a 25 % glycol-water mix.

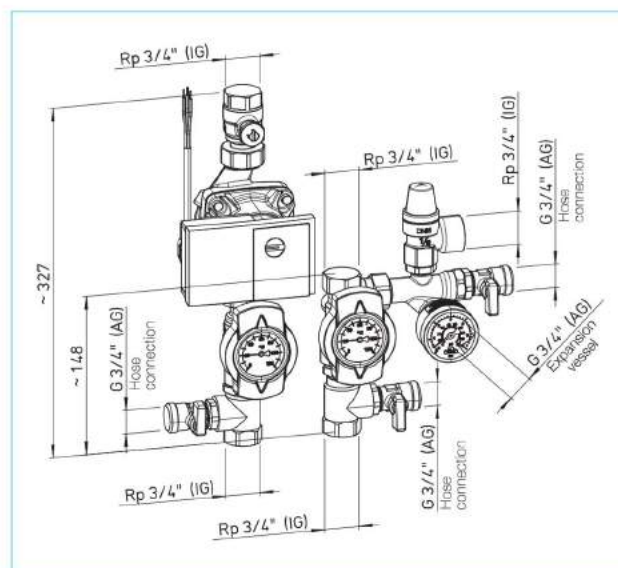
■ Note

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

Type Ref. no.
SEWT kit 2564

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

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





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

Advantages

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

Functional principle

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

Effects:

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

reaches the ventilation unit energetically optimised which additionally saves energy and provides a comfortable climate within the rooms.

Delivery

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

Information on planning

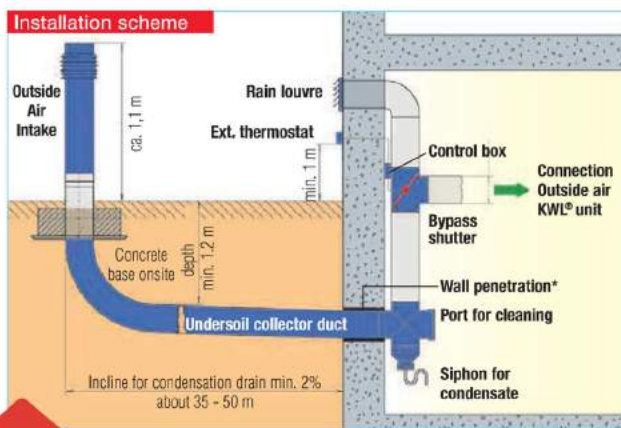
- To ensure the highest possible heat transfer, the undersoil air collector duct should be laid in at least 1.2 m depth as there is a constant temperature of about 8 °C throughout the year. The soil temperature increases the deeper the ducts are laid and becomes constant.
- When installing it is important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

LEWT kit

Ref. no. 2977

Basic scheme for the laying: Buildings with basements

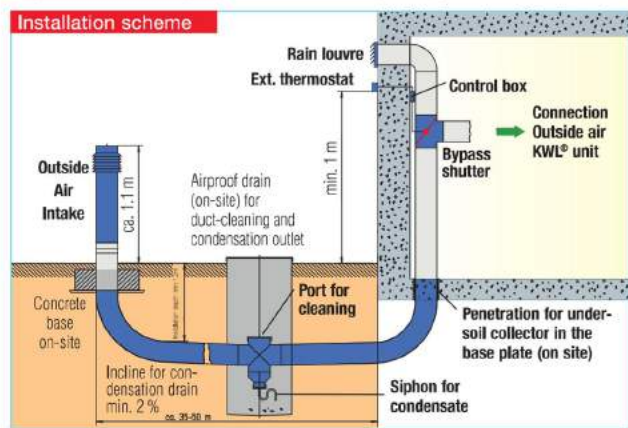
The undersoil collector reaches the building subsurface through a wall penetration.

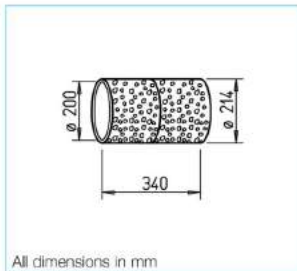


* not suitable for water pressure

Basic scheme for the laying: Buildings without basements

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





All dimensions in mm

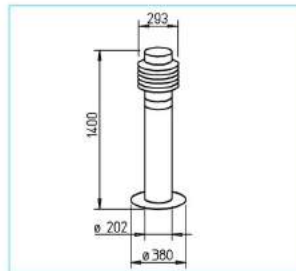
Undersoil collector duct and wall penetration LEWT-E+M

Description

- Flexible undersoil collector duct, ribbed on the outside, smooth inner surface to ensure a very low air resistance, \varnothing 200 mm.
- Co-extruded compound duct made from physiological and toxicological harmless polyethylene (PE-HD). Developed specifically for undersoil laying.
- Easy to clean, complies with DIN 1946-6 (VDI 6022).
- 100 % odourless, 1a quality-assured PE-HD exclude transmission of pollutants and evaporations.
- The material PE-HD achieves a 2-times higher conductivity than PP with comparable wall thicknesses / duct cross sections. Even at 2.5 x better heat conduction performance a rises compared to PVC.
- Supplied as set with 2 x 25 running meters including wall duct DN 200 from polyethylene (bonding surface), profile seals, connector and seals.
- Undersoil collector, wall penetration and seals comply with IP 67, assuming accurate installation.

Additional connector with 2 seals.

LEWT-MU Ref. no. 2971



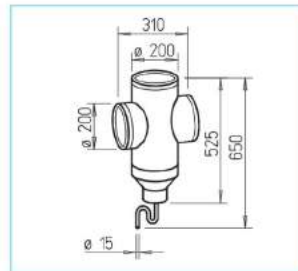
Outside-air-intake LEWT-A with filter

Description

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

Accessories

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



Controller and duct form parts LEWT-S+

Description

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

Delivery

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

Control knob and thermostat for automatic and manual control of the bypass shutter.

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



Control box with double switch. Modes:

- Thermostat mode, automatic
- Undersoil heat, manual
- Outside air, manual



Technical data thermostat

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

Technical data servo motor

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

Note

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

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

Insulated ducting system IsoPipe®



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

The insulated duct system IsoPipe®

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

■ Laying

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

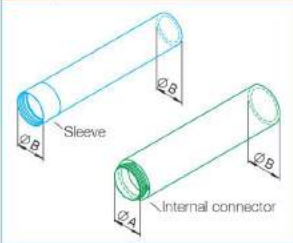
■ Specification

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

■ Laying-conception and installation

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

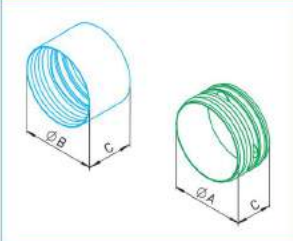
IsoPipe® duct



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

¹⁾ SU = 8 x 2 m ²⁾ SU = 6 x 2 m ³⁾ SU = 4 x 2 m

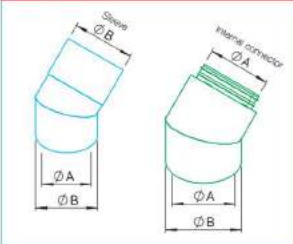
Socket / Inside connector



IsoPipe®	Ø 125 mm				Ø 160 mm				Ø 180 mm			
	Type	Ref. no.	Dim. in mm		Type	Ref. no.	Dim. in mm		Type	Ref. no.	Dim. in mm	
Socket	IP-MU 125	9394	—	157 104	—	—	—	—	—	—	—	—
Inside connector	—	—	—	—	IP-IV 160	9453	160	— 80	IP-IV 180	9454	180	— 80

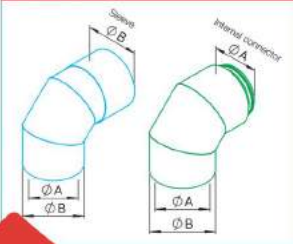
From polymers.

Elbow 45°



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

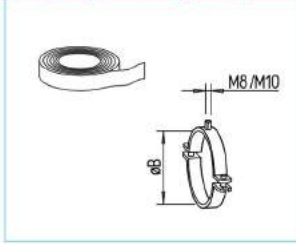
Elbow 90°



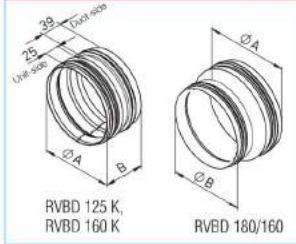
IsoPipe®	Ø 125 mm				Ø 160 mm				Ø 180 mm			
	Type	Ref. no.	Dim. in mm		Type	Ref. no.	Dim. in mm		Type	Ref. no.	Dim. in mm	
Elbow 90° with socket	IP-B 125/90	9398	125	157	—	—	—	—	—	—	—	—
Elbow 90° w. inside connector	—	—	—	—	IP-B 160/90	9451	160	192	IP-B 180/90	9452	180	212



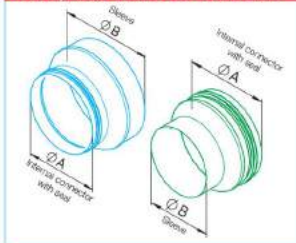
Sticky tape / Casing clamp



Duct piece to unit connection



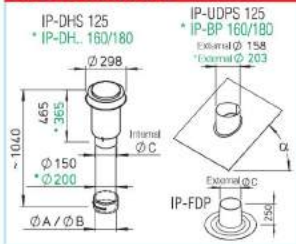
Duct piece to distribution box



Duct piece for KWL® HygroBox and undersoil heat exchanger



Roof terminations



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

IsoPipe®	Ø 125 mm			Ø 160 mm			Ø 180 mm		
	Type	Ref. no.	Dim. in mm Ø A B	Type	Ref. no.	Dim. in mm Ø A B	Type	Ref. no.	Dim. in mm Ø A Ø B
Connector with seal to connect to KWL® unit									
- with socket DN 125	RVBD 125 K	3414	125 70	—	—		—	—	
- with socket DN 160	—	—		RVBD 160 K	3415	160 70	RVBD 180/160	9589	180 160

All duct pieces made from galvanised steel.

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

All duct pieces made from galvanised steel.

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

All duct pieces made from galvanised steel.

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

* Please order roof outlets and roof pantries each separately.

IsoPipe® facade panels



IsoPipe® facade panels made from high-grade steel for connection to outside air and exhaust air ducts.

Properties

All IsoPipe® facade panels are made from high-grade stainless steel. Alternatively available in coated version (type B) for use in environments with severe air pollution or high salt concentrations in the air (near the coast).

Use and installation

Facade combination panel IP-FKB

Designed for the compact installation of IsoPipe® outside air and exhaust air ducts with just one facade panel. Universally applicable for horizontal or vertical installation.

Exhaust air spigots can be posi-

tioned on the right, left or on top.

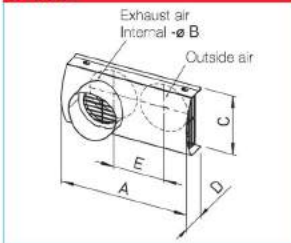
Exhaust air facade panel IP-FBF

For the IsoPipe® ducting system. Horizontal installation. The exhaust air is horizontally discharged directly through the pipe nozzles.

Outside air facade panel IP-FBA

For the IsoPipe® ducting system. Horizontal installation. The outside air intake takes place on both sides.

IP-FKB



IsoPipe®	Ø 125 mm					Ø 160 mm					Ø 180 mm										
	Type	Ref. no.	Dim. in mm				Type	Ref. no.	Dim. in mm				Type	Ref. no.	Dim. in mm						
Facade combination panel	Type	Ref. no.	A Ø B C D E				Type	Ref. no.	A Ø B C D E				Type	Ref. no.	A Ø B C D E						
			A Ø B C D E						A Ø B C D E						A Ø B C D E						
– Stainless steel	IP-FKB 125	2689	420	157	200	100	170	IP-FKB 160	2694	480	192	240	118	210	IP-FKB 180	2695	520	212	290	150	230
	– Stainless steel, with additional coating	IP-FKB 125 B	2661	420	157	200	100	170	IP-FKB 160 B	2662	480	192	240	118	210	IP-FKB 180 B	2663	520	212	290	150

Exhaust air right, left or upward.

IP-FBF



IsoPipe®	Ø 125 mm				Ø 160 mm				Ø 180 mm									
	Type	Ref. no.	Dim. in mm			Type	Ref. no.	Dim. in mm			Type	Ref. no.	Dim. in mm					
Facade panel	Type	Ref. no.	A Ø B C D			Type	Ref. no.	A Ø B C D			Type	Ref. no.	A Ø B C D					
			A Ø B C D					A Ø B C D					A Ø B C D					
– Stainless steel, exhaust air	IP-FBF 125	3126	230	157	200	78	IP-FBF 160	3128	265	192	240	97	IP-FBF 180	3131	285	212	260	126
	– Stainless steel, exhaust air with additional coating	IP-FBF 125 B	2901	230	157	200	78	IP-FBF 160 B	2902	265	192	240	97	IP-FBF 180 B	2903	285	212	260

IP-FBA



IsoPipe®	Ø 125 mm			Ø 160 mm			Ø 180 mm								
	Type	Ref. no.	Dim. in mm			Type	Ref. no.	Dim. in mm			Type	Ref. no.	Dim. in mm		
Facade panel	Type	Ref. no.	A C D			Type	Ref. no.	A C D			Type	Ref. no.	A C D		
			A C D					A C D					A C D		
– Stainless steel, outside air	IP-FBA 125	3125	230	200	78	IP-FBA 160	3127	265	240	97	IP-FBA 180	3130	285	260	126
	– Stainless steel, outside air with additional coating	IP-FBA 125 B	2664	230	200	78	IP-FBA 160 B	2665	265	240	97	IP-FBA 180 B	2666	285	260

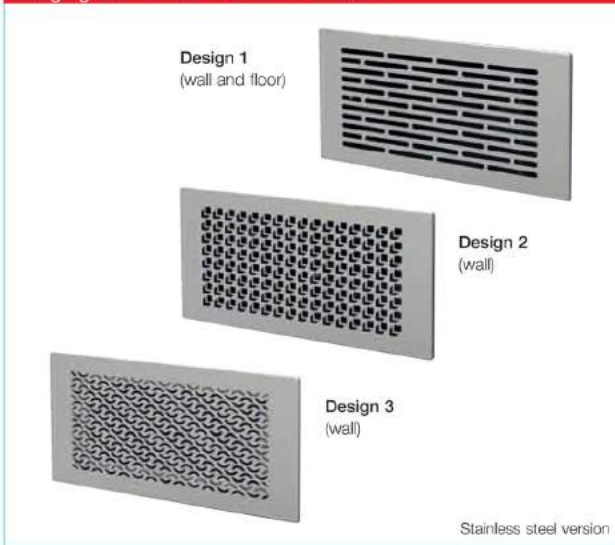
Installation

Type IP-FKB universally applicable for horizontal or vertical installation. Exhaust air right, left or upward. The figure to the left shows horizontal installation on outside wall.

Types IP-FBF and IP-FBA for horizontal installation.



Design grilles for wall and floor installation



The attractive wall-grille in three elegant designs (stainless steel or coated signal white) fit perfectly in the room ambience and ensure a pleasant draught-free inflow of supply air.

■ Specification wall-grille set

- Grille for wall/floor boxes FRS-WBK 2-51.
- Set consists of: Metal wall-grille with mounting frame and insert filter.

■ Surfaces / Colours

- with powder-coating in white: FRS-WGS 1, FRS-WGS 2 and FRS-WGS 3.
- Made from high-grade stainless steel: FRS-WGS 1 E, FRS-WGS 2 E and FRS-WGS 3 E.

Floor-grille set for flush floor installation. Three-dimensional adjustable balancing mechanism for adjusting the grille to the different floor covering heights or for the alignment to overhanging walls or windows.

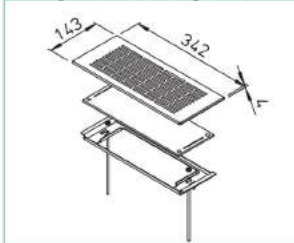
■ Specification floor-grille set

- Grille for multi-floor boxes FRS-MBK 2-75 and wall/floor boxes FRS-WBK 2-51.
- Set consists of: Grille frame, design floor-grille and insert filter.

■ Surfaces / Colours

- Made from high-grade stainless steel: FRS-BGS 1.

Wall-grille set / Design 1



Wall-grille set

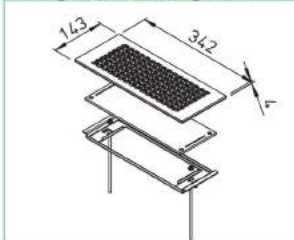
Type	Ref. no.	Colour
FRS-WGS 1	3881	White
FRS-WGS 1 E	3886	Stainl. steel

Spare filter mats for insert filter:
Type ELF-WGS, Ref. no. 3915, SU = 2 pcs.



- Wall-grille set FRS-WGS 1 E with wall/floor box FRS-WBK 2-51.

Wall-grille set / Design 2



Wall-grille set

Type	Ref. no.	Colour
FRS-WGS 2	3882	White
FRS-WGS 2 E	3892	Stainl. steel

Spare filter mats for insert filter:
Type ELF-WGS, Ref. no. 3915, SU = 2 pcs.



- Wall-grille set FRS-WGS 2 E with wall/floor box FRS-WBK 2-51.

Wall-grille set / Design 3



Wall-grille set

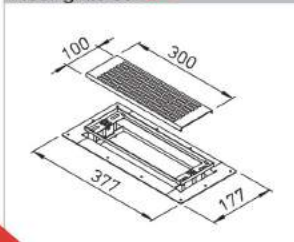
Type	Ref. no.	Colour
FRS-WGS 3	3883	White
FRS-WGS 3 E	3904	Stainl. steel

Spare filter mats for insert filter:
Type ELF-WGS, Ref. no. 3915, SU = 2 pcs.



- Wall-grille set FRS-WGS 3 E with wall/floor box FRS-WBK 2-51.

Floor-grille set



Floor-grille set

Type	Ref. no.	Colour
FRS-BGS 1	3878	Stainl. steel

Spare filter mats for insert filter:
Type ELF-BGS, Ref. no. 3914, SU = 2 pcs.



- Floor-grille set FRS-BGS 1 with wall/floor box FRS-WBK 2-51. Also fits multi-floor box FRS-MBK 2-75.

Air distribution system RenoPipe



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

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

■ Mounting

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

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

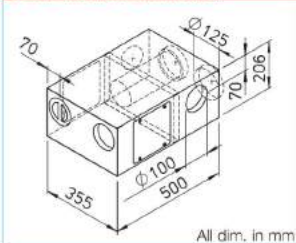
■ Features and advantages

- Components made from highly compressed EPS in white, which can be painted over.
- Fast surface mounting, without time-consuming cover suspensions and dry constructionworks.

■ Distribution system, mounting

- The used air of the kitchen and bathrooms is collected directly in the sound insulated combination distribution box. No need of extracted air outlets and separate attenuators.
- Asymmetrical rubber lip-seals provide airtight connection of the complete RenoPipe system.

Combination distributor

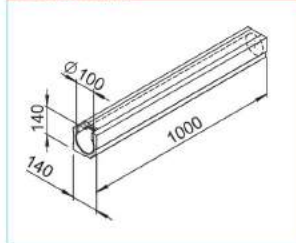


RenoPipe combination distribution box, supply air right

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

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

Duct section



Duct SU = 4 pcs.*

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

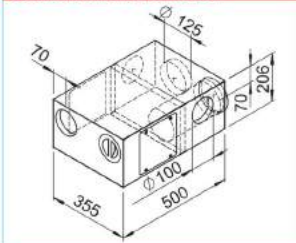
RP-K Ref. no. 3061

Duct with stucco profile

Like above, but with visually attractive stucco profile.

RP-SK SU = 4 pcs.* Ref. no. 3065

Combination distributor

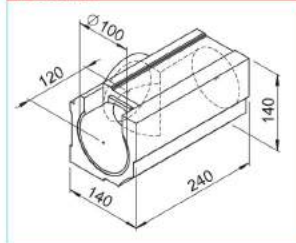


RenoPipe combination distribution box, supply air left

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

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

T-section



T-section SU = 4 pcs.*

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

RP-T Ref. no. 3062

T-section with stucco profile

Like above, but with visually attractive stucco profile.

RP-ST SU = 4 pcs.* Ref. no. 3066

Long connector set

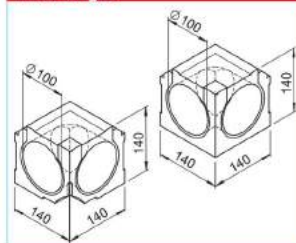


Long connector set

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

RP-LV Ref. no. 3029

Inner angle



Inner angle SU = 2 pcs.*

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

RP-IW Ref. no. 3075

Inner angle with section

Like above, but with visually attractive stucco profile.

RP-SIW SU = 2 pcs.* Ref. no. 3077

Short connector

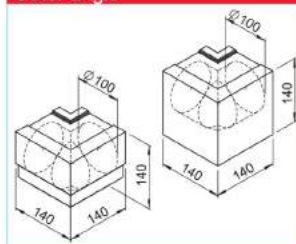


Short connector

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

RP-KV Ref. no. 3030

Outer angle



Outer angle SU = 2 pcs.*

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

RP-AW Ref. no. 3076

Outer angle with section

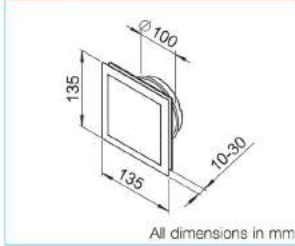
Like above, but with visually attractive stucco profile.

RP-SAW SU = 2 pcs.* Ref. no. 3078

* Supplied in packaging units.



Ventilation valve



Design ventilation valve

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

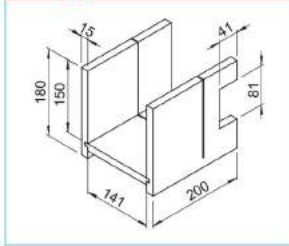
DLV 100 Ref. no. 3039

Replacement air filters

SU = 5 pc.*

ELF-DLV 100 Ref. no. 3042

Cutting guide

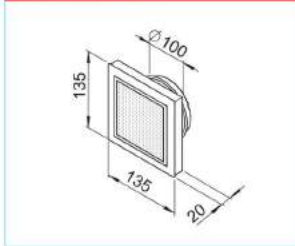


Cutting guide

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

RP-SH Ref. no. 3036

Ventilation valve

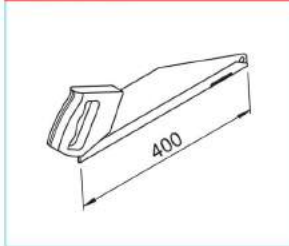


Design ventilation valve for supply air

Design ventilation valve for supply air operation, DN 100.

DLVZ 100 Ref. no. 3040

Precision saw

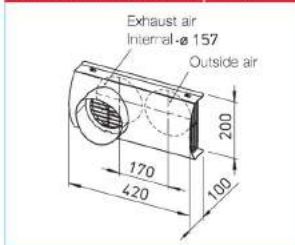


Precision saw

Special hand slitting saw for slight cuts.

RP-FS Ref. no. 3044

Facade combination panel



Facade combination panel

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

IP-FKB 125 Ref. no. 2689

With additional coating for use in environ. with severe air pollution or high salt concentration in air.

IP-FKB 125 B Ref. no. 2661

Clamp



Clamp

SU = 5 pcs.*

From high quality, impact resistant polymer.

RP-BK Ref. no. 3031

Exhaust air panel



Exhaust air panel

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

IP-FBF 125 Ref. no. 3126

With additional coating for use in environ. with severe air pollution or high salt concentration in air.

IP-FBF 125 B Ref. no. 2901

Seal



Seal

SU = 10 pcs.*

DN 100 from EPDM.

RP-LD Ref. no. 3033

Outside air panel



Outside air panel

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

IP-FBA 125 Ref. no. 3125

With additional coating for use in environ. with severe air pollution or high salt concentration in air.

IP-FBA 125 B Ref. no. 2664

Wall casing Final- and inspection lid

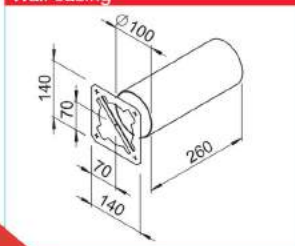


Wall casing Final- and inspection lid

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

RP-RD Ref. no. 3037

Wall casing

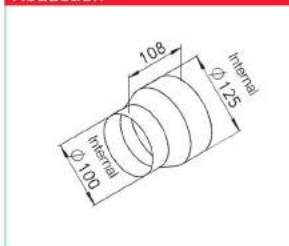


Wall casing

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

RP-WH Ref. no. 3035

Reduction



Reduction

From galvanised sheet steel.

RP-RZ 125/100 Ref. no. 3017

* Supplied in packaging units.

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



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

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

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

installation.

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

Note

FlexPipe® ducting system with outer-Ø: 63 mm, inner: 52 mm for air flow volume up to 20 m³/h see page 132

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

- FRS 75, round:
Outer-Ø: 75 mm, inner: 63 mm for air flow vol. up to 30 m³/h. For laying into concrete. High resilience (STIS ≥ 10 kN/m² to DIN EN 9969). Bending radius horizontal and vertical 150 mm.
- FRS 51, oval:
51 x 114 mm, for air flow volume up to 30 m³/h, ideal for space-saving laying e.g. on the unfinished floor or in the wall. Bending radius horizontal 300 mm, vertical 200 mm.

■ Laying, handling, initiation

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

■ Duct characteristics and advantages

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

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

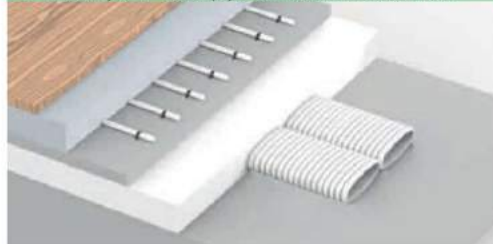
■ Laying-conception/installation

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

○ FlexPipe® plus round pipe in the concrete ceiling



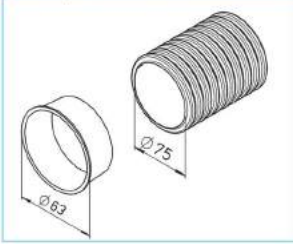
○ FlexPipe® plus oval pipe on the unfinished floor



○ FlexPipe® plus allows any round-oval-combination



FlexPipe® duct round ○

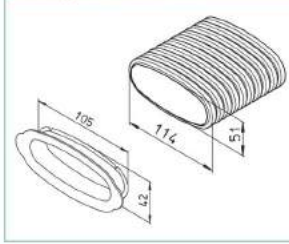


FlexPipe® duct (bundle = 50 running mtrs)

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

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

FlexPipe® duct oval ○

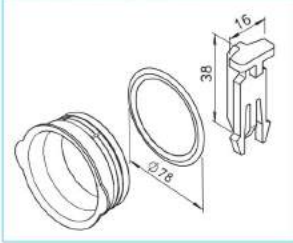


FlexPipe® duct oval (bund = 20 run m)

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

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

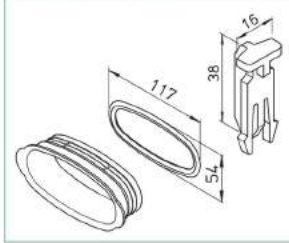
Cap, seal ring, clip ○



Cap, seal ring, clip

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

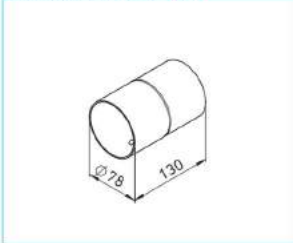
Cap, seal ring, clip ○



Cap, seal ring, clip

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

Connection sleeve ○

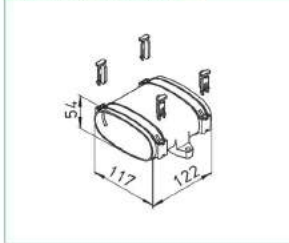


Connection sleeve

Type	Ref. no.
FRS-VM 75 ○	2914

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

Connection sleeve ○

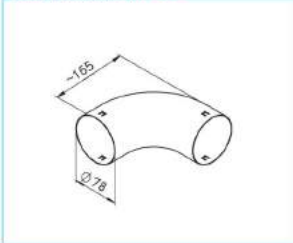


Connection sleeve

Type	Ref. no.
FRS-VM 51 ○	3862

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

Short elbow 90° ○

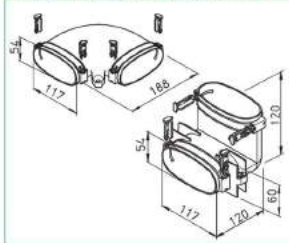


Short elbow 90°

Type	Ref. no.
FRS-B 75 ○	2994

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

Elbow horizontal / vertical ○



Elbow horizontal / vertical

Type	Ref. no.
FRS-BH 51 ○	3863
FRS-BV 51 ○	3859

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

■ Any combination of round and oval pipe

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

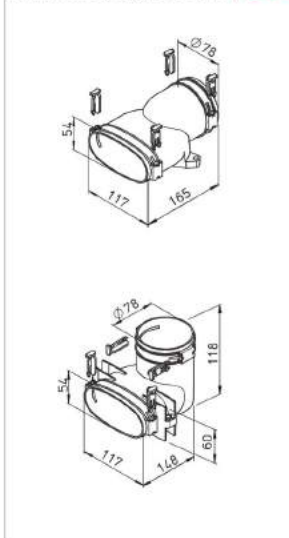


Vertical and horizontal adapters allow each round/oval, oval/oval and round/round combination.



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

Adaptor straight / vertical ○

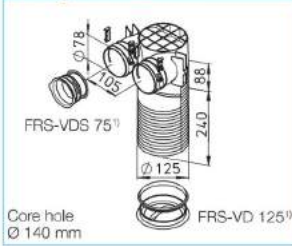


Adaptor straight / vertical

Type	Ref. no.
FRS-ÜG 51-75 ○	3861
Adaptor vertical	
FRS-ÜV 51-75 ○	3860

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

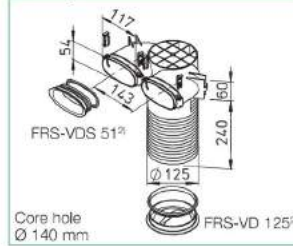
Ceiling-/wall outlet



Ceiling-/wall outlet

Type Ø 75 mm Ref. no.
FRS-DWK 2-75/125 3857
Extension for ceilings > 240 mm
FRS-VV 125 3906
 Ceiling-/wall outlet to connect max. 2 round pipes FRS-R 75. For intake and extract valves DN 125. Integrated bench marks for precise shortening. Incl. spigot cap with seal ring¹⁾ 75 mm and DN 125 (each 1 pc). With integrated fixing brackets, incl. pipe fixing clips (4 pcs). From impact-resistant polypropylene.

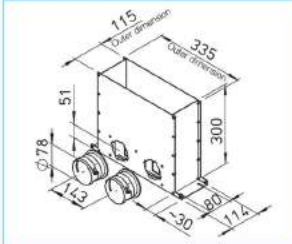
Ceiling-/wall outlet



Ceiling-/wall outlet

Type 114 x 51 mm Ref. no.
FRS-DWK 2-51/125 3858
Extension for ceilings > 240 mm
FRS-VV 125 3906
 Ceiling-/wall outlet to connect max. 2 oval pipes FRS-R 51. For intake and extract valves nom. dia. 125. Integrated bench marks for precise shortening. Incl. spigot cap with seal ring¹⁾ 75 mm and DN 125 (each 1 pc). With integrated fixing brackets, incl. pipe fixing clips (4 pcs). From impact-resistant polypropylene.

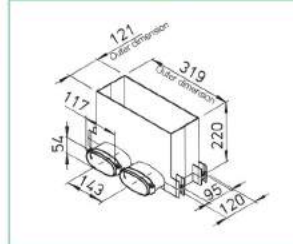
Multi-floor outlet



Multi-floor outlet

Type Ø 75 mm Ref. no.
FRS-MBK 2-75 3872
 Multi-floor outlet to connect max. 2 round pipes FRS-R 75. Suitable for casting in concrete ceiling, consisting of:
 - Floor outlet for grille in robust sheet-metal design
 - 2 pcs. single spigots (round) and 1 pc. spigot cap with sealing (round)

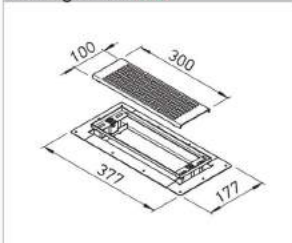
Multi-floor outlet



Multi-floor outlet

Type 114 x 51 mm Ref. no.
FRS-WBK 2-51 3877
 Multi-floor outlet to connect max. 2 oval pipes FRS-R 51. Suitable for casting in concrete ceiling, consisting of:
 - Polymer outlet from impact-resistant polypropylene with air volume regulation. For use with FRS-WGS or FRS-BGS. 1 pc. spigot cover with seal (oval).

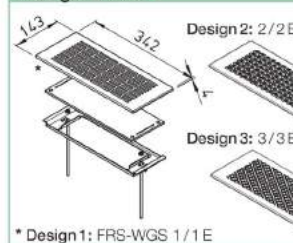
Floor grille kit



Floor grille kit

Type Ref. no.
FRS-BGS 1 3878
 Floor grille kit from high-quality steel for multi-floor outlet FRS-MBK 2-75 and wall/floor outlet FRS-WBK 2-51, consisting of:
 - Grille frame with height adjustment for threshold-free installation in flooring
 - Penetration-proof design floor grille
 - Insert filter (spare filter mat ELF-BGS, Ref. no. 3914, SU = 2 pcs.)

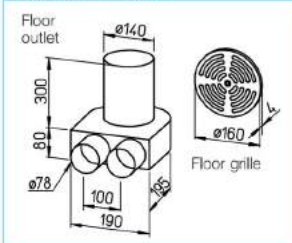
Wall grille set



Wall grille set

Type Ref. no.
FRS-WGS 1 3881 white
FRS-WGS 2 3882 white
FRS-WGS 3 3883 white
FRS-WGS 1 E 3886 stainless st.
FRS-WGS 2 E 3892 stainless st.
FRS-WGS 3 E 3904 stainless st.
 Wall grille set with installation frame and insert filter for FRS-WBK 2-51. Grille designs see p. 125.

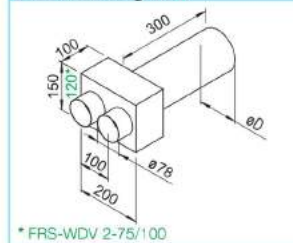
Floor outlet set



Floor outlet set

Type Ref. no.
Ø 75 mm no.
FRS-BKGS 2-75 9992
 Floor outlet with grille consisting of:
 - 1 pc. floor outlet for grille nom. dia. 160
 - 1 pc. floor grille from high-quality steel with adjustable air flow.
 - 1 pc. cap

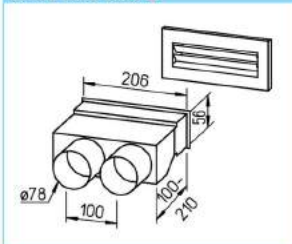
Wall mounting kit



Wall mounting kit for valve connection

Type Ref. no. Ø D
Ø 75 mm no. mm
FRS-WDV 2-75/100 9621 100
FRS-WDV 2-75/125 9622 125
 Wall mounting kit including plaster cover plate and cap (1 pc). For connection of supply or extract air valves nom. dia. 100 or 125.

Grille with box



Grille with box, straight

Type Ref. no.
Ø 75 mm no.
FRS-WDS 2-75 9994
 Grille with box consisting of:
 - outlet box with sliding type fitting
 - grille white (FK-WA 200 W), 250 x 103 mm
 - 1 pc. cap

Basic site package



Basic site package

Type Ref. no. Ø D
FRS-RP 75 9397 75
 FlexPipe® duct system basic site package:
 - 3 pcs. FRS-R 75 (Ref. no. 2913)
 - 2 pcs. FRS-VK 10-75/160 (Ref. no. 3847)
 - 8 pcs. FRS-DWK 2-75/125 (Ref. no. 3857)
 - 7 pcs. FRS-B 75 (Ref. no. 2994)
 - 7 pcs. FRS-VM 75 (Ref. no. 2914)
 - 4 SU FRS-DR 75 (Ref. no. 2916)
 - 1 SU FRS-VD 75 (Ref. no. 2915)
 - 1 pc. Cold shrinking strip KSB (Ref. no. 9343)
 Choosing the Helios basic site package, saves
 - money as you will benefit from the package price,
 - time because everything you need is already included. That way you can start right away.

Grille with elbow box



Grille with elbow box, 90°

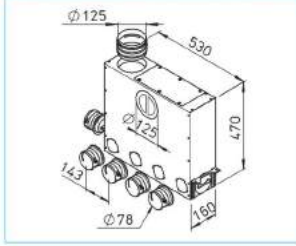
Type Ref. no.
Ø 75 mm no.
FRS-WBS 2-75 9996
 Grille with elbow box consisting of:
 - elbow box with sliding type fitting
 - grille white (FK-WA 200 W), 250 x 103 mm
 - 1 pc. cap



¹⁾ Integrated sealing FRS-VDS 75, Ref.-No. 3855 and -VD 125, Ref.-No. 3865. for single spigot- respectively pipe connection opening at the distribution box.

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

Multi-distribution box 4+1

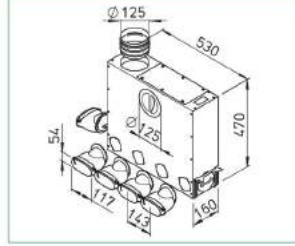


Multi-distribution box¹⁾

Type	Ref.	Ø NW
FRS-MVK 4+1-75/125	3843	125

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

Multi-distribution box 4+1

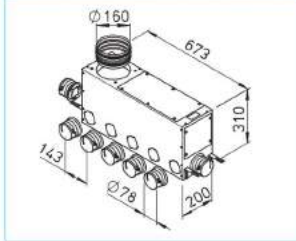


Multi-distribution box¹⁾

Type	Ref.	Ø NW
FRS-MVK 4+1-51/125	3841	125

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

Multi distribution box 5+2-fold

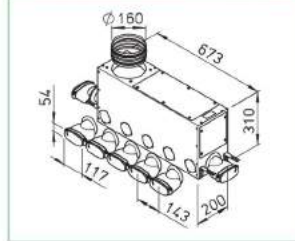


Multi distribution box¹⁾

Type	Ref.	Ø NW
FRS-MVK 5+2-75/160	3836	160

For universal installation in/on raw concrete ceiling. With height-adjustable mounting brackets. Pipe connections DN 160 horizontal or vertical are optional. 12 connection options for up to 7 ventilation ducts FRS-R 75. With sound-absorbing lining and large inspection opening.

Multi distribution box 5+2-fold

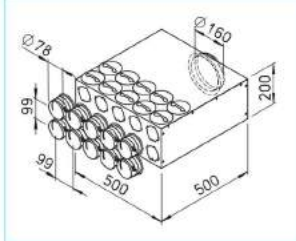


Multi distribution box¹⁾

Type	Ref.	Ø NW
FRS-MVK 5+2-51/160	3838	160

For universal installation in/on raw concrete ceiling or as a floor distributor. With height-adjustable mounting brackets. Pipe connections DN 160 horizontal or vertical are optional. 12 connection options for up to 7 oval ventilation ducts FRS-R 51. With sound-absorbing lining and large inspection opening.

Distribution box 10-fold

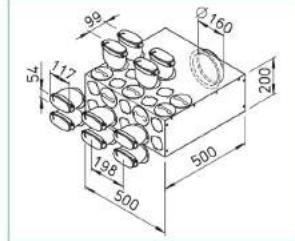


Distribution box 10-75²⁾

Type	Ref.	Ø NW
FRS-VK 10-75/160	3847	160

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

Distribution box 10-fold

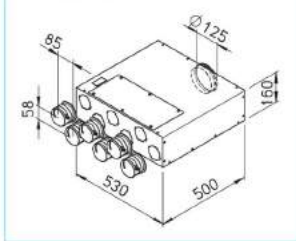


Distribution box 10-51²⁾

Type	Ref.	Ø NW
FRS-VK 10-51/160	3849	160

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

Flat distribution box 6-fold

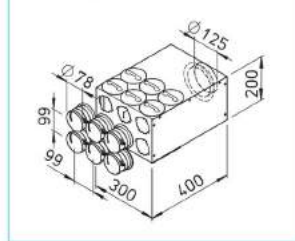


Distribution box 6-75, flat-design¹⁾

Type	Ref.	Ø NW
FRS-FVK 6-75/125	3845	125

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

Distribution box 6-fold

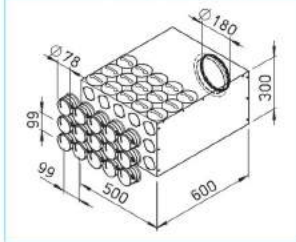


Distribution box 6-75¹⁾

Type	Ref.	Ø NW
FRS-VK 6-75/125	3846	125

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

Distribution box 15-fold

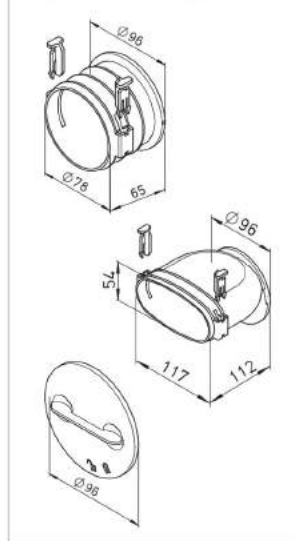


Distribution box 15-75²⁾

Type	Ref.	Ø NW
FRS-VK 15-75/180	3848	180

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

Single spigot, cap

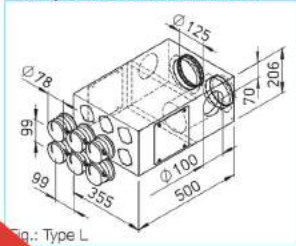


Single spigot, bayonet catch cap

Type	Ref.	SU
FRS-ES 75	3852	1 St.
FRS-ES 51	3851	1 St.
FRS-VDB	3853	1 St.

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

Compact distribution box



Compact distribution box¹⁾

Type	Ref.	Ø NW
FRS-KVK 6-75/125 L*	3873	125
FRS-KVK 6-75/125 R*	3874	125

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

Fig.: Type L

incl. 2 pcs. caps.

²⁾ incl. 4 pcs. caps.



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

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

Available in two sizes and designs

- FlexPipe® FRS 63
Outer-Ø: 63 mm, inner-Ø: 52 mm for air flow vol. up to 20 m³/h.
- FlexPipe® plus
Outer-Ø: 75 mm, inner-Ø: 63 mm for air flow vol. up to 30 m³/h. Can be combined with oval pipe FRS-R51 and oval components, see page 128 on.

Characteristics and advantages

- Special ventilation duct made of hygienically safe PE-HD new material, odourless.
- The two-layered structure – corrugated outside, smooth inside and antistatic – guarantees:
 - very low air flow resistance and high sound absorption.
 - minimal dirt deposits.
 - easy to clean.

Laying

- The FlexPipe® polymer pipe has a high resilience ($S_{1024} > 8 \text{ kN/m}^2$) and can simply be laid directly into, on or under the concrete ceiling in the desired course due to the high flexibility.
- Air- and watertight connection is simply made by use of the FRS seal rings.

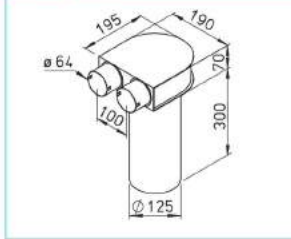
FlexPipe® duct round



FlexPipe® duct round (bund = 50 run. m)

Type	Ref. no.	Dim. in mm	
Ø 63 mm		Outer-Ø	Inner-Ø
FRS-R 63	9327	63	52

Ceiling outlet

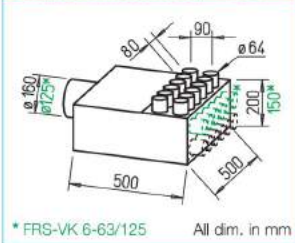


Ceiling outlet 2) for valves DN 125

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

Ceiling outlet incl. cover to avoid soil in the system during construction work. For intake and extract valves nom. dia. 125 (accessories, see page 136).

Distribution box 6-63, 12-63



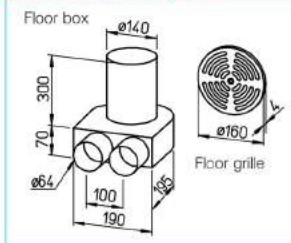
* FRS-VK 6-63/125 All dim. in mm

Distribution box 6-63, 12-63¹⁾

Type	Ref. no.	Ø NW
FRS-VK 6-63/125	9355	125
FRS-VK 12-63/160	9336	160

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

Floor outlet with grille

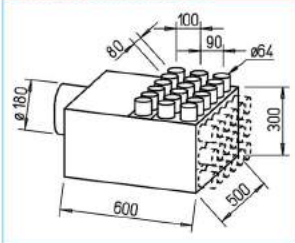


Floor outlet with grille²⁾

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

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

Distribution box 18-63

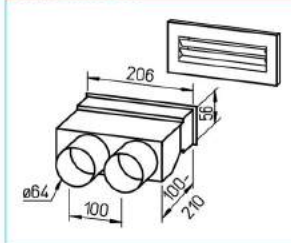


Distribution box 18-63¹⁾

Type	Ref. no.	Ø NW
FRS-VK 18-63/180	9364	180

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

Grille with box

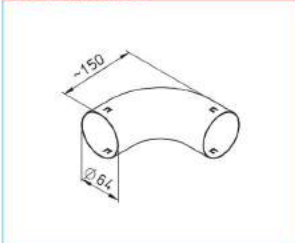


Grille with box, straight²⁾

Type	Ref. no.
FRS-WDS 2-63	9993

Grille with box consisting of:
 - outlet box with sliding type fitting
 - grille white (FK-WA 200 W), 250 x 103 mm

Short elbow 90°

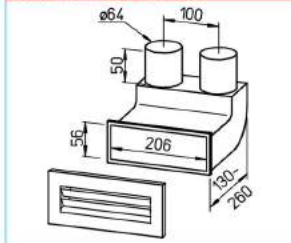


Short elbow 90°

Type	Ref. no.
FRS-B 63	9348

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

Grille with elbow box

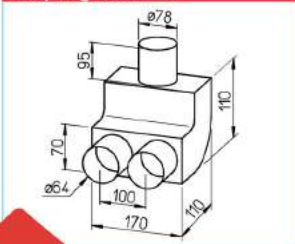


Grille with elbow box, 90°²⁾

Type	Ref. no.
FRS-WBS 2-63	9995

Grille with box consisting of:
 - outlet box with sliding type fitting
 - grille white (FK-WA 200 W), 250 x 103 mm

Adapting elbow 90°

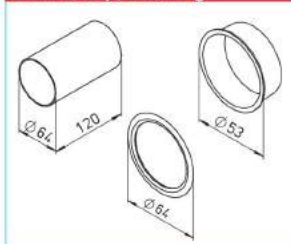


Adapting elbow 90°

Type	Ref. no.
FRS-B 75/2-63	9341

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

Sleeve, cap, seal ring



Sleeve, cap, seal ring

Type	Ref. no.	SU
FRS-VM 63 Sleeve	9329	
FRS-VD 63 Cap	9330	10 St.
FRS-DR 63 Seal ring	9331	10 St.

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



²⁾ ncl. 1 pc. cap.

Flat polymer duct system F



■ Laying

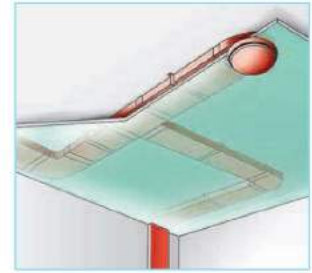
- Easy and fast laying due to the low weight.
- Joining of sections of all kinds allows numerous possibilities.
- Space-saving and universal.
- Ideal for renovation of existing buildings and prefabricated houses.

■ Characteristics

All sections of white, antistatic polymer. Hardly inflammable B1, DIN 4102. Max. temperature +50 °C.

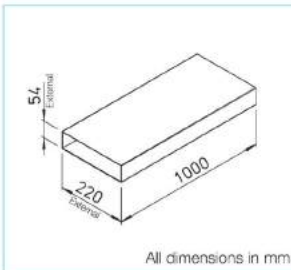
■ Duct-concept and mounting

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



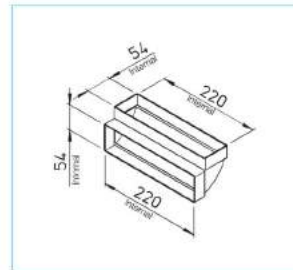
- Cross-section surface for air flow volume of up to 150 m³/h.
- The connections of the formed parts are built as slip-in sleeves; duct connection is done by outside-connection sleeves.
- Requires air-tight connection achieved by using duct tape (accessories).
- Fixation of the pieces using mounting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

KWL® with
heat recovery

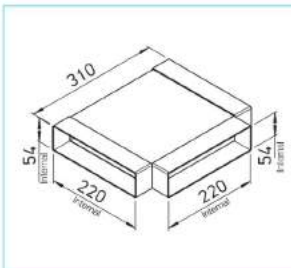


Flat duct w/o sleeve, length 1 m
FOM Ref. no. 0624

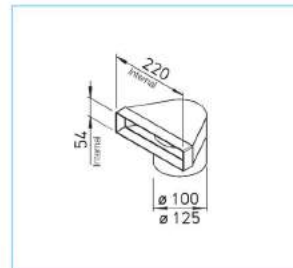
All dimensions in mm



90°-bend vertical
FBV 90 Ref. no. 0630

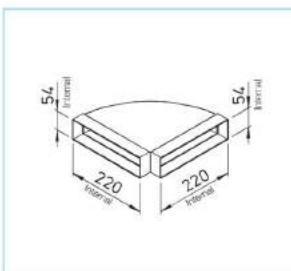


Flat duct T-piece
FTS Ref. no. 0631

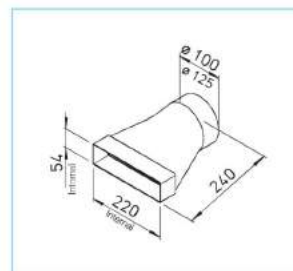


End piece
with connection from Ø to □
FE 100 Ref. no. 0621
FE 125 Ref. no. 0622

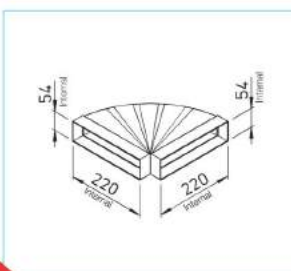
End piece
with connection from Ø to □
with 1 mtr. tube and 2 brackets
FU 90/100 Ref. no. 0627
FU 90/125 Ref. no. 0638



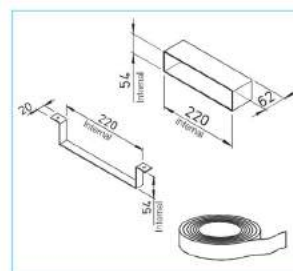
90°-bend horizontal
FBH 90 Ref. no. 0629



Connection
from Ø to □
FUE 100 Ref. no. 0628
FUE 125 Ref. no. 0639



Flexible bend
FBO Ref. no. 0632



Flat duct connector
FV Ref. no. 0625

Mounting bracket
FB Ref. no. 0626

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



Flat duct system FK



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

■ Characteristics

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

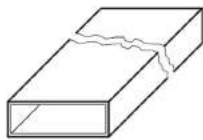
■ Available in two sizes

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

■ Ducts conception and mounting

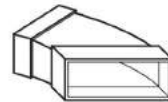
- Flat design and rigid construction allow a trouble-free laying on the floor screed.
- Connection via external connectors. Fittings with sockets (35 mm insertion). Therefore, the absolutely smooth inner surface ensures low air flow resistance and no barriers for dirt. However, disinfection is possible,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

Flat duct



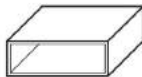
Flat duct				
Type	Ref. no.	Dim in mm		
		Width	Height	Length
150 x 50 mm				
FK 150	2905	150	50	1500
200 x 50 mm				
FK 200	2906	200	50	1500

Elbow, horizontal 45°



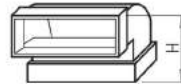
Elbow, horizontal 45°				
Type	Ref. no.	Dim in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BH 150/45	2910	153	53	45°
200 x 50 mm				
FK-BH 200/45	2912	203	53	45°

Flat duct connector



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

Elbow, vertical 90°



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

Mounting bracket



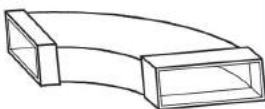
Mounting bracket				
Type	Ref. no.	Dim in mm		
		Width	Height	Length
150 x 50 mm				
FK-B 150	2907	151	52	30
200 x 50 mm				
FK-B 200	2908	201	52	30

Elbow, vertical 45°



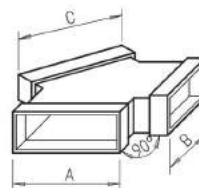
Elbow, vertical 45°				
Type	Ref. no.	Dim in mm		
		Width	Height	Radius
150 x 50 mm				
FK-BV 150/45	2917	153	73	45°
200 x 50 mm				
FK-BV 200/45	2918	203	73	45°

Elbow, horizontal 90°



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

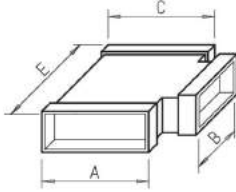
Y-Branch



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



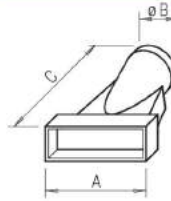
T-piece



T-piece

Type	Ref. no.	Dim. in mm			
		A	B	C	E
FK-T 150/150/150	2921	153	153	153	250
FK-T 150/150/200	2923	153	153	203	390
FK-T 150/200/150	2926	153	203	153	300
FK-T 200/150/200	2925	203	153	203	250
FK-T 150/200/200	2924	153	203	203	440
FK-T 200/200/200	2922	203	203	203	300

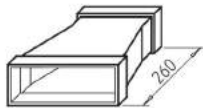
Adaptor



Adaptor

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

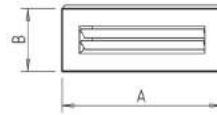
Reducer



Reducer

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

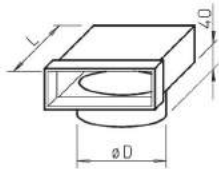
Grille



Wall and ceiling grill

Type	Ref. no.	Colour	Dim. in mm	
			A	B
200 x 50 mm				
FK-WA 200 W	9350	white	250	103
FK-WA 200 AL	9351	alu	250	103

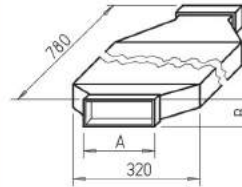
End piece – spiral duct



End piece with duct connector

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

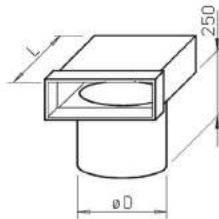
Attenuator



Attenuator

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

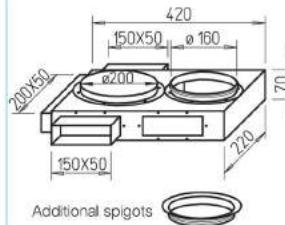
End piece – valve



End piece with valve connector

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

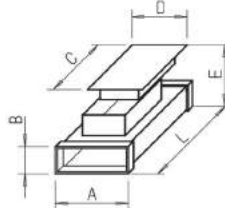
Junction box



Junction box

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

Access opening piece



Access opening piece

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

E can be adapted from 105-130 mm.

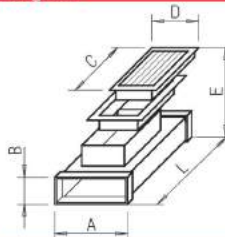
End cover



End cover

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

Floor grille



Aluminium floor grille with casing

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

E can be adapted from 112-152 mm.

Sealing strip



Sealing strip

Type	Ref. no.
Cold shrinking strip	
KSB	9343 50 mm width 15 mtrs
Alu-cold shrinking strip	
KSB ALU	9344 50 mm width 15 mtrs
Strip	
KLB	0619 50 mm width 20 mtrs

Extract air elements



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

Supply air elements



Design ventilation and poppet valves
For air supply with higher and lower air flow speeds and/or resistances.
Type DLV 125 with compact and attractively designed fascia and integrated filter

Supply-extract-valve ZAV



Supply-extract-valve ZAV
Elegant polymer valve for wall and ceiling installation. Can be used as wall element with open front grille. Ceiling installation possible with closed front grille.
Flexible use as supply or extract air valve possible.

Attachment filter element VFE



Attachment filter element VFE
Covers poppet valves in case of contaminated air. Prevents fat and dust deposits.
Casing made from galvanised steel, white, powder coated.
Filter made from aluminium with 324 cm² filter surface and aluminium frame.

Control line



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

Adapter board

Adapter from ribbon cable to wires or cables. For connecting KNX module and RJ10 control line. Description KNX module see KWL® unit product pages.

Type KWL-RJ10 KL No. 4277

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Design valve DLV¹⁾ for extraction							
	DLV 100		3039	DLV 125	3049		
	ELF-DLV 100²⁾		3042	ELF-DLV 125²⁾	3058		

Polymer poppet valve KTVA							
KTVA 75/80	0940	KTVA 100	0941	KTVA 125	0942	KTVA 160	0943
Metal poppet valve for extraction (for areas, in which inflammable comp. are not prescribed)							
MTVA 75/80	8868	MTVA 100	8869	MTVA 125	8870	MTVA 160	8871

¹⁾ With integrated filter. ²⁾ Replacement air filters for DLV, SU = 5 pcs.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Ventilation grille LGK, Design valve DLV for supply							
LGK 80	0259	DLVZ 100	3040	DLV 125	3049	ELF-DLV 125¹⁾	3058

Polymer poppet valve KTVZ							
KTVZ 80	2762	KTVZ 100	2736	KTVZ 125	2737	KTVZ 160	2738
Metal poppet valve for supply (for areas, in which inflammable comp. are not prescribed)							
MTVZ 75/80	9603	MTVZ 100	9604	MTVZ 125	9605	MTVZ 160	9606

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

Ø 80		Ø 100		Ø 125		Ø 160	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
Polymer valve for supply and extract air ZAV							
ZAV 80	3079			ZAV 125	3080		

Type VFE 70 Ref. no. 2552

Type VFE 90 Ref. no. 2553

Type ELF/VFE Ref. no. 2554

Replacement air filters, SU = 2 pcs.

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

* Other lengths on request.

Other accessories	Page
- Enthalpy heat exchanger	84 on
- HygroBox	116 on
- Undersoil heat exch.	118 on
- Insulated ducting syst.	122 on
- Air distrib. systems	126 on
- Fire prot. elements	516 on

Accessories details	Page
Dimensions, further technical information as well as other sizes:	
Water heater batteries and temp. control systems	431 on
Grilles, ducts, duct components, roof terminations	487 on
Extract air elements, attachment filter elements,	500 on
Valves	508 on



Shutters



Attenuators



Ø 125	Ø 160	Ø 200	Ø 250	Ø 315	Ø 355	Ø 400	Ø 560
Flanged flexible connector – For sound insulation, incl. 2 pcs. hose clamps							
—	—	FM 200 1670	FM 250 1672	FM 315 1674	FM 355 1675	FM 400 1676	FM 560 1679
Back draught shutter – manual or automatic, in-line installation, casing made from galvanised sheet steel or *polymer							
RSKK* 125 5107	RSK 160 5669	RSK 200 5074	RVM** 250 2576	RVM** 315 2578	RVM** 355 2579	RVM** 400 2580	RVM** 560 2583
Lock cold smoke valves – For mains common in multi-storey buildings							
KAK 125 4098	KAK 160 4099	KAK 200 4100	—	—	—	—	—
Flexible attenuator (FSD) or elastic silencer (SDE) – Aluminium duct							
				Circular attenuator (RSD) – Galv. sheet steel			
SDE 125 0789	SDE 160 0790	FSD 200 0679	FSD 250 0680	FSD 315 0681	FSD 355 0682	FSD 400 0683	—
—	—	—	RSD 250 8739	RSD 315 8745	RSD 355 8748	RSD 400 8751	RSD 560 8759

Water heater battery



Type	Ref. no.	Suitable for pipe Ø mm	Air-side data				Water data ¹⁾		Weight kg	Suitable temperature control system	
			Heat power kW ¹⁾	kW ²⁾	Δ T air K ¹⁾	K ²⁾	at V m ³ /h	Pressure loss Δp _w kPa		at water flow rate l/h	Type
WHR 100	9479	100	1.9	0.9	35	17	150	1	84	3.2	WHST 300 T50 8820
WHR 125	9480	125	2.6	1.1	29	13	250	2	115	3.2	WHST 300 T50 8820
WHR 160	9481	160	5.5	3.1	38	22	400	11	245	4.9	WHST 300 T50 8820
WHR 200	9482	200	7.2	4.1	33	19	600	17	317	4.9	WHST 300 T50 8820
WHR 250	9483	250	10.7	6	37	21	800	8	470	6.9	WHSHE 24 V 8318
WHR 315	9484	315	18.3	10.4	36.2	21	1400	9	810	9.0	WHSHE 24 V 8318
WHR 400	9524	400	26.2	15	36	21	2000	11	1060	12.5	WHSHE 24 V 8318

Ventilation door grille



Ventilation door grille

Unobtrusive, opaque ventilation grille break-proof polymer for installation in door panel.

Detailed description see product page.

Type LTGW

Polymer, white.

Ref. no. 0246

Type LTGB

Polymer, brown.

Ref. no. 0247

Cleaning kit



Cleaning kit for distribution systems FlexPipe® and RenoPipe

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

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

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

Delivery in practical transportation bag.

Scope of delivery: 1 piece of each

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

Type KWL-RS Ref. no. 2797

Air temperature control system



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

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

Temperature range 8 – 38 °C.

WHST 300 T38 Ref. no. 8817

Air temperature control system



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

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

Temperature range 20 – 50 °C.

WHST 300 T50 Ref. no. 8820

Hydraulic unit



Hydraulic unit

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

WHSHE 24 V (0-10V) No. 8318

Clock timer



Clock timer

Digital with LCD-display or the automatic control of the operation, all days of the week can be programmed. For surface and flush mounting.

Dim. mm (WxHxD) 85 x 85 x 52

Type **WSUP** Ref. no. 9990

For switchboard installation (2 space units required).

Dim. mm (WxHxD) 36 x 90 x 69

Type **WSUP-S** Ref. no. 9577

WHR: The above values apply for an intake temperature of 0 °C and flow/return water temperature: ¹⁾ 90/70 °C, ²⁾ 60/40 °C.



The following information completes the "General Technical Information" section.

Types

- Helios offer a wide range of products for various applications, i.e. particular help for problem solutions.
- Standard and high-performance fans in industrial design are available as standard in more than 20 standard sizes and more than 1000 types; many of which are shown in this catalogue.
- Closely matched air flow volume and pressure can be achieved on larger fans with a maximum diameter of 7100 mm through adjustable pitch angle. Four standard casing types are available.
- Types HQ, HW and HRF are available up to standard size 500 mm with highly-efficient EC motor technology for particularly energy-saving application and lowest operating costs.

Types in this catalogue

1. Wall fan HQ

Square plate with inlet cone
Casing made from galvanised sheet steel. Motor with terminal box and motor side guard.

2. Built-in fans

HW, AVD DK
Circular plate with inlet cone
Casing made from galvanised sheet steel. Motor with terminal box and motor side guard.

3. Built-in wall fan HS

Cylindrical duct case with spigot ends
For flush, wall or in-line duct installation. Casing made from galvanised sheet steel with circular stiffening rings.

4. In-line fans

HRF, AVD RK
Cylindrical duct with flanges on both ends
For direct in-line installation in ducting. Flanges made to DIN 24155, PT. 3. Casing made from galvanised sheet steel, additional terminal box (IP 55) on outer casing.

Motor

- AC types
Robust 1 ph. or 3 ph. internal rotor motor with thermal contacts in the windings. Ball bearings lubricated for life.
- EC types
Highly-efficient, speed controllable external rotor motor protected to IP 44 or 54. Ball bearings lubricated for life.

Impellers

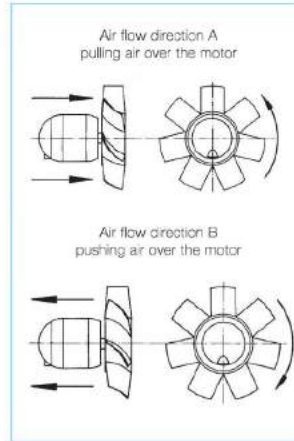
- Depending on the performance requirements the impellers are made from various materials; see product pages. The standard design is made from reinforced polymers. Other materials, aluminium or steel, are available on special order.
- All impellers feature:
 - Low noise characteristics.
 - High efficiency.
 - Vibration free operation due to dynamic balancing to DIN ISO 1940 T.1 – grade 6.3.
- Impellers made from other materials are available upon request.
- The standard models are suitable for air flow temperature from -30° to +60 °C. For higher temperatures metal impellers are available to order. See information on the product pages.

Pitch angle

- The standard products up to 630 mm Ø are equipped with fixed impeller blades.
- Starting from nominal size 710 mm (except type HQW 710/6), the impeller blades are available with order related pitch angles.
- The installation sizes Ø 800/4, 900/4 and/6 as well as Ø 1000 mm have adjustable blades at standstill. This enables the fan to provide the exact duty required. The pitch angle is factory set (must be stated when ordering). The motors are selected using their maximum performance (see table on product page). The maximum pitch angle shown must not be exceeded as the motor will be overloaded.

Air flow direction

- All fans (except HRF and AVD RK) come with the air flow direction
- A = pulling air over the motor** as standard. Air flow direction **B = pushing air over the motor** is available for most models with an additional charge. HRF and AVD RK come with air flow direction B as standard.
- The air flow direction can be changed after supply, should it be required, for most AC high-performance axial fans. To do so you have to:
 1. Change the direction of rotation of the motor by changing the terminals on the terminal board.
 2. Remove impeller and put it the opposite way round on the shaft (possible up to Ø 500). Models HQ and HW allow for a 1/3 drop in performance.
 - EC types can only be operated in the set standard direction of rotation.



Protection against contact

All relevant safety instructions and regulations must be followed when the fans are installed. A protection against accidental contact to VDE 0700 and/or DIN EN ISO 13857 must be guaranteed. The contact with rotating parts must be avoided. Make sure that there are no items near the inlet which could be pulled into the fan. Fans which are protected when installed (e.g. in ventilation ducting or closed aggregate) do not require a guard if the system provides sufficient safety. We emphasise that the installer is responsible for the safety of the installation by fitting appropriate protection devices. Suitable guards are available as accessories. The responsibility that all relevant regulations have been observed remains with the installer.

Position, installation, drainage holes

- Axial fans are suitable for installation in any position. If condensation is to be expected, (e.g. for intermittent operation, high humidity air flow or rapidly changing temperatures) the fan must be installed with the motor drainage holes facing downward and they must be open.
- If installed outdoors, or in wet conditions or if installed with the motor shaft facing vertically upwards, this must be stated when ordering. Please make sure that the fan is fixed securely and the casing is not squeezed or distorted.

Reverse operation

- Most axial fans are reversible (see product page). Using a suitable reversing switch. The fan can be used for intake or extract. In abnormal direction of flow the capacity decreases by approx. 1/3.
- EC types are not reversible as standard.

Air flow temperatures

The standard models are suitable for temperatures from -30 °C to +40 °C or +60 °C (AC or EC types). Apart from explosion proof fans, higher temperatures are possible for a short time. For permanently higher temperatures special models are available on request.

Motor protection

- For AC types; through thermal contacts in the windings
 - standard for 1 ph. motors,
 - mostly standard for 3 ph. motors (see product page).
- For EC types; integrated electronic temperature monitoring.

Explosion protection

The ex-proof models conform to cluster II, category 2G for operation in zone 1 or 2. According to directive 2014/34/EU (ATEX), larger air gaps are specified which lead to a capacity reduction of up to 10%.

Extra equipment, additional charge on demand

- Aluminium cast impeller
- Alternative voltage
- Alternative frequency
- Two pack coating for protection of external components against diluted acids and lime solutions
- Alternative air flow direction
- Extra equipment for higher air flow temperatures
- Pressure-tight encapsulated motors (standard for 1 ph. ex-proof types)

Anti vibration insulation

To avoid vibration transmission to building and ducting the use of anti vibration mounts (accessory SDD, SDZ) is highly recommended. Larger frame size motors may protrude out of the casing and might move the centre of gravity within the fan. To avoid an uneven load on the anti vibration mounts, an extension duct is recommended (accessory VR).

