



Product manual

Kitchen hoods

KHE, KHI, KHC

Kitchen ventilation

Version 2.0.6
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BASIC PRINCIPLES IN KITCHEN VENTILATION

Ventilation and air conditioning systems are necessary in commercial kitchens because:

- the air is polluted by odors, particles of fat and gaseous products of combustion
- hygiene requirements must be met with regard to the quality of the room air
- heat is created to a considerable extent due to convection and radiation
- moisture is created by the preparation of meals and by washing
- It is necessary to renew the air in the rooms by an exchange with outside air and maintain comfortable or specified room air temperatures.

To meet this task, supply and exhaust air systems shall be installed in the kitchen areas so that deposits, air pollutants and moisture are drawn off, impairment of rooms not forming part of the kitchen area is avoided and no air which could be considered unhygienic is either supplied or can flow back.

Particular attention is to be paid to separating fat from the exhaust air. To minimize the necessary airflows, it is useful to install heat-emitting appliances in continuous blocks or along surfaces forming room boundaries.

If the exhaust air comes into direct contact with the structure of the building, it should be ensured that this does not damage the building structure and that no persistent condensation occurs.

Calculation of required air volume rates

Quantity of air required for kitchen ventilation depends on size and type of kitchen, as well as on kitchen devices and food preparation appliances.

Table 1. presents approximate air volume flow rates (in m^3/h per m^2 of kitchen area). Quantities refer to temperature difference of 8K between ambient air in the kitchen and supply air.

Kitchen type	Airflow per kitchen area [$m^3/h \cdot m^2$]	Referring to sections of the kitchen			
		Cooking [$m^3/h \cdot m^2$]	Baking and grilles [$m^3/h \cdot m^2$]	Dish washing [$m^3/h \cdot m^2$]	Ancillary rooms [$m^3/h \cdot m^2$]
Buffet	80	-	120	-	-
Inns, Cafeterias	60	105	120	120	45
Canteens	90	105	120	120	45
Public houses	90	105	120	150	45
Hospital kitchens	90	105	120	120	60
Food preparation	80	105	120	120	60
Ship kitchens	90	120	120	-	60

Table 1. Exhaust volumes per kitchen area

Design of the kitchen ventilation system should take into account:

- the quantity of exhaust air should be somewhat higher (5%) than the quantity of supply air in order to prevent kitchen odors from spreading into adjacent rooms
- opening of the cooking kettle lid may direct the steam plume in wrong direction; therefore it is recommended to increase hood dimension for a certain margin

For purely practical reasons, i.e., in order to achieve the required exhaust of air polluted by vapors, smoke or odors, it is recommended that kitchen ventilation design implements the air quantity values as given suggested in this manual. If considerably lower design air quantities were taken, the exhaust rate would not be sufficient, especially in case of stronger air cross-flow above the working surface of the kitchen. Required air flow rate can be calculated using two expressions (acc. to Recknagel/Sprenger):

$$V = 2 \cdot O \cdot x \cdot v_x \text{ [m}^3/\text{s}] \text{ or } V = 1.4 \cdot O \cdot x \cdot v_m \text{ [m}^3/\text{s}]$$

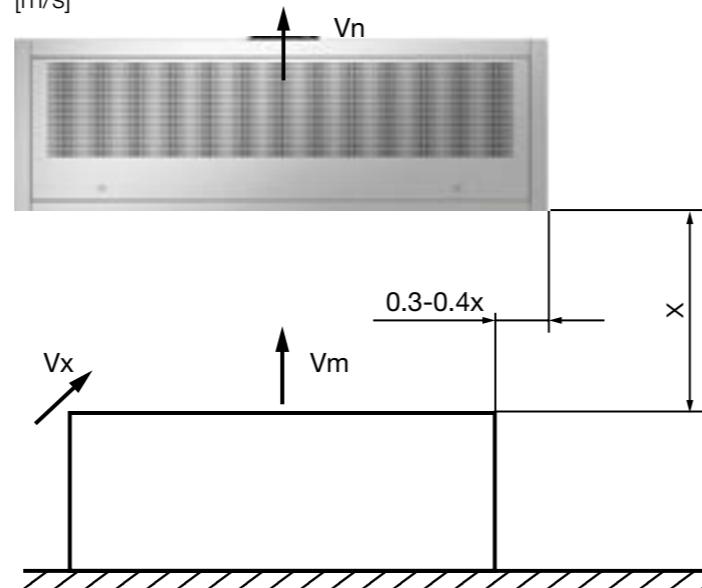
O - Hood perimeter [m]

v_x - Air velocity at the working surface outer edge [m/s]

x - Distance between working surface and hood [m]

v_n - Air velocity at hood inlet [m/s]

v_m - Mean air velocity between hood and working surface [m/s]



Drawing 1. Physical quantities for airflow calculation

Velocity v_x and v_m [m/s] empirical values:

- In still air $v_x = 0.10 - 0.15$;
 $v_m = 0.2 - 0.3$

- With weak cross-flow $v_x = 0.15 - 0.30$;
 $v_m = 0.3 - 0.4$

- With strong cross-flow $v_x = 0.20 - 0.40$;
 $v_m = 0.4 - 0.5$

Velocity v_n [m/s] empirical values:

- For hoods with free air access from 4 sides $v_n = 0.9 - 1.2$
- For hoods with free air access from 3 sides $v_n = 0.8 - 1.1$
- For hoods with free air access from 2 sides $v_n = 0.7 - 0.9$
- For hoods with free air access from 1 side $v_n = 0.5 - 0.8$

Heat and humidity loads

Areas with different pollution loads occur within kitchens. The total heat emission takes place directly due to convection radiation and latently due to the generation of steam and other gaseous components. Radiation-intensive areas are characterized by high surface temperatures. These include preparation areas with grills and salamanders, grill plates, tipping frying pans, stoves etc.

Foreign substances in the air occur almost any time food is heated. The type and amount are influenced particularly by the amount of fat and the temperature, with the ensuing pyrolyzes being possibly damaging to health. These particularly include short-chain aldehyde's, such as formaldehyde, acetaldehyde, tr-2 hexenal and acrolein as well as highly-volatile nitrosamines and polycyclic aromatic hydrocarbons (e.g. benzo-a-pyrene). Calculation of the required air flow rate based on heat balance in the room/kitchen (acc. VDI 2052, E 3.81) referring to temperature difference of $\Delta t = 8K$ (acc. to Recknagel/Sprenger):

$$\dot{V} = \frac{\sum (P_i \cdot \Psi_i \cdot \eta_i) \cdot \varphi \cdot 3600}{\rho \cdot c_p \cdot (t_p - t_z)} \text{ [m}^3/\text{s}]$$

\dot{V} - required air flow rate [m^3/h]

P_i - Installed output of each individual kitchen device [kW]

Ψ_i - Dissipated heat per 1 kW of installed device output [kJ/kW]

η_i - Kitchen device efficiency, normally 0.8

ρ - Air density 1.2 kg/m³

c_p - Specific heat of air [kJ/kgK]

Δt_z - Air Temperature difference (tp-tz) [K]

t_p - Room air temperature

t_z - Supply air temperature

φ - Factor of simultaneous operation of devices:

- for small kitchens: 0.8 - 1.0

- for medium kitchens: 0.5 - 0.8

- for large kitchens: 0.5 - 0.8

Calculation of required air flow for removal of latent moisture:

$$\dot{V} = \frac{\sum (P_i \cdot D_i \cdot \eta_i)}{(X_p \cdot X_z) \cdot \rho}$$

D_i - Vapor (moisture) content per 1 kW of installed output of kitchen devices [g/h * kW]

X_p - Vapor content of room air [g/kg]

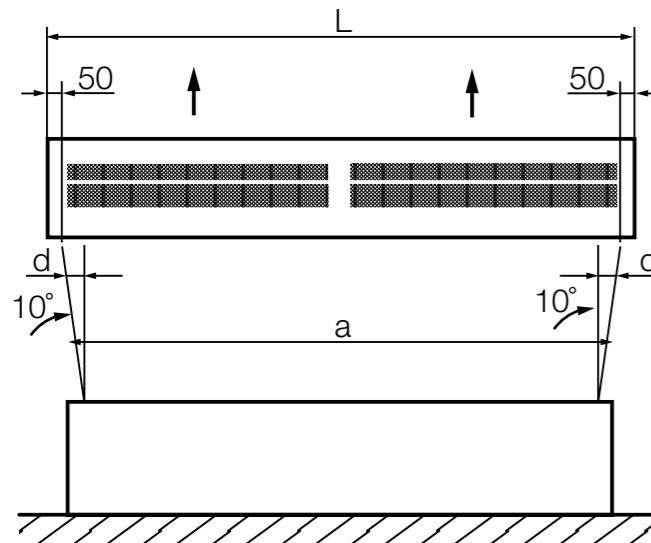
X_z - Vapor content of supply air [g/kg]

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DESIGN PRINCIPLES

Hood Size

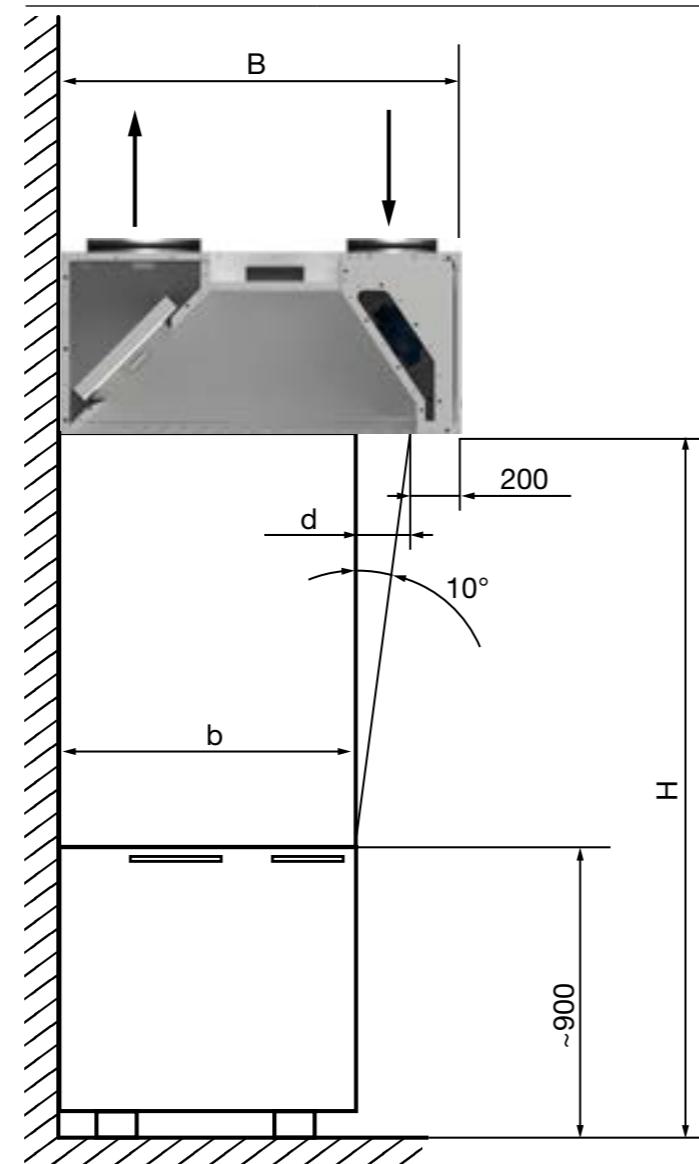
Hood size is defined by the size (dimensions) of kitchen devices from which polluted air is exhausted. For example, if a hood hangs above a drawer-type oven, dimensions of the hood are defined taking into account the ground plan of the oven with opened drawers. After dimensions of a certain hood type are defined or calculated, a typical size of the hood should be selected from technical data given in this manual. If the calculated value differs from typical dimensions given in the table, a higher value/dimension should be selected, especially when the hood width is concerned.



Hoods installed at height $H = 2.1$ m from floor, perimeter of a kitchen-hood edges should oversize the ground plan of the working surface for an excess of $d = 100$ mm. If the hood is at height $H = 2.1$ m, then the key parameter is an angle 10° which defines the appropriate value of the excess "d" (see figure below). When energy-saving hoods are concerned, the hood width should be additionally increased for the width of outer, inactive edge, i.e., for 200 mm by wall hoods and 400 mm by ceiling hoods. It should be taken into account that, when opened, lids of cooking kettles or washed pots can act as directing panels. Vapour clouds released from these devices may require higher than minimum excess value "d" in order to be exhausted.

Recommended Minimum Hood Dimensions

For $H = 2100\text{mm}$	For $H > 2100\text{mm}$
CONVENTIONAL WALL HOOD $B = b+d = b+100$ $L = a+2d = a+200$	CONVENTIONAL WALL HOOD $B = b+d$ $L = a+2d$
CEILING HOOD $B = b+2d = b+100$ $L = a+2d = a+200$	CEILING HOOD $B = b+2d$ $L = a+2d$
INDUCTION WALL HOOD $B = b+d+200 = b+300$ $L = a+2d = a+200$	INDUCTION WALL HOOD $B = b+d+200$ $L = a+2d$
CEILING HOOD $B = b+2d+2\cdot200 = b+600$ $L = a+2d = a+200$	CEILING HOOD $B = b+2d+2\cdot200 = b+2d+400$ $L = a+2d$



*Excess value "d" For $H > 2100$ mm

H [mm]	d [mm]
2150	220
2200	230
2250	240
2300	250
2350	260
2400	265

Example 1:

Given:
-dimension of the working surface $a \times b = 2100 \times 900$
-height to the lower edge of the hood $H = 2,1$ m

Required:
-size of the conventional wall hood
-size of the induction wall hood
Solution:

- **Conventional wall hood**

$B = b+d+200 = 900+100=1000$ (see table A page 4.)
 $B=1000$

$L = a+2d = 2100+2\cdot100 = 2300$ (see table A page 4.)
 $L=2300$

Ordering data:
KHE 2300 x 1000 x 400 - W

- **Induction wall hood**

$B = b+d+200 = 900+100+200 = 1200$ (see table B page 4.)
 $B=1200$

$L = a+2d = 2100+2\cdot100 = 2300$ (see table B page 4.)
 $L=2300$

Ordering data:

KHI 2300 x 1200 x 550 - W

Example 2:

Given:
-dimensions of the working surface $a \times b = 2100 \times 900$
-height of the lower edge of the hood $H = 2,3$ m

Required:
-size of the conventional wall hood
-size of the induction wall hood
Solution:

- **Conventional wall hood**

$B = b+d = 900+250=1150$ (see table A page 4.) $B=1300$

$L = a+2d = 2100+2\cdot255 = 2600$ (see table A page 4.) $L=2700$

Ordering data:

KHE 2700 x 1200 x 400 - W

- **Induction wall hood**

$B = b+d+200 = 900+250+200 = 1350$ (see table B page 4.)
 $B=1500$

$L = a+2d = 2100+2250 = 2600$ (see table B page 4.)
 $L=2700$

Ordering data:

KHI 2700 x 1500 x 550 - W

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DESIGN PRINCIPLES

SECTION OF THE KITCHEN	TYPES OF KITCHEN DEVICES	ELECTRICAL DEVICES				GAS DEVICES			
		Normal use ^a		Limited use ^b		Normal use ^a		Limited use ^b	
		Emission of heat W/kW	Moisture g/(hkW)						
COOKING	- boiling pans and automatic boiling pans	35	441	25	118	100	441	75	118
	- pressure cookers	40	15	-	-	-	-	-	-
	- high pressure steamers, slide-in appliances	25	294	25	0	-	-	-	-
	- high pressure steamers Push-through appliances (appliance with a front and back door)	25	294	25	0	-	-	-	-
	- combination ovens	120	265	70	147	150	265	85	147
BAKING HOTPLATE FRYING	- tilting frying pans	450	588	250	220	450	630	450	368
	- roasting, grilling and griddle plates	330	588	200	175	350	588	250	220
	- grilling and salamander appliances	800	257	700	257	720	294	720	294
	- roasting and baking ovens	350	235	250	235	350	294	250	294
	- hot air appliances/thaving appliances	70	220	40	88	100	220	50	147
	- automatic roasting and grilling appliances for quick fried food	250	338	250	338	-	-	-	-
	- automatic sauce appliances	150	235	110	235	-	-	-	-
	- deep fryers	90	1030	-	-	90	1030	-	-
	- automatic tunnel deep fryers ^c	50	147	-	-	-	-	-	-
	- automatic tunnel deep fryers ^d	50	808	-	-	-	-	-	-
Multi-purpose area for: -BAKING -THAWING -TEMPERATURE MAINTAINING -COOLING -MEAL PREPARATION -MEAL TRANSPORT	- induction hob	70	41	35	74	-	-	-	-
	- ceramic cooker	200	118	100	74	200	118	1120	94
	- wok	70	41	-	-	450	630	-	-
	- cookers, cooking points ^e	200	118	100	74	250	147	150	118
	- stockpot cooker	200	220	150	147	250	265	200	176
	- microwawe appliances	50	15	-	-	-	-	-	-
	- waterbaths	125	194	-	-	195	323	-	-
	- warm cupboards	350	-	-	-	350	-	-	-
	- refrigerators	700	-	-	-	-	-	-	-
	- kitchen appliances	300	-	-	-	-	-	-	-
MEAL SERVING	- transportation devices ^f	1000	-	-	-	-	-	-	-
	- warm meals self-service	125	-	-	-	-	-	-	-
	- cold meals self-service	700	-	-	-	-	-	-	-
	- dish dispensing	300	-	-	-	-	-	-	-
	- serving beverages	100	-	-	-	-	-	-	-

^a Normal operation: simultaneous, correct use of several devices for frying, grilling, baking, cooking, annealing.

^b Limited operation: during periods of reduced activity with partial use of cooking appliances, steam cooking, defrosting, reheating, heat retention, low temperature cooking, and the like.

^c With built-in remover

^d Without built-in remover

^e Multiplied by factor for kitchen hobs: - Electric cooker factor (Solid kitchen hob: 1, Ceramic hob: 1, Induction hob: 0.35, Large surface steel plate: 1.3)

- Factor for gas hobs (Open cooking space: 1, Glossy hob: 1.2, Ceramic hob: 0.8)

^f Total output is emitted into space as heat.

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Notes for special devices

- K = hemispherical pot, calculated as cooking point (eg induction wok, nominal consumption x value from table x kitchen hob factor)

- Pasta cooker, counts as a boilie pan

- Pressure cooker (braiser), counts as a pressure boiling pan or where it is used constantly for fast frying, counts as a tilting frying pan

- Chicken grill, counted as salamander or combination ovens

- Rotary grill, counted as a frying pan or frying plate

- Contact grill, counts as frying plate

Roasting spit, open, is calculated as a combination of furnaces or in accordance with the manufacturer's data.

NOTE 1. To calculate the thermal airflow for cabinet devices, the average height of the device for determining h_d will be used. (see Figure 3).

NOTE 2 Equipment with higher power consumption during start-up can be calculated with a value for normal operation.

Air velocity and sound proofing

The limits of the air velocity in the comfort area depend on the temperature of the room air, the turbulence of the flow, the degree of activity and the thermal resistance of the clothing (refer to DIN 1946-2). The limits shall be maintained up to a volume rate of flow relative to area of $35 \text{ m}^3/(\text{m}^2 \text{ h})$.

The pressure level emitted by a ventilation and air conditioning system shall be limited to 50 dB to 60 dB, according to requirements, measured at a height of 1.7 m above the floor (refer also to VDI 2080). Maximum pressure level of 50 dB is recommended where the meal delivery point is open. Value of 65 dB shall not be exceeded for sculleries. Sound levels and flows should be optimized when designing ventilation and air conditioning systems, particularly with a view to minimizing the use of sound absorbing measures in the exhaust air. This also means that the sound power level of the extraction fan will be minimized. Sound-absorbing surfaces can also be used in the room as additional sound insulation, but this must be consistent with the requirements of hygiene. The sound pressure levels permissible in other parts of the building shall not be exceeded by the ventilation and air handling.

If different levels of hygiene requirements are required for different areas of the kitchen, this can be aided by appropriate airflows in the room. The total of all airflows (supply air and exhaust air) should be balanced in the overall kitchen area. The recirculation of air from rooms where the hygiene is questionable shall be precluded.

The spread of odors within the building shall be prevented by additional exhaust air which is drawn off in suitable forward rooms. Ventilation and air conditioning systems may be operated using external air only. Recirculated air shall not be used. Hygiene requirements shall be jointly agreed with the kitchen designer, the operator and, where necessary, the supervisory authorities.

Room air temperature in °C	Room humidity in %
20	80
22	70
24	62
26	55

Ergonomic and hygiene requirements

It is not always possible to maintain thermal comfort in kitchens. This applies particularly to work areas close to kitchen appliances which are strong heat emitters (latent and direct heat), e.g. within a distance of approximately 1 m of stoves with heat-radiating surfaces, tilting frying pans, large fryers or dishwashers.

In these areas, tolerable climatic conditions according to DIN 33403-3 should be guaranteed as a minimum. Taking account of the clothing normally worn in kitchens and the work energy expenditure of the personnel to be expected, the condition of the air should lie within tolerable climatic ranges.

Air temperature and humidity are measured at a height of 1.10 m above the floor at a distance of 0.50 m from the appliances. The temperature of the room air in kitchens and sculleries shall be at least 18 °C and shall not exceed 26 °C unless unavoidable due to the processes. This does not include brief, seasonal, excess temperatures or areas in which higher temperatures are unavoidable due to their function.

The temperature of the room air within the meaning of the Factories Order is the temperature in degrees Celsius measured at a height of 0.75 m above the floor in the center of the closed room (or other comparable point). Cooling of the room air is normally not necessary unless required in certain areas due to foodstuffs regulations or for reasons of hygiene.

Guidelines on this are given in Table 1.

The relative humidity in the occupied zone shall not exceed the values given in Table 2

room air can be taken as the comfort limit - as independent as possible from the temperature of the room air-with occasional undershoots being acceptable.

From the point of view of hygiene, the task of a ventilation and air conditioning system for kitchens is also to prevent the contamination of food by the airflow during preparation, storage and distribution and to prevent an undefined spread of odors, pollutants and other gaseous substances by the airflow. To meet these tasks, hygiene requirements must be set for individual components, system concepts and maintenance.

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 **DESIGN PRINCIPLES**

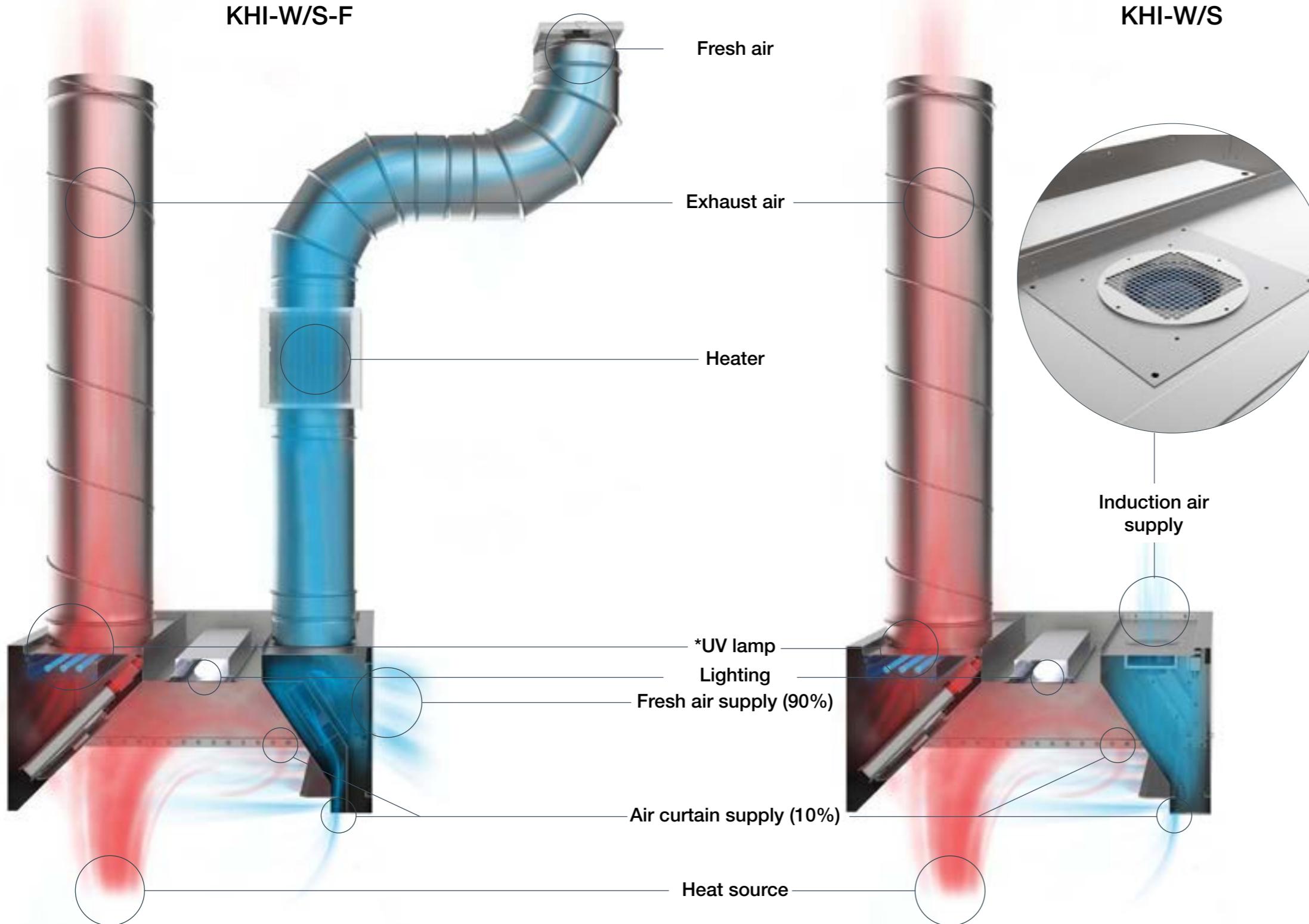
Kitchen area	Temperature
Meat preparation	15 - 18 °C
Vegetables, salad and potato preparation	18 - 20 °C
Cold kitchen	17 - 20 °C
Storeroom for cook & chill meals	0 - 3 °C
Distribution room for meals prepared by the cook & chill system	12 - 14 °C

In comfort areas, the upper limit of the moisture content of the air is 11.5 g of water per kg of dry air and 65 % relative humidity. Because comfortable climatic conditions cannot always be achieved in kitchens, the design of a ventilation and air conditioning system may be based on a maximum moisture content x of the air of 16.5 g of water per kg of dry air. No reliable data is available regarding the lower limit of the relative humidity of the room air. 30 % relative humidity of the

System components

Air supply

When designing a kitchen it is necessary to provide a underpressure to ensure the supply of air (3-5%) from the surrounding rooms. This prevents the spread of unpleasant odors to the surrounding rooms. The recommended supply air temperature should be 18-20 ° C.



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DESIGN PRINCIPLES

Filters KCF

Cyclone filters use centrifugal force to extract grease particles with efficiency of up to 95%. When greasy air enters cyclonic filter, it is forced to transform its path into a series of spirals. The grease particles in the rotating streams have too much inertia to follow a spiral curve of the air stream. As a result, the particles collide with the inner walls of filter channels and permanently stick to it.

KCF filters are produced in single dimension 500x360, and are produced from AISI 304 or 316 on special request.

Cyclone filters have the highest extraction efficiency while maintaining the lowest pressure loss of any mechanical filtration device. The efficiency limits grease deposition inside the exhaust plenums of hood and ventilated ceilings and the ductwork. This in turn reduces the energy consumption and greatly reduces the cleaning costs.

- The efficiency of the KCF filters is up to 95% (measured for 10 µm particles and 130Pa pressure loss)
- Reduced cleaning and maintenance costs due to high efficiency grease extraction
- Lower noise and pressure drop levels
- Compatible to use in combination with UV Ozone system for high demand applications

KCF filters are tested and approved in EN12238 accredited laboratory. Tests were carried out for aerosol separation efficiency and flame penetration according to the EN 16282 "Equipment for commercial kitchens - Components for ventilation in commercial kitchens - Part 2: Kitchen ventilation hoods; design and safety requirements".

Benefits of using KCF filters with UV-C Ozone System

UV-C Ozone System is used in applications where there is a need for neutralization of medium and small sized grease particles. In combination with KCF filters the UV-C Ozone System provides a high efficiency filtration for the whole range of the particle sizes.

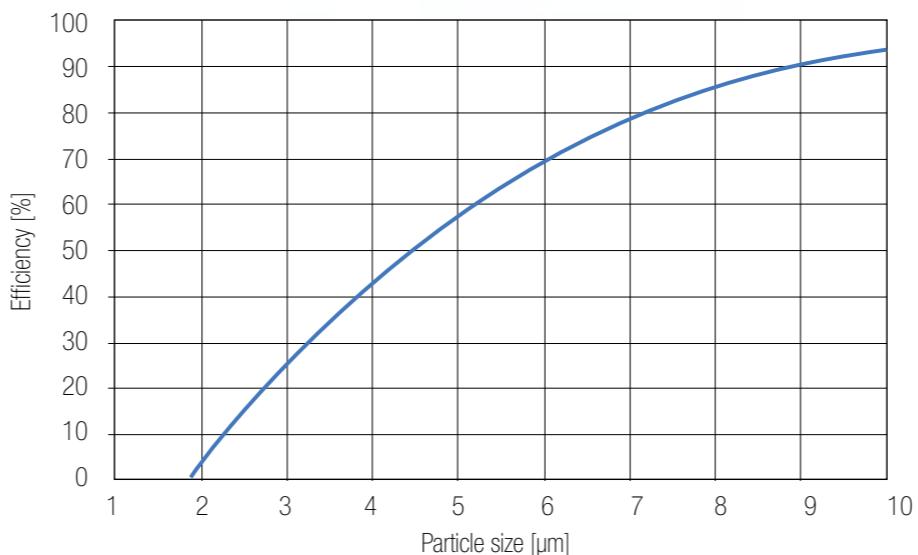
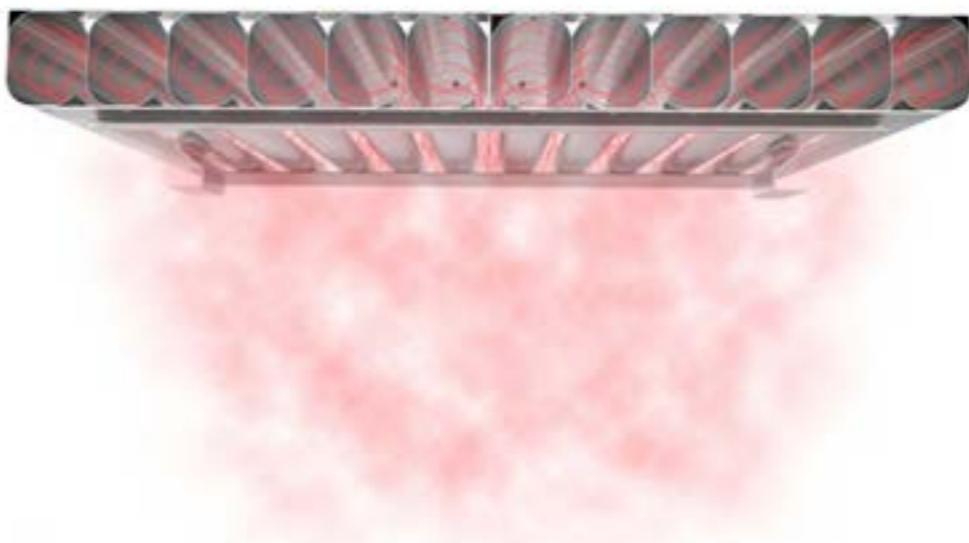


Diagram of particle separation efficiency per particle size. Tests are conducted at 130Pa filter pressure drop and 1500 [m³/h * m] of exhaust airflow.



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DESIGN PRINCIPLES

Induction nozzles

Dadanco's breakthrough, patented induction nozzles address shortcomings in traditional induction systems relating to floor space, appearance, noise levels, cooling capacities and energy consumption. Patented star shaped design provides higher air entrainment ratios compared to the similar round shaped ones. Consequently lower air volumes can be used, creating less pressure drop and noise for the same effect. The nozzles design was performed using CFD optimization process and its benefits were confirmed in the testing laboratory.



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DESIGN PRINCIPLES

Induction supply fan

KHI range of kitchen hoods are equipped with patented Dadanco TM air supply jet nozzles. A constant pressure air fan is supplying the jet nozzles with the supply air. The fan is controlled via control unit that is installed in the supply chamber, and is measuring and controlling the static overpressure in the chamber. Set-point is calibrated and adjusted in the factory at 60Pa of overpressure in the air supply chamber. More information on the documentation of the presostat controller can be found here: www.hkinstruments.fi



Exhaust balancing damper

All exhaust kitchen hoods come equipped with a balancing exhaust damper as standard. The mechanism is designed as a sliding damper for reliable adjustment and easy cleaning. Each exhaust connection is equipped with its own damper for easy balancing of the exhaust.



Lighting fixtures

Lighting fixtures are part of the standard equipment of all kitchen hoods. Energy efficient LED T8 tubes, 4000K are mounted in all fixtures. Dimensions and number of fixtures vary on the size of the kitchen hood. Casings of the fixtures are watertight and made out of the same type stainless steel as the rest of the kitchen hood. The flush design is made for easy cleaning and maintenance.



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DESIGN PRINCIPLES

KHI Induction kitchen hood

W-Wall installation

S- Space installation

F- Fresh air supply

KHI induction kitchen hood is the most technologically advanced design from Klimaoprema kitchen hood range. It includes fresh air supply via patented Dadanco™ jet nozzles and perforated supply air diffusers. It can be produced in wall or space type installation. Standard equipment include LED lighting and regulation damper. On the exhaust side new cyclone effect grease filters provide high efficiency particle removal. For even higher standards of exhaust emissions, UV Ozone System is available as an accessory. It ensures almost no maintenance, fat-free ducts and deodorization of the exhaust fumes. Standard material is AISI 304/EN 1.4301, optional AISI 316/EN 1.4401. Optional front perforation is used for air supply into the kitchen. It is equipped with standard G4 filter. The hoods are developed in accordance with the standard EN 16282-2_2016, while the cyclone filter complies with the standard EN 16282-6_2020.



KHE Conventional kitchen hood

W-Wall installation

S- Space installation

A- Angled version

KHE is a convectional kitchen hood design. It can be produced in wall or space type configuration. Standard equipment include LED lighting and regulation damper. On the exhaust side new cyclone effect grease filters provide high efficiency particle removal. For even higher standards of exhaust emissions, UV Ozone System is available as an accessory. It ensures almost no maintenance, fat-free ducts and deodorization of the exhaust fumes. Standard material is AISI 304/EN 1.4301, optional AISI 316/EN 1.4401. The hoods are developed in accordance with the standard HRN EN 16282-2_2016, while the cyclone filter complies with the standard EN 16282-6_2020.



KHC Condensation exhaust hood

W-Wall installation

KHC are dedicated kitchen hoods specially designed for exhaust of water vapour and steam. Standard equipment include LED lighting and circular duct connections with regulation damper. On the exhaust side, water condensation baffles are installed. Standard material is AISI 304/EN 1.4301, optional AISI 316/EN 1.4401. The hoods are developed in accordance with the standard EN 16282-2_2016.



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KHI-W

Induction kitchen hood

- Wall installation
- DadancoTM nozzles
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



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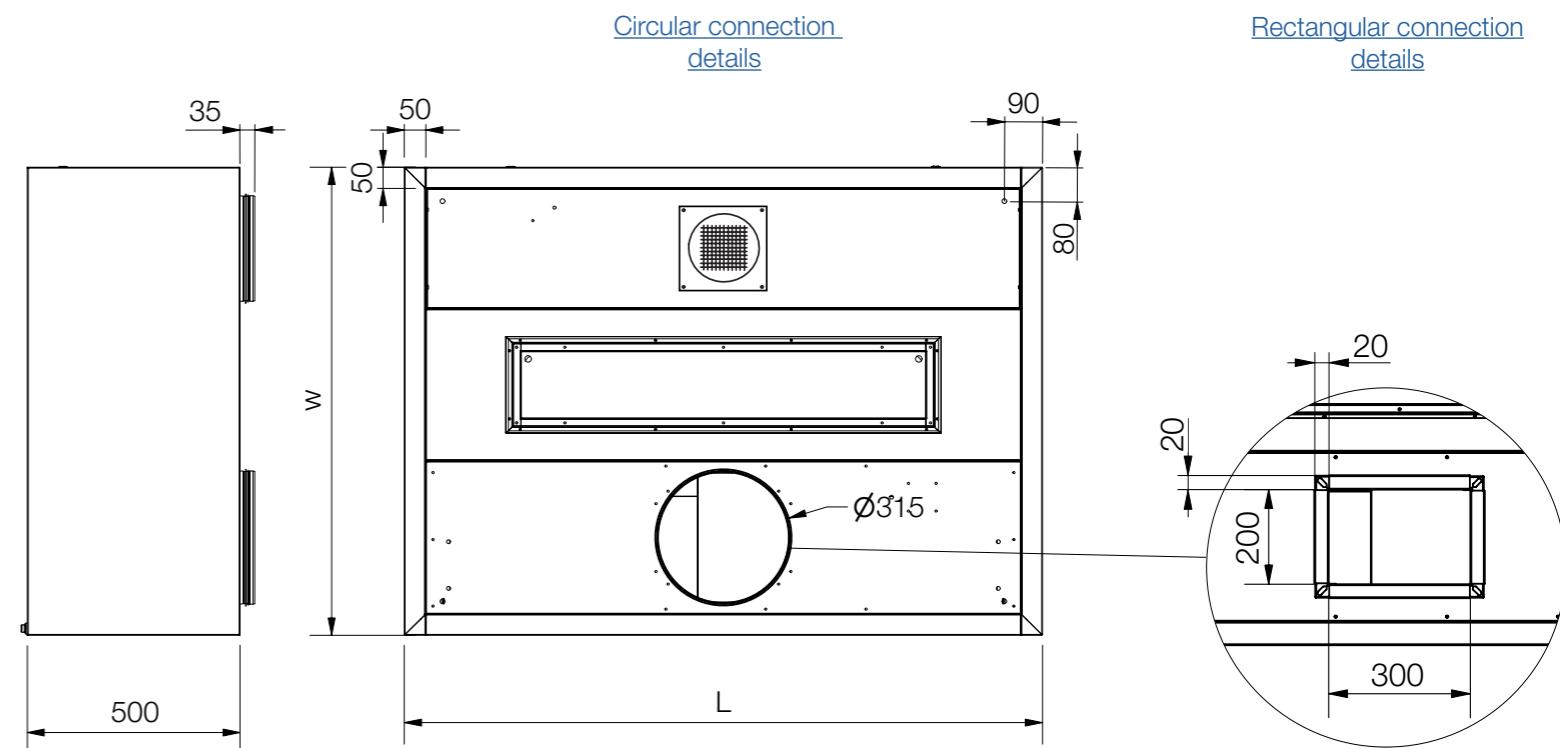
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KITCHEN VENTILATION

DIMENSIONS

KHI-W	Number of filters	Number of exhaust connections	Lighting LED 4000K			
			Number of lighting fixtures	Power	Length	Suspension points
1100	1		1	2x10W	720	4
1300	2		1	2x15W	720	4
1500	2	1	1	2x15W	1025	4
1700	3		1	2x15W	1025	6
1900	1100, 1300, 1500	3	1	2x20W	1330	6
2100			1	2x20W	1330	6
2300	3		1	2x25W	1630	6
2500	4	2	1	2x25W	1630	8
2700	5		2	2x15W	1025	8
2900	5		2	2x15W	1025	8

[More dimensions](#)



KHI-W-F

Induction kitchen hood

- Wall installation
- Dadanco™ nozzles
- Fresh air supply
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



- ▼ Design principles
- ▼ Product range
- ▼ Ordering key
- ▼ Installation
- ▼ Air volume / Pressure drop
- ▼ Accessories
- ▼ Maintenance



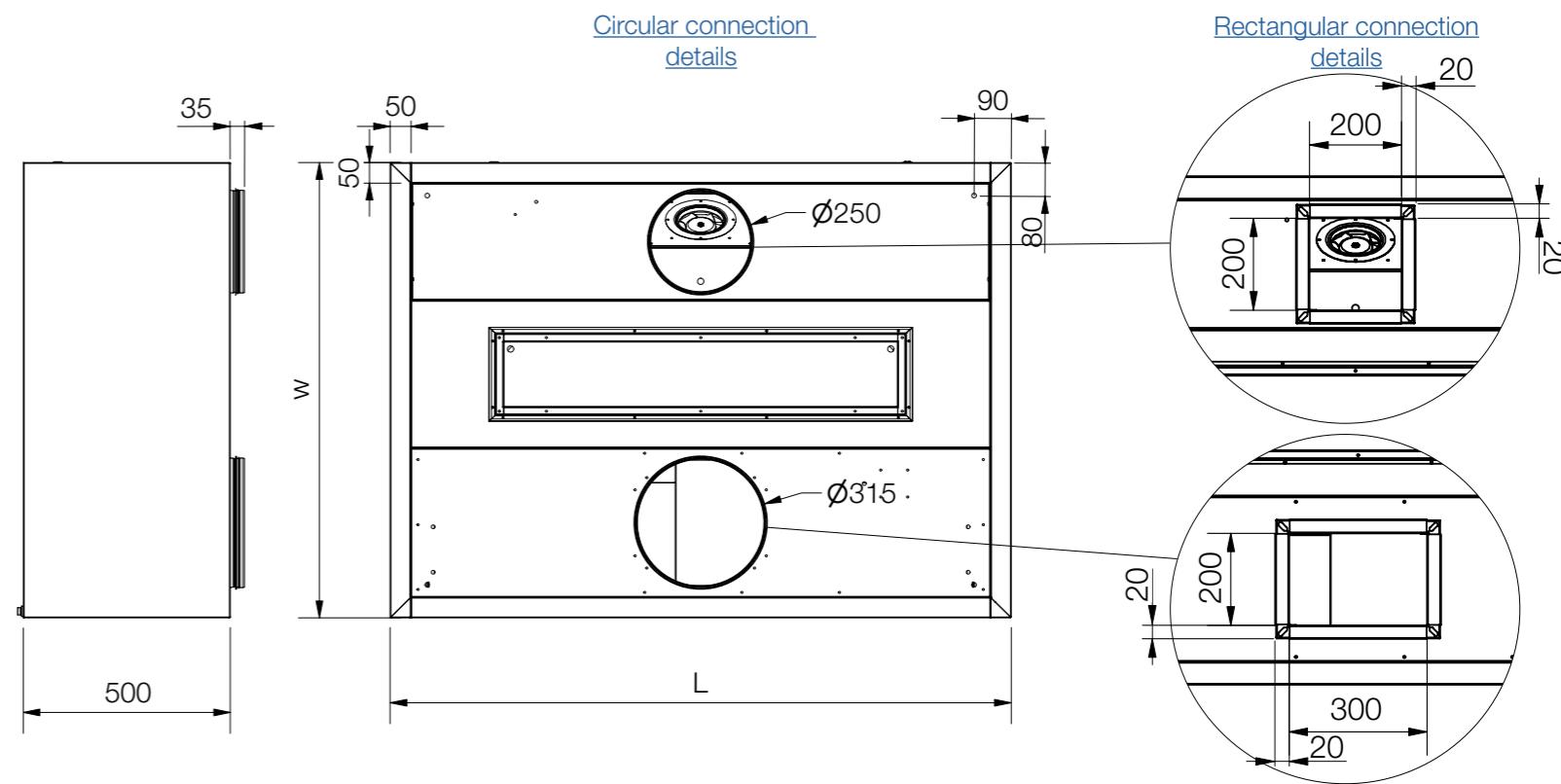
KHI

KITCHEN VENTILATION

DIMENSIONS

KHI-W-F	Lighting LED 4000K							
	L x W	Number of filters	Number of exhaust connections	Number of supply connections	Number of lighting fixtures	Power	Length	Suspension points
1100		1			1	2x10W	720	4
1300		2			1	2x10W	720	4
1500		2	1	1	1	2x15W	1025	4
1700		3			1	2x15W	1025	6
1900		3			1	2x20W	1330	6
2100	1100, 1300, 1500	3			1	2x20W	1330	6
2300		3			1	2x25W	1630	6
2500		4			1	2x25W	1630	8
2700		4	2	2	2	2x15W	1025	8
2900		5			2	2x15W	1025	8

[More dimensions](#)



KHI-S

Induction kitchen hood

- Space installation
- DadancoTM nozzles
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



- ▼ Design principles
- ▼ Product range
- ▼ Ordering key
- ▼ Installation
- ▼ Air volume / Pressure drop
- ▼ Accessories
- ▼ Maintenance



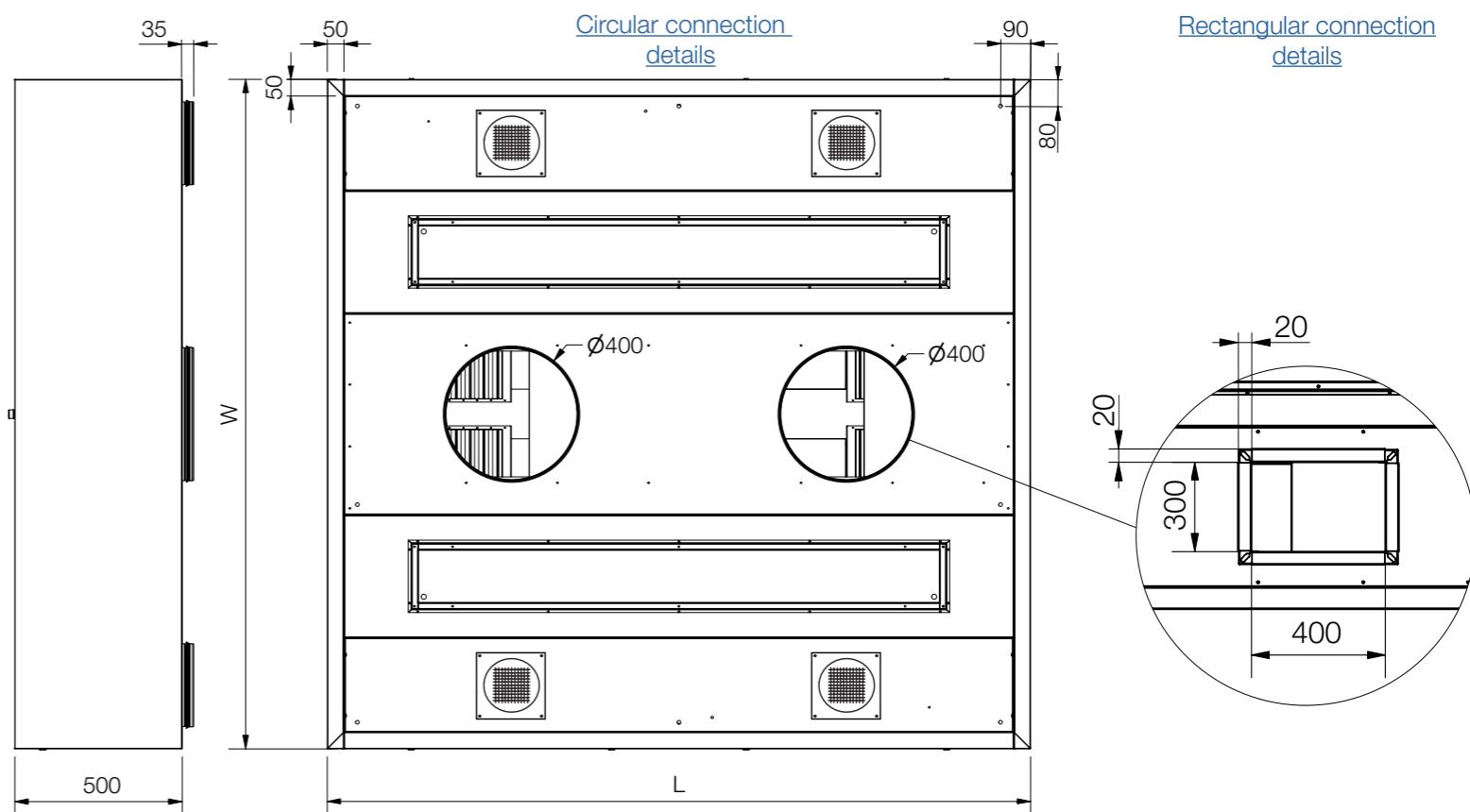
KHI

KITCHEN VENTILATION

DIMENSIONS

KHI-S	Lighting LED 4000K						
	L x W	Number of filters	Number of exhaust connections	Number of lighting fixtures	Power	Length	Suspension points
1100	1800, 2000,	2	2	2	2x10W	720	6
1300	2200,	4	1	2	2x10W	720	6
1500	2400,	4		2	2x15W	1025	6
1700	2600,	6		2	2x15W	1025	8
1900	2800	6		2	2x20W	1330	8

[More dimensions](#)



KHI-S-F

Induction kitchen hood

- Space installation
- DadancoTM nozzles
- Fresh air supply
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



- ▼ Design principles
- ▼ Product range
- ▼ Ordering key
- ▼ Installation
- ▼ Air volume / Pressure drop
- ▼ Accessories
- ▼ Maintenance



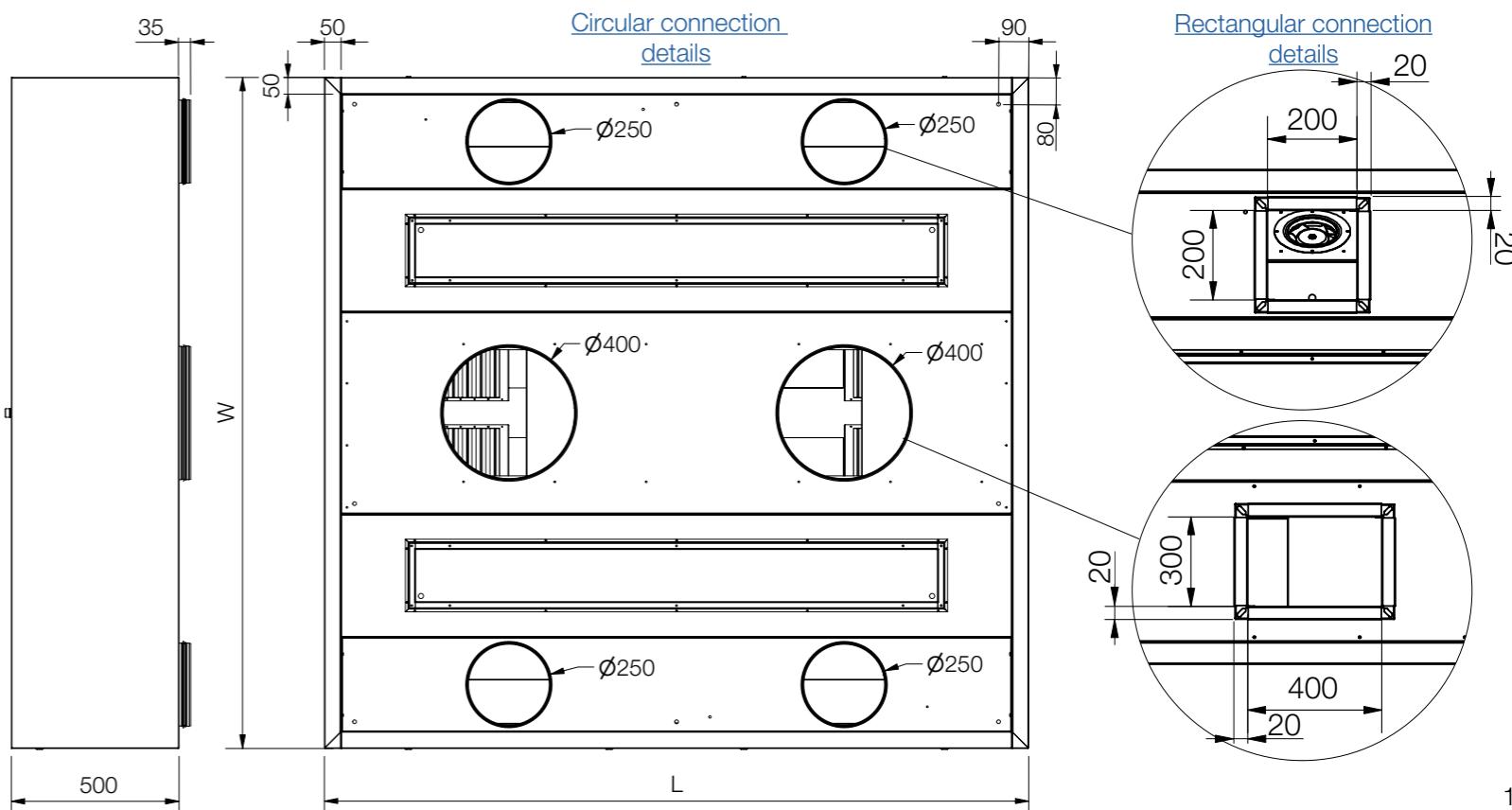
KHI

KITCHEN VENTILATION

DIMENSIONS

KHI-S-F	Lighting LED 4000K							
	L x W	Number of filters	Number of exhaust connections	Number of supply connections	Number of lighting fixtures	Power	Length	Suspension points
1100	1800, 1300	2			2	2x10W	720	6
1300	2000, 1500	4			2	2x10W	720	6
1500	2200, 1700	4	1	2	2	2x15W	1025	6
1700	2400, 2600	6			2	2x15W	1025	8
1900	2800	6			2	2x20W	1330	8

[More dimensions](#)



KHE-W

Conventional kitchen hood

- Wall installation
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



KHE

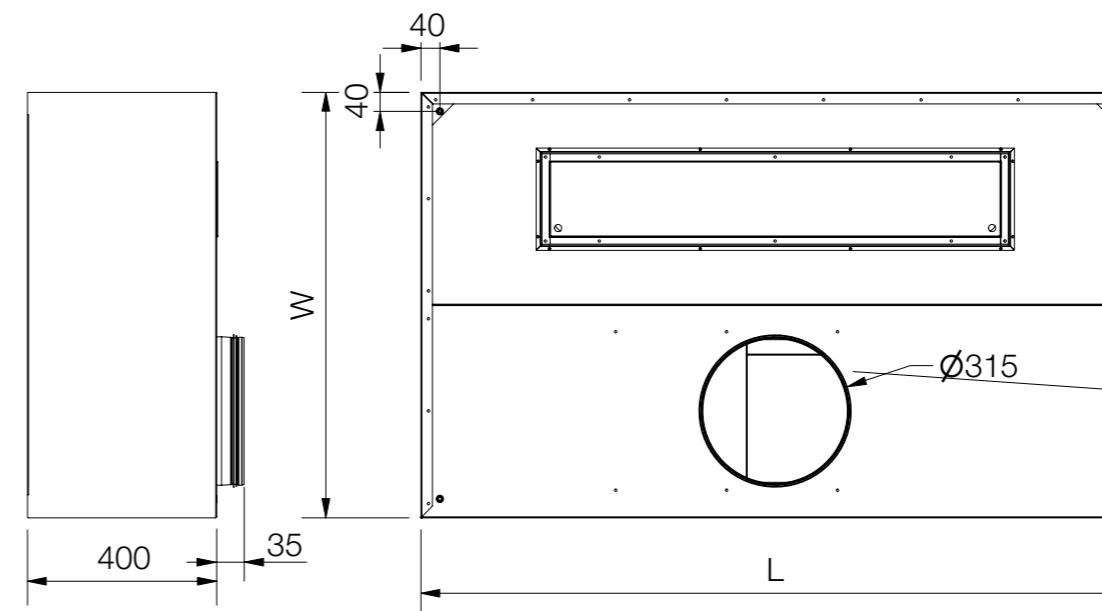
KITCHEN VENTILATION

DIMENSIONS

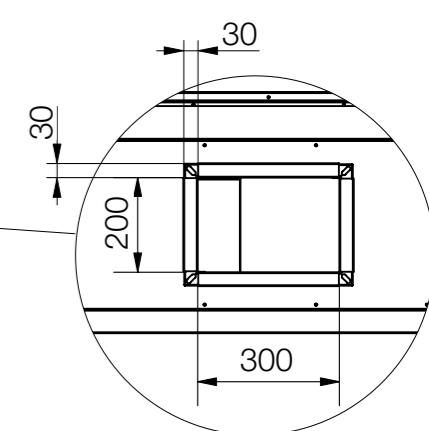
KHE-W	Lighting LED 4000K						
	L x W	Number of filters	Number of exhaust connections	Number of lighting fixtures	Power	Length	Suspension points
900		1		1		720	4
1100		2		1	2x10W	720	4
1300		2	1	1	2x15W	1025	4
1500		2		1	2x15W	1025	4
1700	900, 1100,	3		1	2x20W	1330	6
1900	1100, 1300,	3		1	2x20W	1330	6
2100	1300, 1500	4		1	2x25W	1630	6
2300		4		1	2x25W	1630	8
2500		4	2			1025	8
2700		5		2	2x15W	1025	8
2900		5		2	2x15W	1025	8

[More dimensions](#)

[Circular connection details](#)



[Rectangular connection details](#)



KHE-W-A Conventional kitchen hood

- Wall installation
- Angled version
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



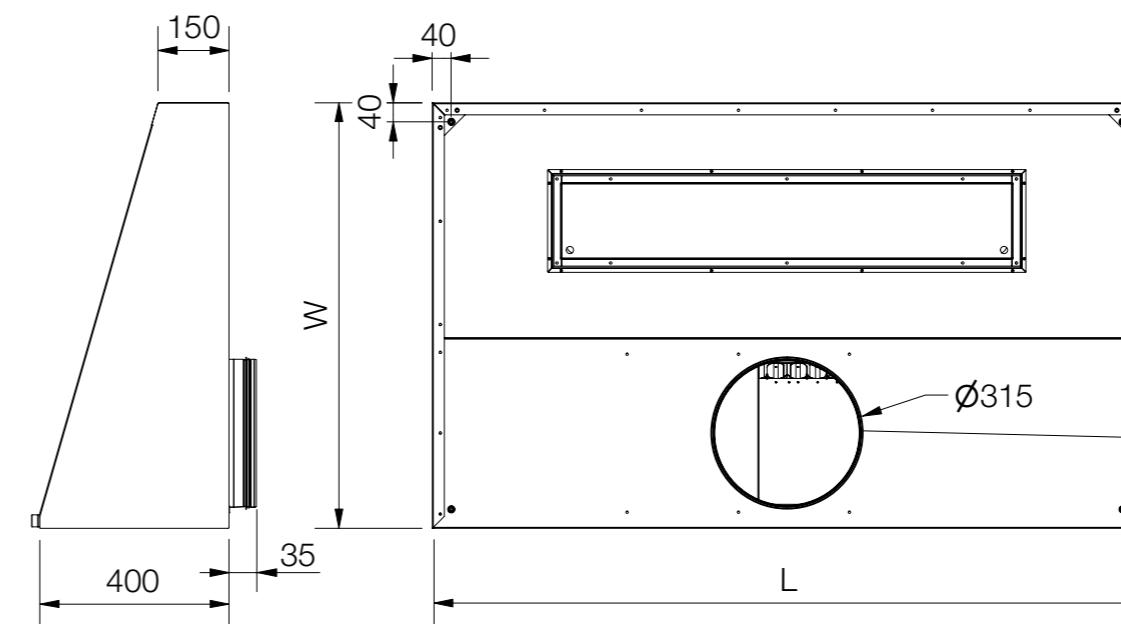
KHE

KITCHEN VENTILATION

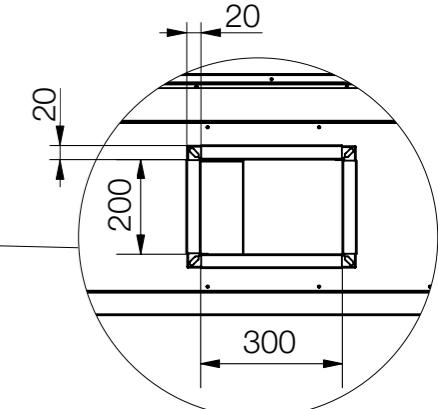
DIMENSIONS

KHE-A	Number of filters	Number of exhaust connections	Lighting LED 4000K			
			Number of lighting fixtures	Power	Length	Suspension points
900	1		1		720	4
1100	2		1	2x10W	720	4
1300	2	1	1		1025	4
1500	2		1	2x15W	1025	4
1700	900, 1100,	3	1		1330	6
1900	1100, 1300,		1	2x20W	1330	6
2100	1500	4	1		1630	6
2300			1	2x25W	1630	8
2500	4	2	2		1025	8
2700	5		2	2x15W	1025	8
2900	5		2		1025	8

[Circular connection details](#)



[Rectangular connection details](#)



KHE-S

Conventional kitchen hood

- Space installation
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



- ▼ Design principles
- ▼ Product range
- ▼ Ordering key
- ▼ Installation
- ▼ Air volume / Pressure drop
- ▼ Accessories
- ▼ Maintenance



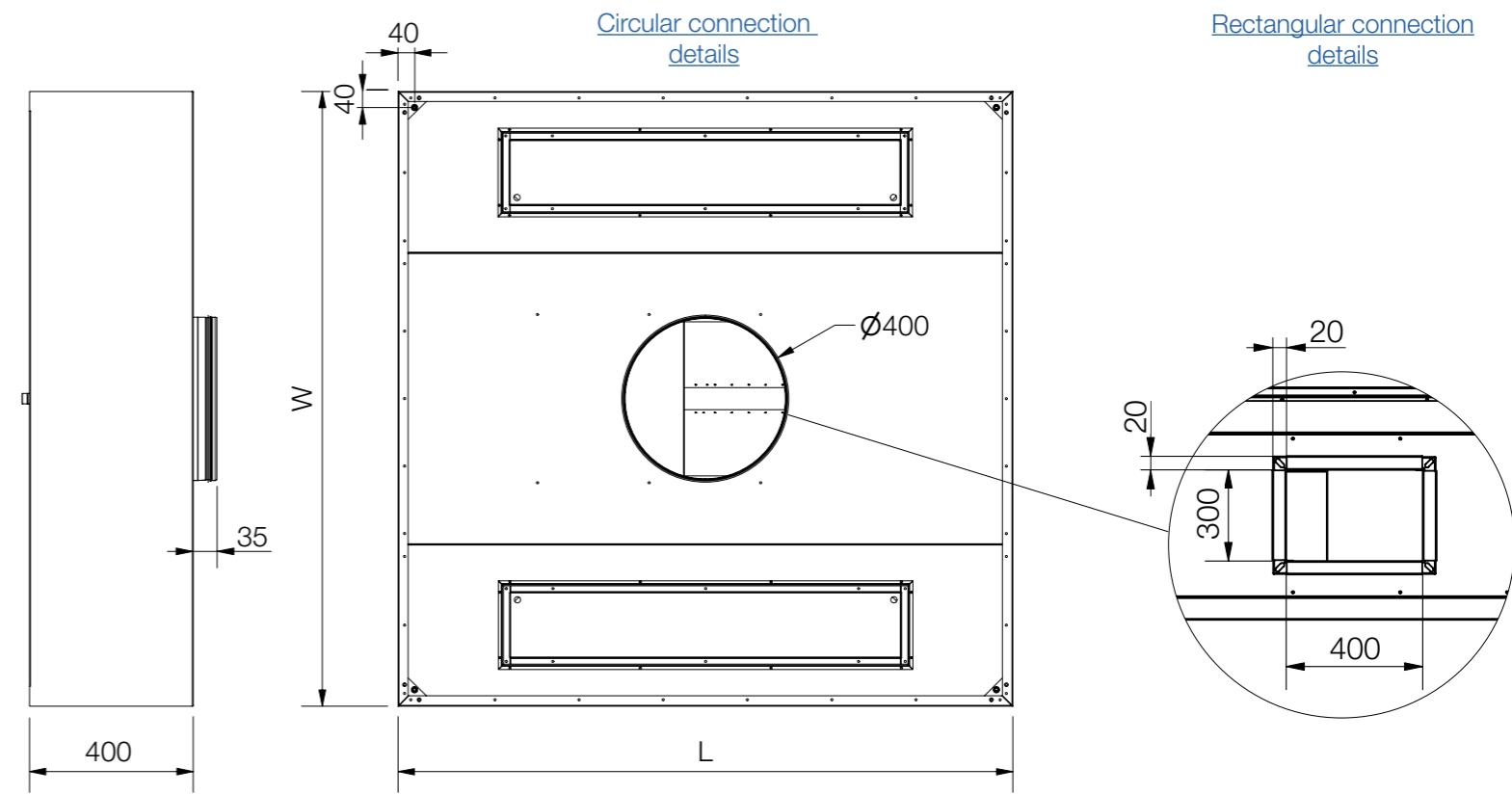
KHE

KITCHEN VENTILATION

DIMENSIONS

KHE-S	Number of filters	Number of exhaust connections	Lighting LED 4000K			
			Number of lighting fixtures	Power	Length	Suspension points
L x W						
900	2		2		720	6
1100	4		2	2x10W	720	6
1300	4	1	2		1025	6
1500	4		2	2x15W	1025	6
1400, 1700	6		2		1330	8
1600, 1800, 2000, 2100	6		2	2x20W	1330	8
2200, 2300, 2400	8	2	2	2x25W	1630	8
2500	8		2		1630	10
2700	10		4	2x15W	1025	10
2900	10		4		1025	10

[More dimensions](#)



KHE-S-A

Conventional kitchen hood

- Space installation
- Angled version
- LED lighting
- Circular duct connections with regulation damper
- KCF cyclone filter
- Standard material AISI 304/EN 1.4301

Optional

- UV Ozone System
- Optional material AISI 316/EN 1.4401
- Rectangular connection



- ▼ Design principles
- ▼ Product range
- ▼ Ordering key
- ▼ Installation
- ▼ Air volume / Pressure drop
- ▼ Accessories
- ▼ Maintenance

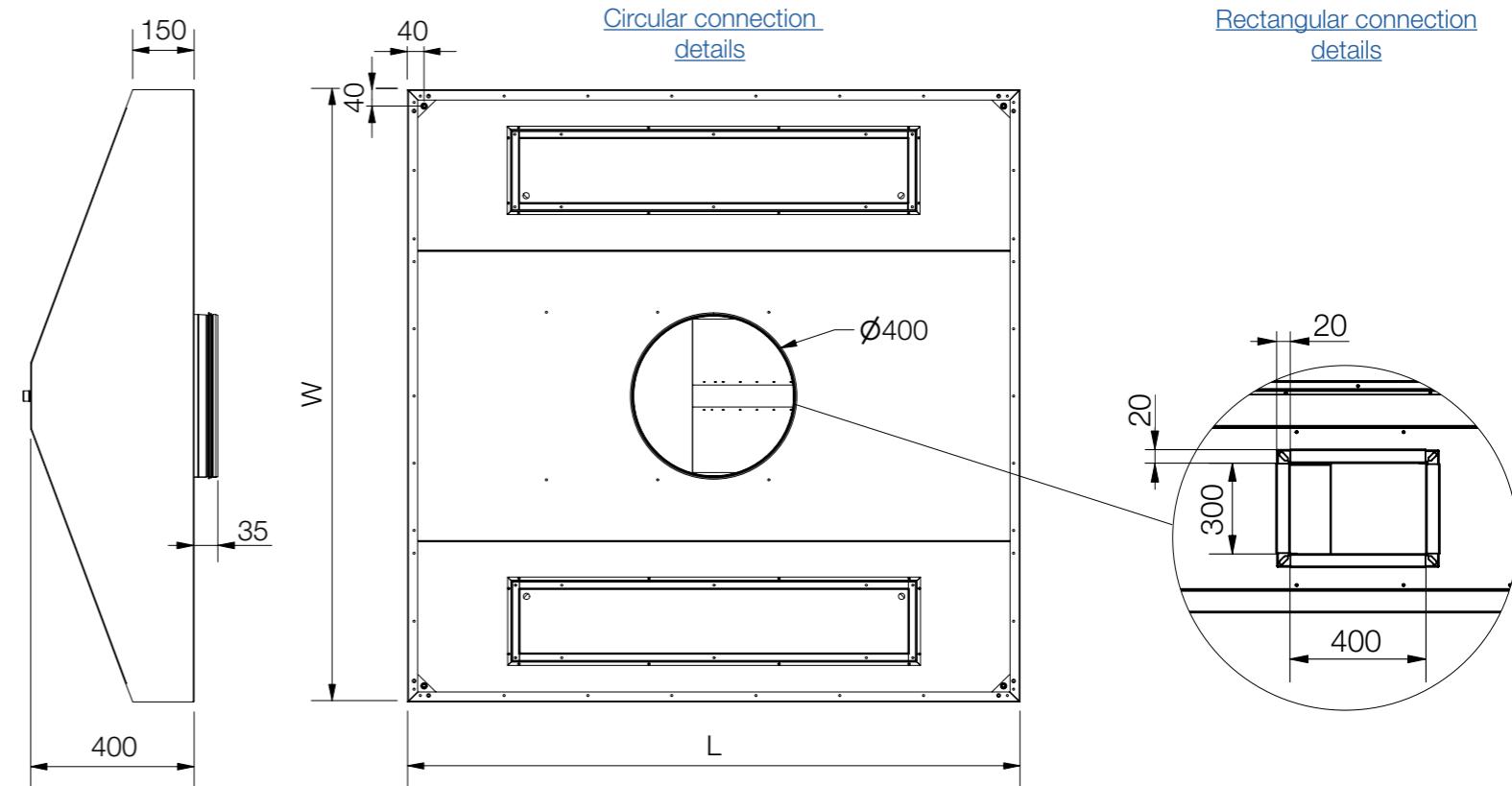


KHE

KITCHEN VENTILATION

DIMENSIONS

KHE-S-A	Number of filters	Number of exhaust connections	Lighting LED 4000K			Suspension points
			Number of lighting fixtures	Power	Length	
900	2		2		720	6
1100	4		2	2x10W	720	6
1300	4	1	2		1025	6
1500	4		2	2x15W	1025	6
1400, 1700, 1600, 1800, 1900, 2000, 2100, 2200, 2300, 2500	6		2		1330	8
2400	8		2	2x20W	1330	8
		2	2		1630	8
2700	8		2	2x25W	1630	10
2900	10		4	2x15W	1025	10
			4		1025	10



KHC-W

Condensation exhaust hood

- Wall installation
- LED lighting
- Circular duct connections with regulation damper
- Standard material AISI 304/EN 1.4301

Optional

- Optional material AISI 316/EN 1.4401
- Rectangular connection

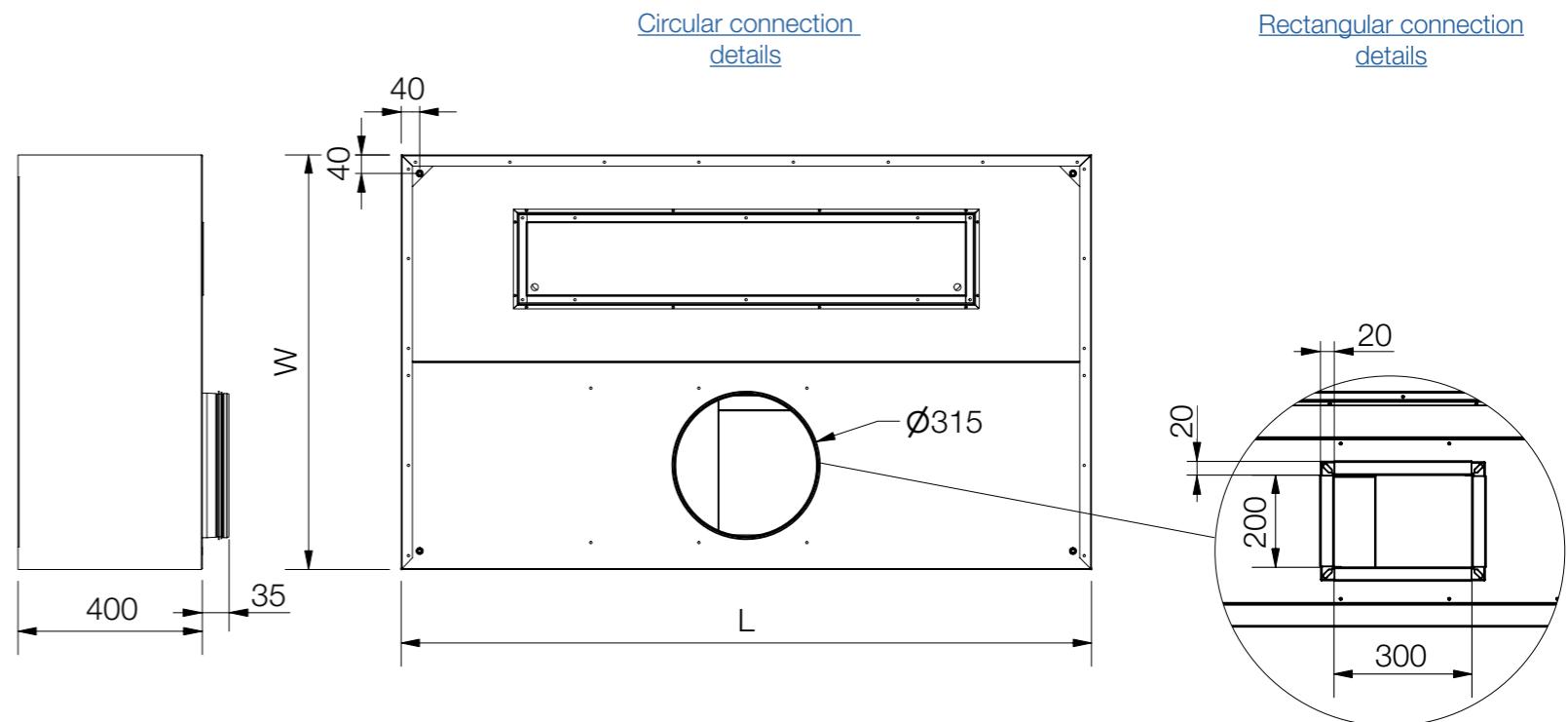


KHC

KITCHEN VENTILATION

DIMENSIONS

KHC-W	Number of exhaust connections	Lighting LED 4000K			Suspension points
		Number of lighting fixtures	Power	Length	
900		1	2x10W	720	4
1100		1	2x10W	720	4
1300	1	1	2x15W	1025	4
1500	900, 1100,	1	2x15W	1025	4
1700	1100, 1300,	1	2x20W	1330	6
1900	1500	1	2x20W	1330	6
2100		1	2x25W	1630	6
2300		1	2x25W	1630	8



[Circular connection details](#)

[Rectangular connection details](#)

Hood sections combinations

	L x W	1100	1300	1500
KHI-W	1100			
	1300			
	1500			
	1700			
	1900			
	2100			
	2300			
	2500			
	2700			
	2900			
KHI-W	3300	2 x 1700	2 x 1700	2 x 1700
	3700	2 x 1900	2 x 1900	2 x 1900
	4100	2 x 2100	2 x 2100	2 x 2100
	4500	2 x 2300	2 x 2300	2 x 2300
	4900	2 x 2500	2 x 2500	2 x 2500
	5300	2 x 2700	2 x 2700	2 x 2700
	5700	2 x 2900	2 x 2900	2 x 2900
	6100	3 x 2100	3 x 2100	3 x 2100

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-  [Air volume / Pressure drop](#)
-  [Accessories](#)
-  [Maintenance](#)

-  [KHI-W x 1](#)
-  [KHI-W x 2](#)
-  [KHI-W x 3](#)

PRODUCT RANGE

	L x W	1800	2000	2200	2400	2600	2800
KHI-S	1100						
	1300						
	1500						
	1700						
	1900						
	2100	2x1100	2x1100	2x1100	2x1100	2x1100	2x1100
	2500	2x1300	2x1300	2x1300	2x1300	2x1300	2x1300
	2900	2x1500	2x1500	2x1500	2x1500	2x1500	2x1500
	3300	2x1700	2x1700	2x1700	2x1700	2x1700	2x1700
	3700	3x1300	3x1300	3x1300	3x1300	3x1300	3x1300
KHI-S	4300	3x1500	3x1500	3x1500	3x1500	3x1500	3x1500
	4900	3x1700	3x1700	3x1700	3x1700	3x1700	3x1700
	5500	3x1900	3x1900	3x1900	3x1900	3x1900	3x1900
	5700	4x1500	4x1500	4x1500	4x1500	4x1500	4x1500
	6500	4x1700	4x1700	4x1700	4x1700	4x1700	4x1700



For more information about
pressure drops visit
[Klimaoprema selection software](#)

-  [KHI-S x 1](#)
-  [KHI-S x 2](#)
-  [KHI-S x 3](#)
-  [KHI-S x 4](#)

Hood sections combinations

	L x W	900	1100	1300	1500
KHE-W	900				
	1100				
	1300				
	1500				
	1700				
	1900				
	2100				
	2300				
	2500				
	2700				
KHE-W	2900				
	3400	2x1700	2x1700	2x1700	2x1700
	3800	2x1900	2x1900	2x1900	2x1900
	4200	2x2100	2x2100	2x2100	2x2100
	4600	2x2300	2x2300	2x2300	2x2300
	5000	2x2500	2x2500	2x2500	2x2500
	5400	2x2700	2x2700	2x2700	2x2700
	5800	2x2900	2x2900	2x2900	2x2900
	6300	3x2100	3x2100	3x2100	3x2100

	L x W	1400	1600	1800	2000	2200	2400
KHE-S	900						
	1100						
	1300						
	1500						
	1700						
	1900						
	2100			2x 1100	2x 1100	2x 1100	
	2300			2x 1200	2x 1200	2x 1200	
	2500			2x 1300	2x 1300	2x 1300	
	2700			2x 1400	2x 1400	2x 1400	
KHE-S	2900			2x 1500	2x 1500	2x 1500	
	3400	2x1700	2x1700	2x1700	2x1700	2x1700	
	3900	3x1300	3x1300	3x1300	3x1300	3x1300	
	4500	3x1500	3x1500	3x1500	3x1500	3x1500	
	5100	3x1700	3x1700	3x1700	3x1700	3x1700	
	5700	3x1900	3x1900	3x1900	3x1900	3x1900	
	6000	4x1500	4x1500	4x1500	4x1500	4x1500	

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 **KHE-W x 1**

 **KHE-W x 2**

 **KHE-W x 3**



PRODUCT RANGE

 **KHE-S x 1**

 **KHE-S x 2**

 **KHE-S x 3**

 **KHI-S x 4**

Hood weights

	1100	1300	1500
1100	76	82	87
1300	81	87	93
1500	91	97	103
1700	96	103	109
1900	105	112	119
2100	115	122	129
2300	122	130	137
2500	129	137	145
2700	137	146	154
2900	145	153	162
3300	168	178	187
3700	187	197	207
4100	206	216	227
4500	220	232	243
4900	235	247	260
5300	251	264	277
5700	266	280	293
6100	296	311	325

	1800	2000	2200	2400	2600	2800
1100	121	127	132	139	144	150
1300	134	140	146	152	158	164
1500	150	156	163	169	175	182
1700	158	164	171	178	184	191
1900	174	181	188	195	202	209
2100		212	220	228	236	243
2500		238	246	254	263	271
2900		271	280	289	298	307
3300	278	287	297	306	316	325
3700	446	459	473	486	499	513
4300	375	386	397	409	420	431
4900	398	410	423	435	447	460
5500	446	459	473	486	499	513
5700	487	51	515	529	542	556
6500	519	534	549	564	579	594

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PRODUCT RANGE

UV Ozone system

UV-900	5,09 kg by exhaust connection
UV-1200	4,08 kg by exhaust connection

Filters

KCF	4,8 kg per piece
KCF-B	2,2 kg per piece

Hood weights

	L x W	900	1100	1300	1500
KHE-W [kg]	900	37	40	44	47
	1100	39	43	47	51
	1300	47	51	55	60
	1500	52	56	61	66
	1700	57	62	67	72
	1900	64	69	74	80
	2100	69	75	81	86
	2300	74	80	86	92
	2500	82	88	94	101
	2700	85	91	98	104
	2900	90	97	104	110
	3400	106	114	122	130
	3800	120	128	137	146
	4200	132	140	150	159
	4600	142	151	161	171
	5000	155	166	177	188
	5400	161	173	184	196
	5800	171	183	195	208
	6300	192	205	219	232

	L x W	1400	1600	1800	2000	2200	2400
KHE-S [kg]	900	58	62	66	69	73	76
	1100	62	66	70	73	77	81
	1300	73	78	82	86	90	95
	1500	81	86	90	95	99	104
	1700	88	93	97	103	108	113
	1900	98	103	108	113	119	124
	2100	105	111	117	122	128	133
	2300	113	119	125	131	137	143
	2500	126	127	140	145	152	158
	2700	130	136	143	150	156	163
	2900	137	144	151	158	165	172
	3400	164	172	180	189	197	205
	3900	195	205	214	223	233	242
	4500	218	229	239	249	260	270
	5100	240	251	260	274	285	297
	5700	268	280	293	305	317	330
	6000	287	300	313	327	340	353

	L x W	900	1100	1300	1500
KHC [kg]	900	37	40	44	47
	1100	41	45	49	53
	1300	48	53	57	61
	1500	53	58	62	67
	1700	61	66	71	76
	1900	66	71	76	81
	2100	73	78	84	90
	2300	77	83	89	95

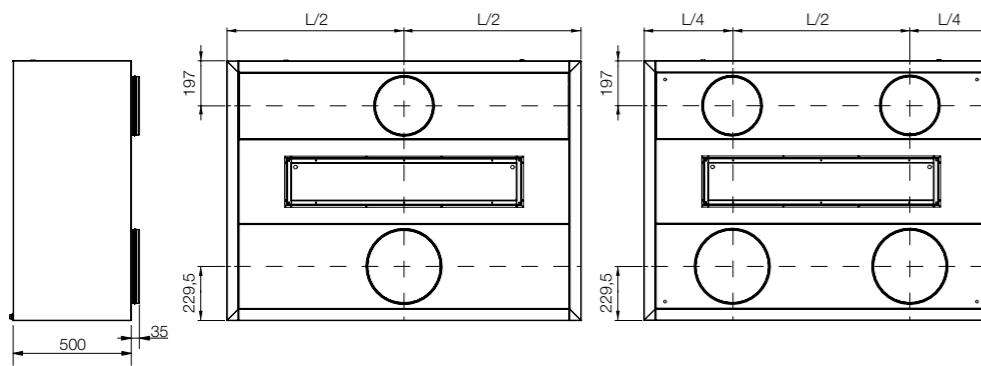
- [Design principles](#)
- [Product range](#)
- [Ordering key](#)
- [Installation](#)
- [Air volume / Pressure drop](#)
- [Accessories](#)
- [Maintenance](#)

PRODUCT RANGE

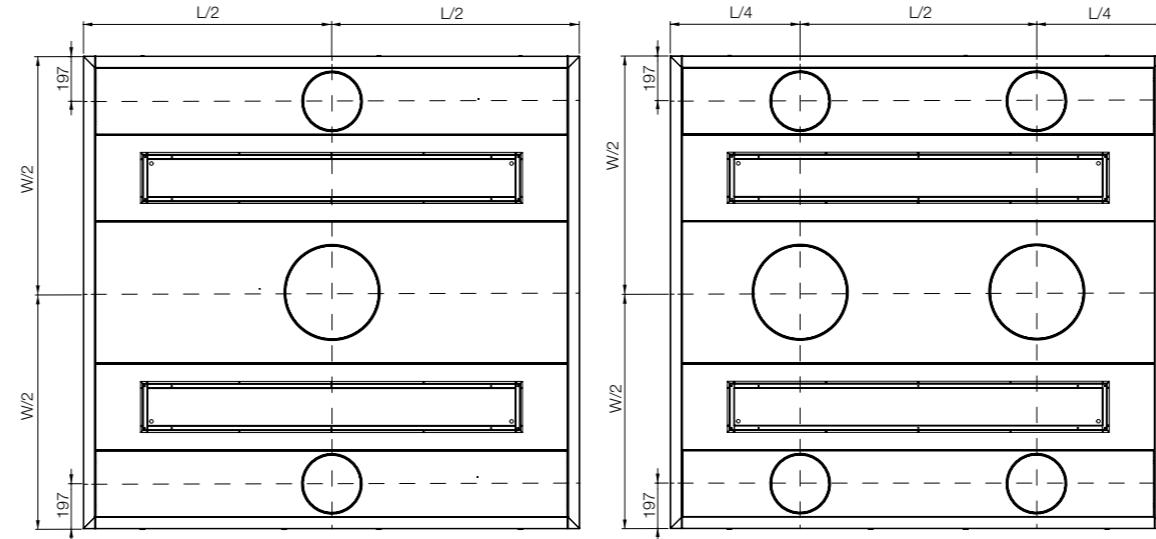
UV Ozone system	
UV-900	5,09 kg by exhaust connection
UV-1200	4,08 kg by exhaust connection
Filters	
KCF	4,8 kg per piece
KCF-B	2,2 kg per piece

Air duct circular connection positions

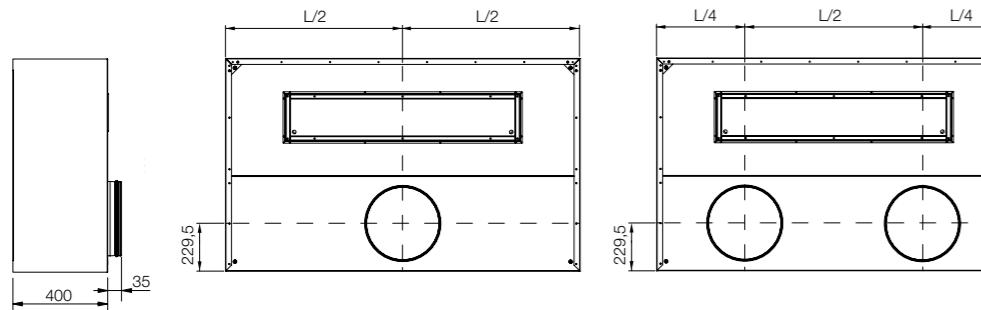
KHI



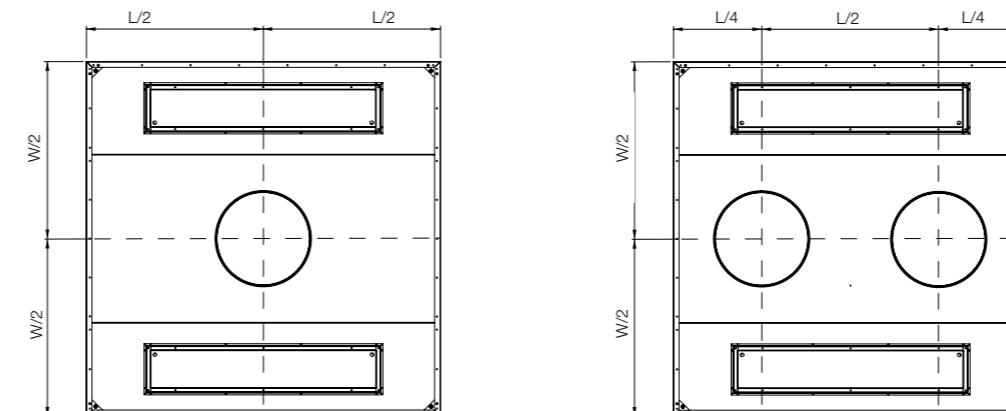
KHI-S



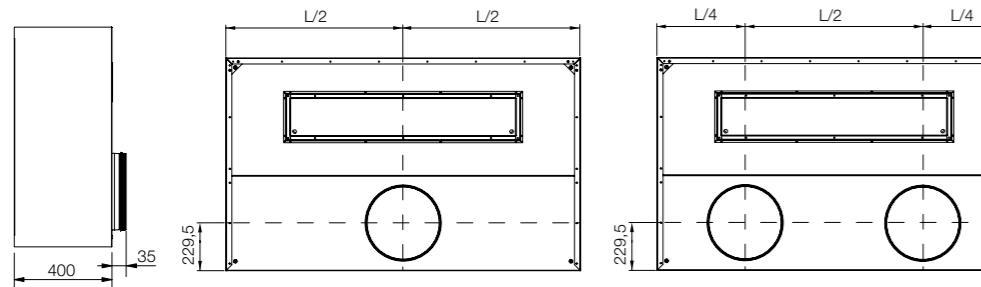
KHE



KHE-S



KHC

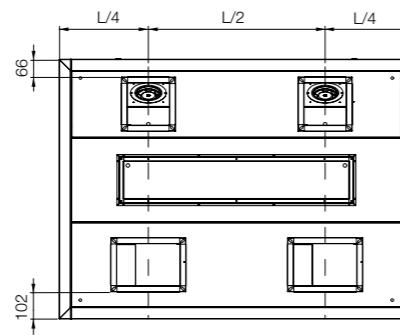
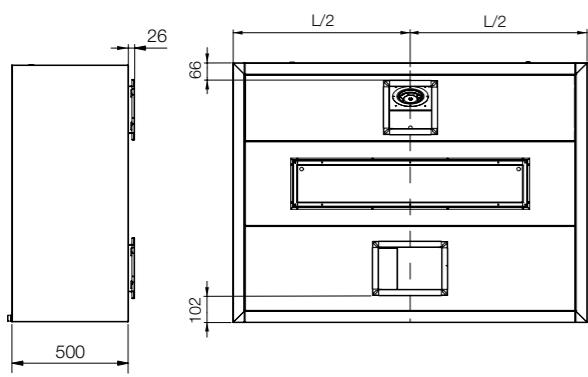


- ▼ Design principles
- ▼ Product range
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- ▼ Maintenance

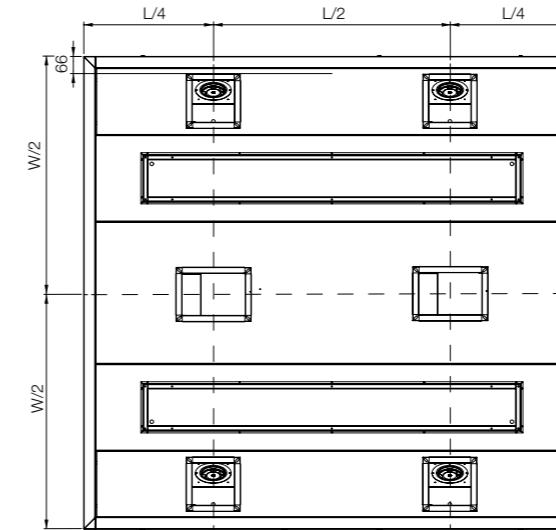
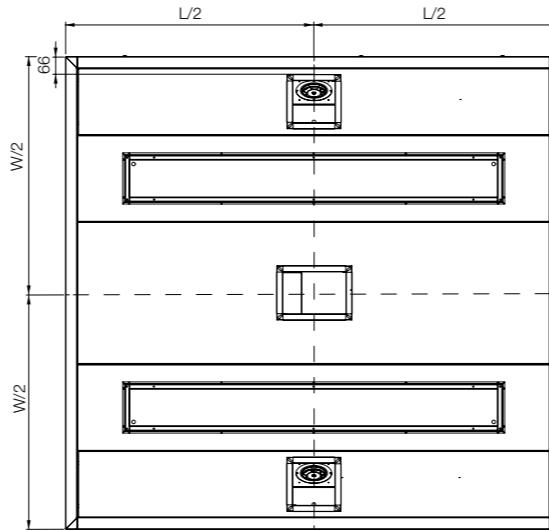
 **PRODUCT RANGE**

Air duct rectangular connection positions

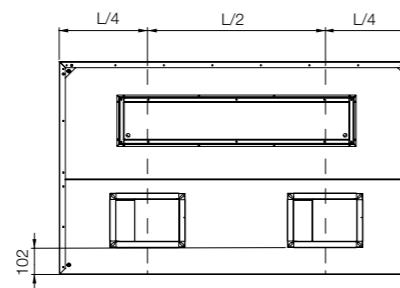
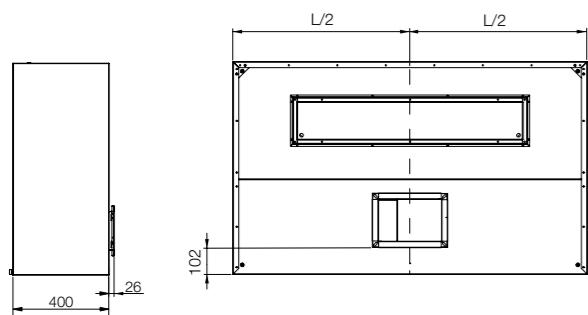
KHI



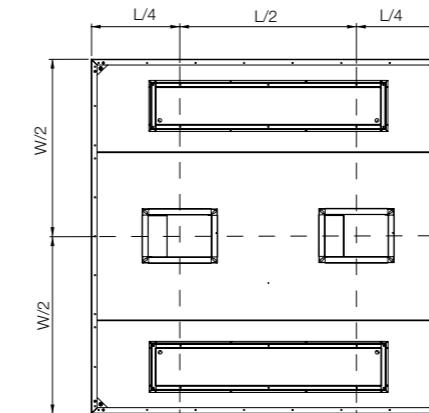
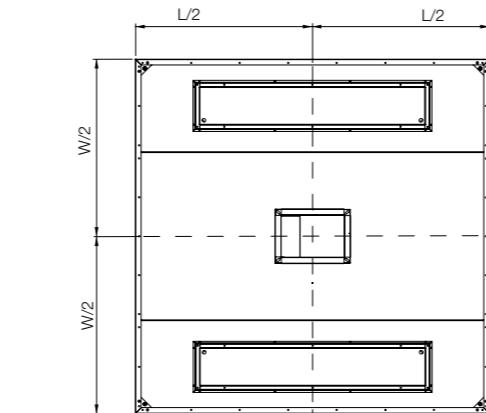
KHI-S



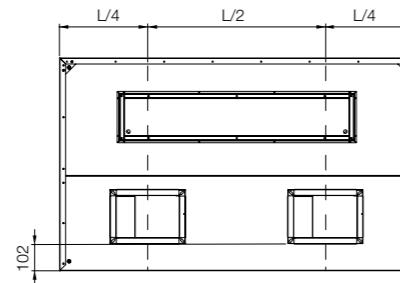
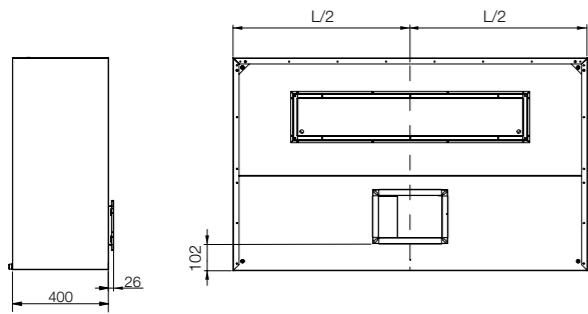
KHE



KHE-S

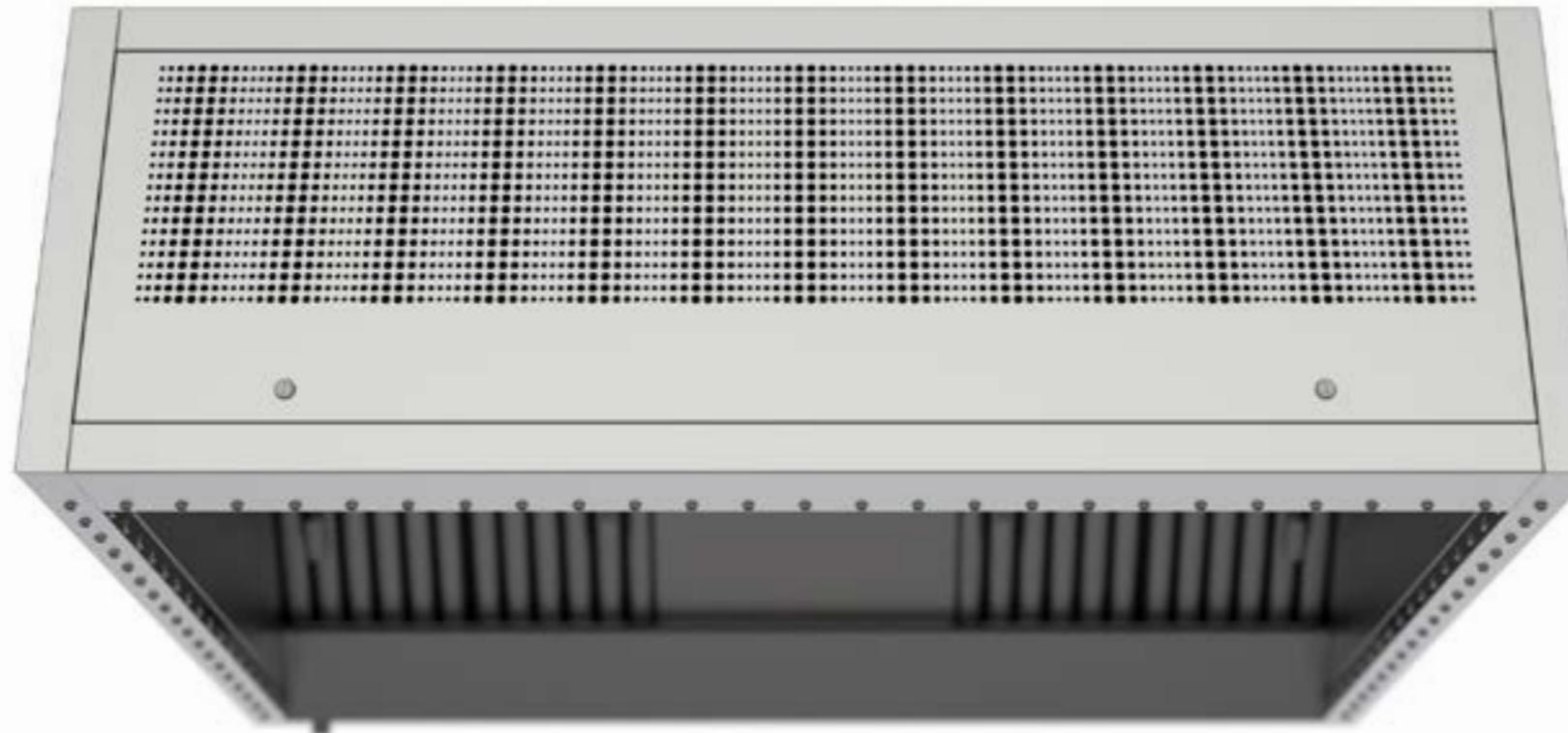


KHC



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 **PRODUCT RANGE**



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ORDERING KEY

KITCHEN VENTILATION

ORDERING KEY	(1) Hood	(2) Installation	(3) Options	(4) Dimensions	(5) Connection type	(6) Material	FILTER ORDERING KEY	(1) KCF Filter	(2) Material				
KHI	-	W	-	F	-	2500 x 1100 x 500	-	P	-	316	KCF	-	316
(1) KHE KHI KHC				(4) Dimensions L x W x H							(1) KCF		
(2) Installation W- wall installation S- Ceiling installation (optional on KHI/KHE)				(5) Connection type P- Rectangular connection C- Circular connection							(2) Material Optional - 316 - AISI 316/EN 1.4401		
(3) F- Fresh air supply (optional on KHI) A- Angled version (optional on KHE)				(6) Material Optional - 316 - AISI 316/EN 1.4401			BLANK FILTER ORDERING KEY	(1) KCF Filter	(2) Material				
* For more technical information visit www.klimaoprema.com													

Installation

Suspension installation procedure

1. Drill holes in ceiling and put anchors in it
2. Place open hooks into ceiling anchors
3. Place hooks into riv-nuts in hood ceiling
4. Place hooks into tensioner
5. Place cable into the hook

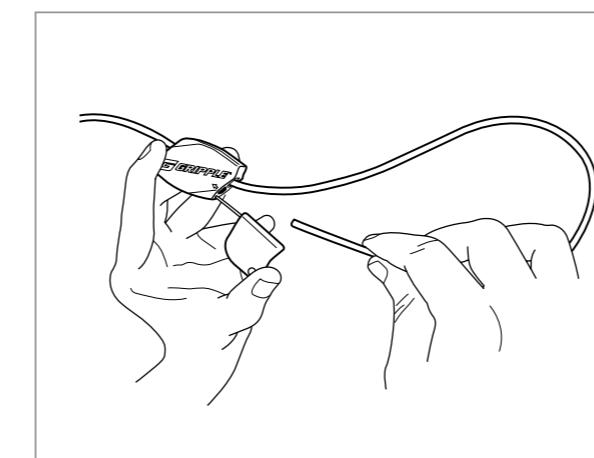
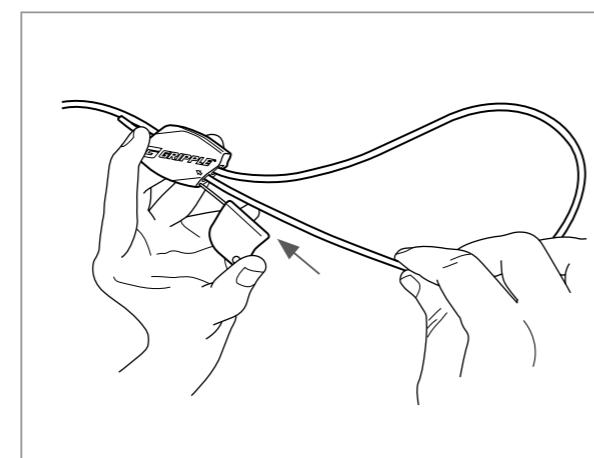
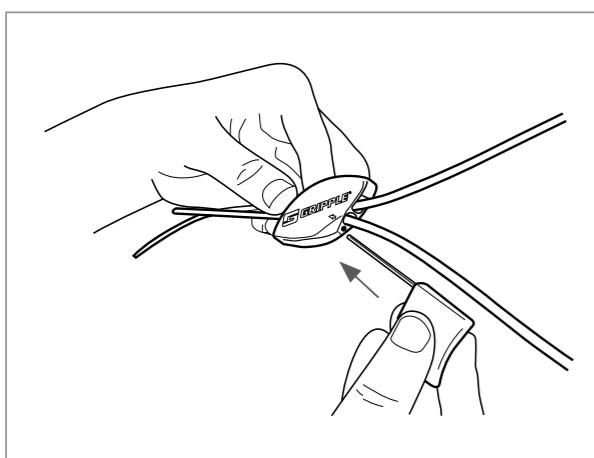
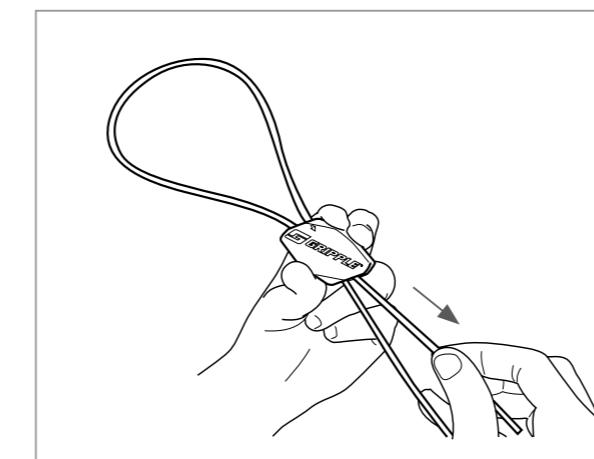
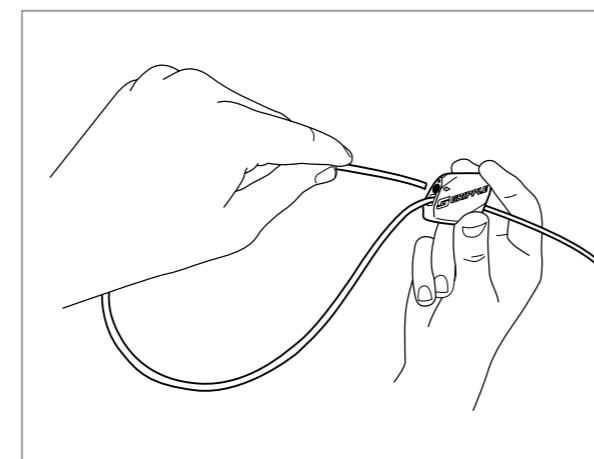
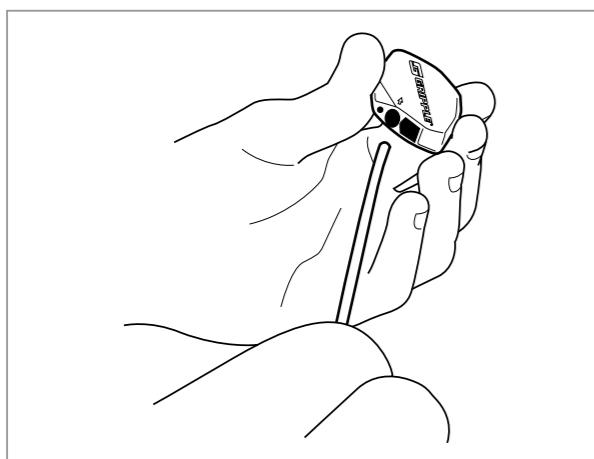
Gripple suspension system

Used to suspend a variety of HVAC, mechanical and electrical services from different substrates. Ideal for fast suspension of cable containment, pipework, air conditioning

- Up to six times faster to install than traditional hanging systems
- Versatile and simple to use
- Strong, safe and industry approved
- Aesthetically discreet and lightweight
- Supplied in ready-to-use kits, comprising a length of wire, pre-crimped End Fixing, Gripple Hanger and Setting Key



For more information visit www.gripple.com



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* Kitchen hood weight can be up to 200kg. It is instructed to use lifting platform when installing the hood. Hood should be placed to a height of 2,1m from the floor.

*Ensure a minimum 75 mm of tail wire exits the hanger.

Installation

Condensate drain

Condensate draining is done by unscrewing the threaded cap on the bottom of the hood. First few weeks condensate should be checked on a daily basis to determine cleaning interval. If condensate is concentrated on the other side of the hood should be leveled accordingly. Thread on the cap is G3/8".

Connecting of multiple part hood

Multiple part hoods are delivered with a connecting angle. Adjust the hood so that holes are coincident with holes in the other half of the hood and fasten it with rivets.

If the hood is made out of multiple parts, every part has its own suspension anchors. After lifting all parts are fastened mutually with nuts and bolts M8. When parts are fastened, check that all joining edges are linear. If insulation in supply chamber is damaged during installation, seal the damage before starting to use the hood. Hood is standardly delivered with supply and exhaust connections. Dimensions depend on the size of the hood and can be found in technical catalogue (5/S1). Connection height is standard 100 mm or 125 mm if equipped with aluminium regulation louver. Sealing silicone should be placed on hood-connection-duct connections. Hood ceiling and duct connection can be fastened with sheet metal screws or nuts and bolts. Duct connection can be fastened with sheet metal screws, nuts and bolts, rivets or duct couplings. Check that mounting points and ductwork position is in accordance with expected position of the hood.



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***For installation of an additional kitchen hood sprinkler system from a third-party, you should contact Klimaoprema directly for installation guidance.**

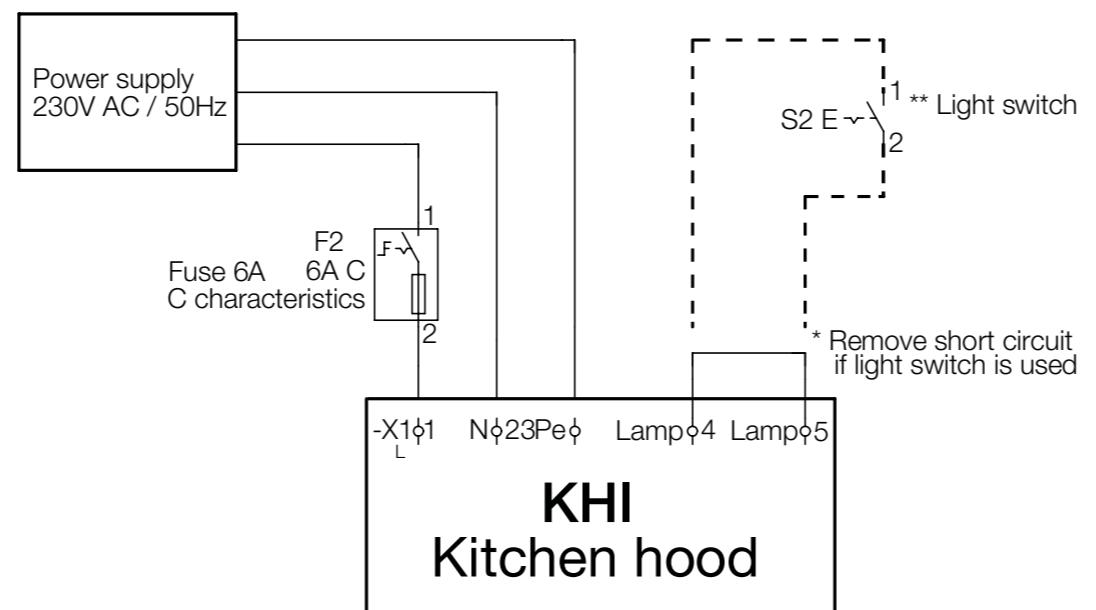
Installation

Wiring diagram - KHI

*Danger from electric current

In case of insulation damage, shut down the power supply immediately.

- Only qualified personnel can work on electrical system of the hood
- Before working on electrical system check that system is not under current
- Never disable or short circuit electric fuse.
- Check system current after changing the fuse.
- Electronics should not be working in damp conditions, it can cause short circuit.
- Install shortest possible cable route
- Prevent damage from sharp edges



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 **INSTALLATION**

Installation

Cyclone filters

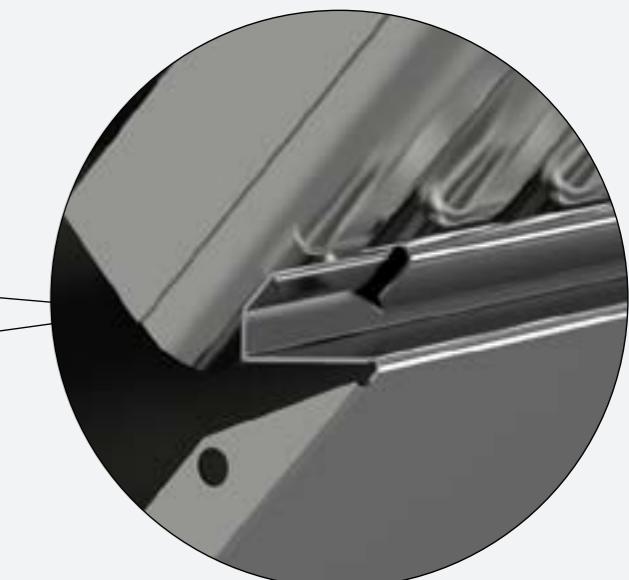
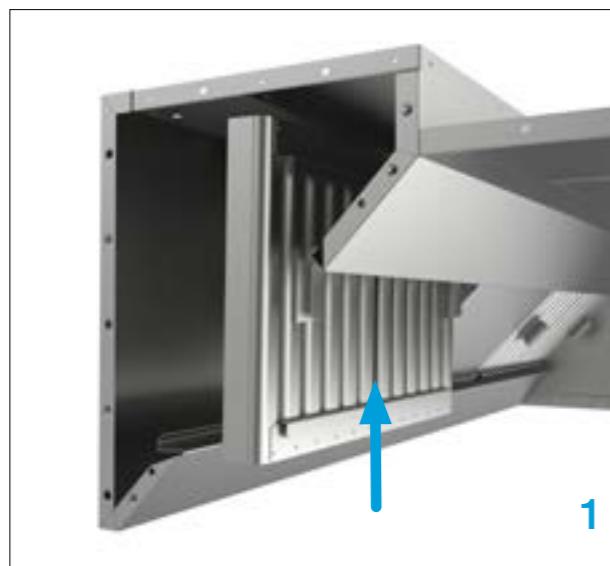
Cleaning intervals is determined for each kitchen individually. Filter should be washed with hot water and detergent or washed in dishwashing machine. KCF filter can be disassembled in a manner showed on lower drawings. Manufacturer Klimaoprema d.d. doesn't take any responsibility for damage done by clogged or dirty filters.

Inserting cyclone filter

1. Place filter to inner side of the hood
2. Place filter into upper rail
3. Lower the filter into lower rail



- ▼ Design principles
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Installation

Lighting

Body is electro-galvanized finished in RAL 9010 white paint with tempered glass, thickness 4 mm, IP55 ingress protection. Cover is AISI 304 SB stainless steel.

Features

- Anti-drop cable with clip and shackle
- Lighting assembly consisting of white painted sheet steel envelope, thickness 0.5 mm, 2 x SYLVANIA Luxline Plus lamps, A2 class power supply, HN H- 1x 220/240V reactor, G5 tube holder
- Power cord: cord with silicone sheath for resistance to high temperatures, length 1.5 m

Changing LED tubes

1. Locate and remove 6 screws
2. Remove the cover and let it hang on the safety cable.
3. Disconnect LED tubes by rotating them



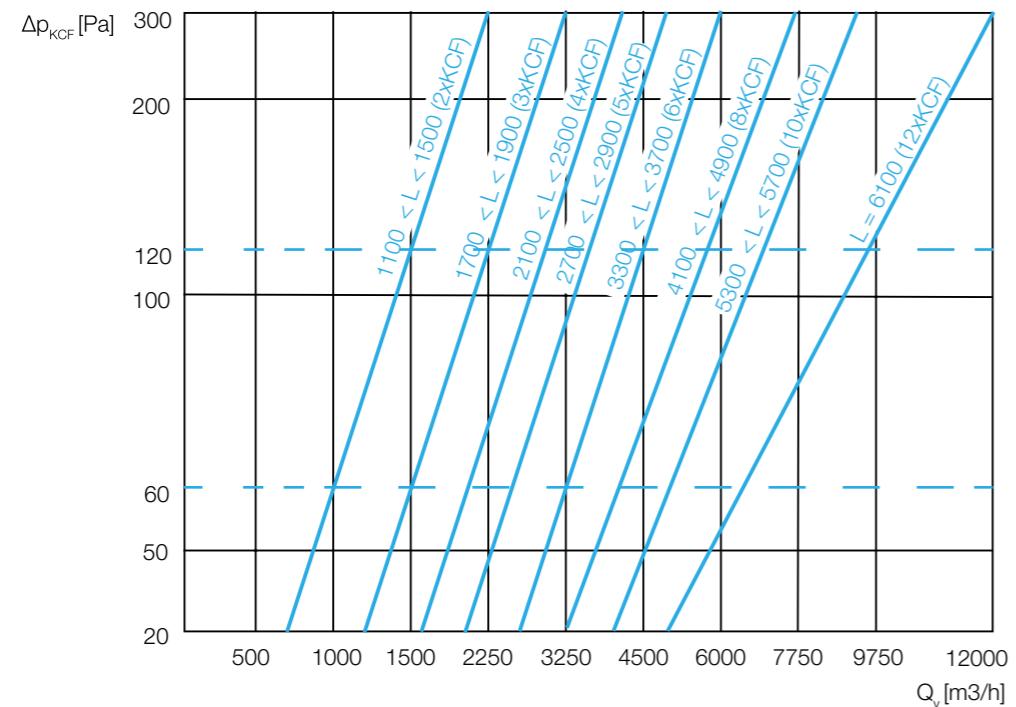
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Air volume and pressure drop tables

Exhaust volume per wall kitchen hood length L[mm]:

Recommended filter operating pressures 60 - 120Pa

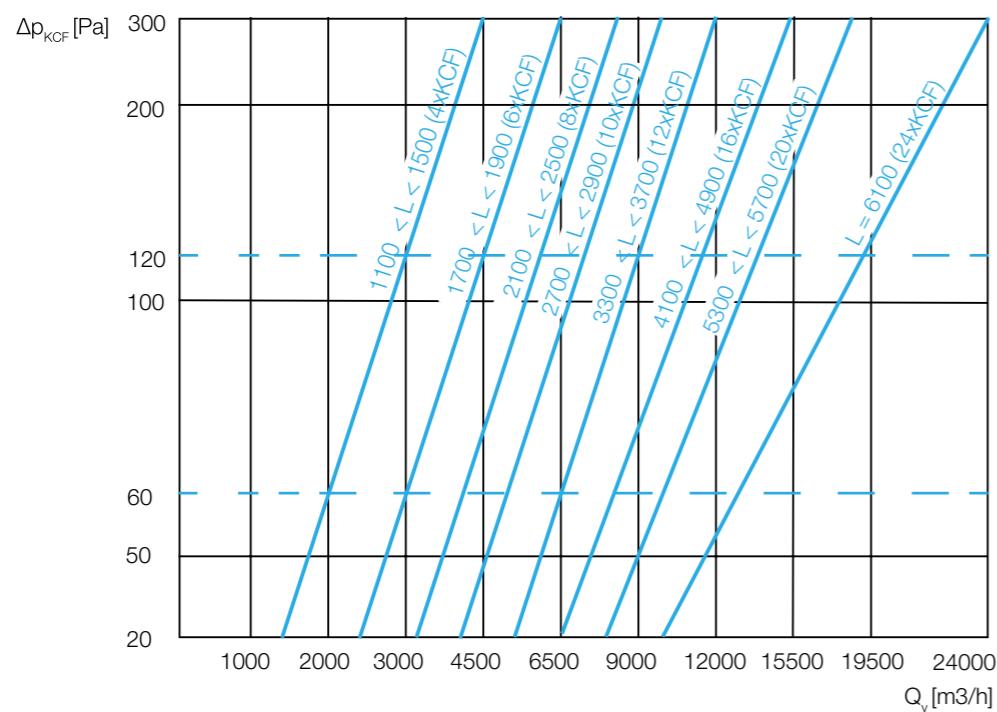


Maximum recommended airflow

Minimum recommended airflow

Exhaust volume per ceiling kitchen hood length L[mm]:

Recommended filter operating pressures 60 - 120Pa



Maximum recommended airflow

Minimum recommended airflow

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PRESSURE DROP



For more information about pressure drops visit
[Klimaoprema selection software](#)

Accessories

UV ozone purification system

High performance vacuum UV lamps filled with amalgam remain extremely effective even at ambient temperatures up to 80 ° C. The long service life of one UV lamp, up to 10,000 operating hours, minimizes the number of services required, and the efficiency of the system reduces the need for dry cleaning of the exhaust system professional kitchens.

The most important advantages of installing the UVC Ozone system of the company Klimaoprema are:

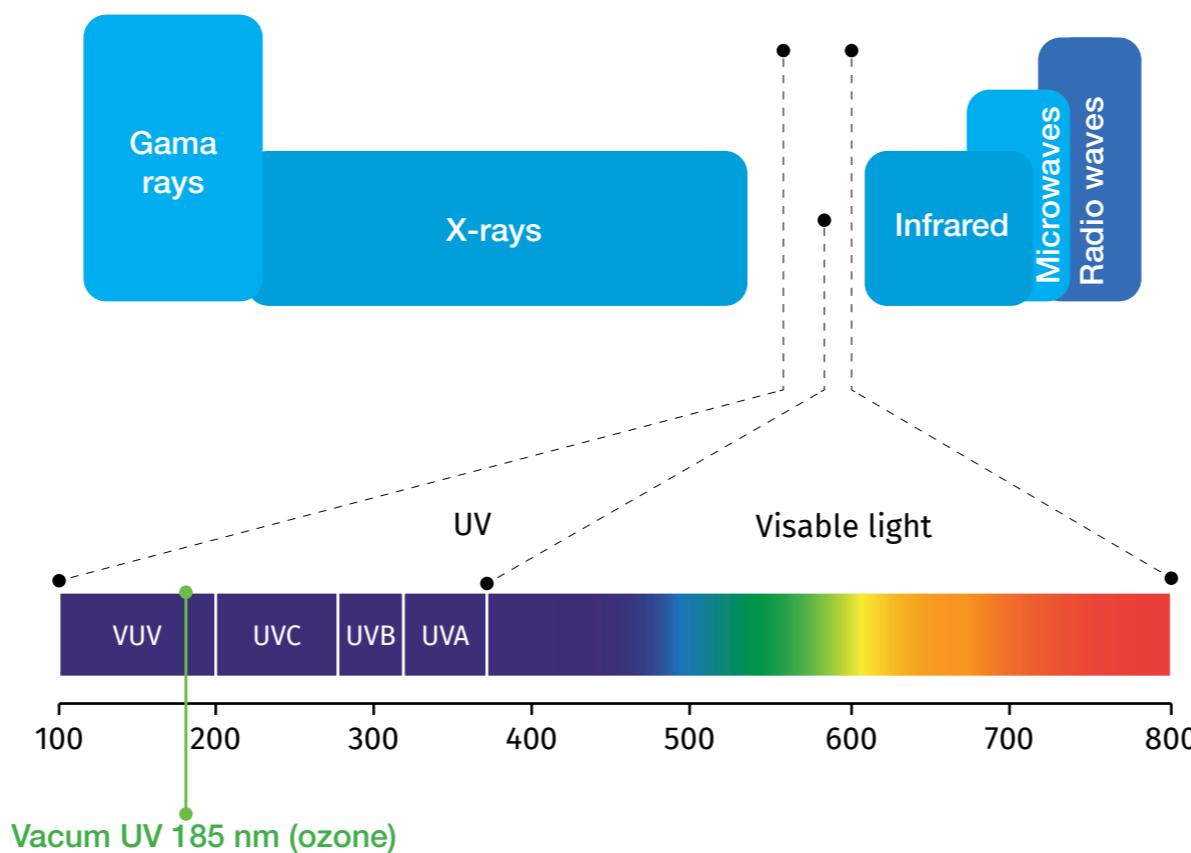
- Effective removal of unpleasant odors from waste air by decomposing odor molecules already in the stage of formation.
- Prevent the deposition of new grease and remove existing deposits in the exhaust system.
- There is no risk of fire due to burning of fat deposits - the best possible protection against fire in professional kitchens.
- Satisfaction of hygiene standards by eliminating a large number of microorganisms.
- Since the unpleasant odor and impurities have been removed it is possible to recirculate the warm air through the system.
- Easy installation, use and maintenance of the system with automated operation.
- Long lifespan of UV lamps - up to 10000 hours with occasional wiping of lamps with denatured alcohol and cloth.
- Quick and easy replacement of UV lamps during service.
- Significantly reduced need for dry cleaning of the exhaust system.
- Numerous security features and warning alarms enable safe operation of the system.
- Longer life of all elements of the exhaust ventilation system due to reduced contamination.
- **IMPORTANT:** UV ozone purification systems are not intended for use on the charcoal grills

Since UV light radiation is not completely harmless, it is necessary to follow the safety measures listed in the instructions of the manufacturer Klimaoprema.

- The system has several safety elements (magnetic switches and pressure switch) that ensure automatic switching off of UV lamps when removing the grease filter or due to a fault in the exhaust ventilation system.
- In order to make the system as efficient as possible and to completely decompose the remaining ozone, a minimum length of the exhaust ventilation duct of 8m is recommended. It is also recommended to install an FKU filter with activated carbon at the end of the exhaust duct.



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ACCESSORIES

ORDERING KEY

(1) UV Ozone system

UV-OS-1

(1) UV-OS-1
UV-OS-2
UV-OS-3
UV-OS-4
UV-OS-6
UV-OS-8

* For more technical information visit www.klimaoprema.com



MAINTENANCE

KITCHEN VENTILATION

TRANSPORT

Upon arrival, check the kitchen hood for possible damage during the transport. In case of any damage or shortcomings, immediately contact your supplier.

STORAGE

If the product is not installed immediately:

- Remove any wrapping.
- Protect the product from dust and contamination.
- Do not expose the product to the effects of weather - store it in a dry place.
- Do not store the unit below -20 °C or above 50 °C.

Please properly dispose of packaging material!

MAINTENANCE AND OPERATION

For maintaining the hygiene and fire safety requirements, it is perform periodic cleaning of the kitchen equipment. Cleaning interval is dependent on the type and frequency of use. Soap and dish detergents can be used for cleaning of the surfaces of the hood. Cleaning agents containing chlorine and extremely alkaline solutions ($\text{pH}>11$) should be avoided. KCF filters can be cleaned in the dishwashing machine. UV Ozone system does not require cleaning, and the UV lamps should not be washed with cleaning agents. Supply air plenum can also be inspected by removing the front cover, and cleaned if necessary.

COMMISSIONING

1. Carefully unpack product - be careful of sharp edges and do not use excessive force for unpacking
2. Inspect the product for damage

*** All electric installations and commissioning should be done by a trained electrician!**

Commissioning procedure

1. Ensure that all filters are inserted and free from obstacles
2. Check duct connection
3. Ensure that regulation louvers are open
4. Turn on power supply
5. Turn on supply fans
6. Check device functions
7. Measure if exhaust volume flow is in the required interval
8. Measure if supply volume flow is in the required interval
9. Before commissioning: check the product functions

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KITCHEN VENTILATION

Images are for informational purposes only and may differ from the actual product.
Follow the latest versions of the catalog on the website.

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