

# **NORD**canopy

# HZ Grease Canopy with Ozone Cleaning

Replacement room air provided through front and side panels

"AirGrip" air intake system

Laser welded structure

Efficient HFK grease filters protected by utility patent

Energy efficient LED lights

Registered design no. 007972823-0001

HACCP certified (no. I-PE-106-ETS-R4-01)





## **General**

The NORDcanopy product portfolio consists of canopies and related air treatment products for use in commercial and industrial kitchen ventilation to create a comfortable and hygienic work environment.

Our products combine elegant design with highly effective grease, steam, heat and odor removal performance for your project. Thanks to our highly efficient HFK centrifugal filters, most of the cooking grease is eliminated from the kitchen exhaust airstream. In addition to HFK filters, HZ kitchen canopies come with an integrated ozone cleaning system, which provides a further reduction of grease and odor, as well as many other benefits.

We at ETS NORD know that no project is exactly alike. We have designed our canopies to be modular, so we can custom design and manufacture a NORDcanopy solution to meet each and every project requirement or technical need.

NORDcanopy products are manufactured from stainless steel according to standards EVS-EN 10088- 2:2014, EN 1.4301 or AISI 304 (AISI 304, surface 2K).

HACCP International certifies the equipment as food-safe and suitable for use in food facilities that operate in accordance with a HACCP based Food Safety Programme.





## **Grease Canopies with Ozone Cleaning**

## **HZ** Grease Canopy

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HZ-C Grease canopy - standard with ozone cleaning

aSAP

HZ-V Grease canopy - island with ozone cleaning



HZ-G Grease canopy - HIGH CAPACITY with ozone cleaning





OZ Ozone cleaning system

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## aSAP Solution

20



## **Accessories**

FET "Helping hand"

Grease filter removal tool





## **CP Cover plates**

21





## **HZ** Grease Canopies with Ozone Cleaning



The HZ grease canopy with ozone cleaning combines effective grease removal with elegant design in order to thoroughly clean and remove the excess heat from kitchen exhaust air. HZ kitchen canopy includes HFK cyclon grease filters and one or more integrated ozone cleaning systems with smart control system to further reduce grease and odor. Ozone treatment is simply chemical oxidation, whereby grease and odor are broken down to water vapor and dry minerals, thereby providing many advantages.

> NOTE! HZ Canopy needs supply air to function! The Ozone Module must not be installed if the hood serving it doesn't have a supply air duct installed.

## Advantages of canopies with Ozone Cleaning



#### Effective two-phase cleaning

- 1: Mechanical grease separation
- 2: Ozone treatment by oxidation



Notably improved fire safety



Less odors



**Enables heat recovery** 



Low operating cost



Maintenance service available

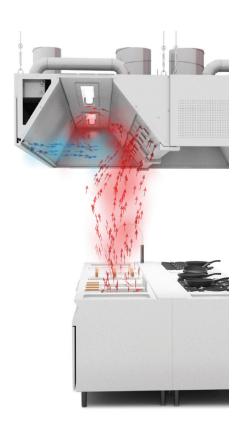
Canopy construction complies with the standard EN 16282-2 Equipment for commercial kitchens - Kitchen ventilation hoods; design and safety requirements.

Ozone technology used in the canopy complies with standard EN 16282-8 Equipment for commercial kitchens - Installations for treatment of aerosol. Requirements and testing.



## **Function**

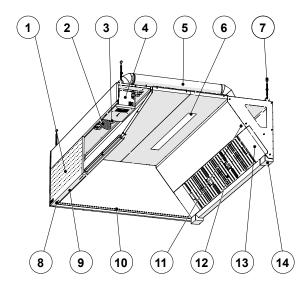
- The HZ canopy removes excess heat, grease and other particles emitted from commercial kitchen devices.
- Supply air is routed into the room through the front and optionally side panels of the kitchen canopy in the proximity of the kitchen
- Air supplied by the "AirGrip" air intake system along the lower perimeter of the canopy helps route the kitchen effluent into grease filters in order to remove grease and other pollutants. The grease drains from the filters down into a collection channel leading to a grease collection container.
- One or more ozone cleaning systems are installed inside the supply air chamber, thereby hidden from view and provided with clean air for its reliable production of ozone. The ozonated air is then drawn into exhaust chamber and mixed with the emissions, at which point the simple and natural process of chemical oxidation takes over to break down odor and grease particles remaining in the air stream.



#### Recommended data

Section length L	Exhaust airflows for the maximum number of filters (I/s)		AirGrip	Supply airflow per linear meter of panel (I/s)		
Section length L	E1	E3, E4	AllGlip	Front panel+ Air- Grip	Side panel (Optional)	
1000	200-260	400-520	40			
1500	300-390	600-780	45	110-275	40	
2000	400-520	800-1040	55	110-275	40	
2500	500-650	1000-1300	60			

## Construction

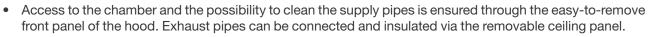


- 1 Front panel
- 2 Supply air adjustment plate
- 3 Supply air connection
- 4 Ozonator
- 5 HZ ozone duct
- 6 Lighting
- 7 Suspension points
- 8 Auxiliary supply
- 9 Front panel lock
- 10 "AirGrip" air nozzle system
- 11 Airflow measuring nozzles
- 12 HFK grease filters
- 13 Blind panel for grease filter rail
- 14 Grease collection container



- The canopy is made from stainless steel (AISI 304, surface 2K).
- Duct connections are equipped with rubber gaskets.
- Supply air chambers are heat insulated to prevent condensation of steam on the inner surface of the canopy.
- The laser welded end walls of the exhaust chamber prevent the possible spillage of grease from the inside of the chamber, thereby reducing the possibility of bacteria forming in the joints of the parts.
- The side walls of the hood are a closed structure and air tight allowing for routing supply air and the use of the "AirGrip" air capture on the sides, contributing thereby to more efficient removal of pollution.





- A sectioned canopy is supplied without partition walls.
- Adjustable suspension hooks are included.

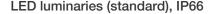


Professional kitchens require functional lighting to ensure that employees have a safe and effective work environment.

ETS NORD professional kitchen canopies use the next generation of energy-efficient LED luminaries, which can save as much as 50% more energy compared to old technologies.

Canopies include LED luminaries integrated into their ceilings, protected by an aluminum and plastic glass casing. The size and number of light fixtures are determined by the size of the canopy, to ensure there is enough light output for the entire workspace.

LED luminaries have two color temperature options - colder 4000K and warmer 3000K. It is also possible to choose between regular LED and DALI2 (dimmable) luminaries.



Canopy section length (mm)	Luminaries	Lighting length (mm)	Energy use (W)	Color temperature (K)	Color rendering index (Ra)	Flux (lm)
1000 ≤ L <1300	LED-4000-600	600	17	4000	90	2907
1000 ≤ L <1300	LED-3000-600	600	17	3000	90	2907
$1400 \le L < 2900$	LED-4000-1200	1200	34	4000	90	6498
1400 ≤ L <2900	LED-3000-1200	1200	34	3000	90	6498

#### DALI2 LED luminaries, IP66

Canopy section length (mm)	Luminaries	Lighting length (mm)	Energy use (W)	Color temperature (K)	Color rendering index (Ra)	Flux (lm)
$1000 \le L < 1300$	DALI2-4000-600	600	20	4000	90	3000
1000 ≤ L <1300	DALI2-3000-600	600	20	3000	90	3000
$1400 \le L < 2900$	DALI2-4000-1200	1200	37	4000	90	6000
1400 ≤ L <2900	DALI2-3000-1200	1200	37	3000	90	6000





## Spot LED lighting fixtures, IP65

Light colour: 4000K (colder), 3000K (warmer)

Housing material: Aluminium Colour separation index: > 80 (Ra)



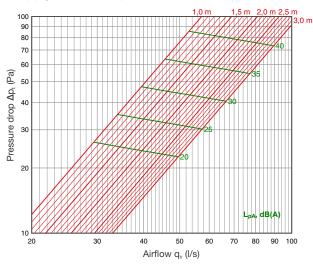
Canopy length (mm)	Spot LED quantity	Energy use (W)	Flux 4000K (lm)	Flux 3000K (lm)	Radiation angle
$1000 \le L < 1200$	2	16	1340	1240	36°
1300 ≤ L <1700	3	24	2010	1860	36°
$1800 \le L < 2300$	4	32	2680	2480	36°
2400 ≤ L ≤2900*	5	40	3350	3100	36°

<sup>\*</sup>In sectional canopies the amount of SpotLEDs may differ.

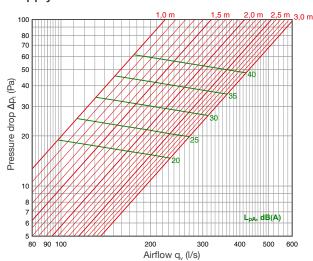
## Technical data

The supply panels always contain the "AirGrip" air capture system.

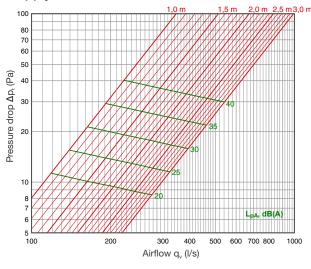
## Supply air: "AirGrip"



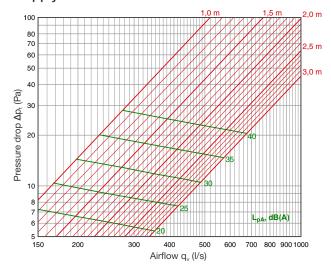
## Supply air: SPx1



## Supply air: SP×2

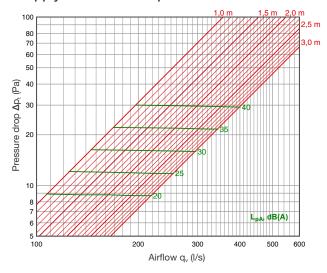


Supply air: SPx3

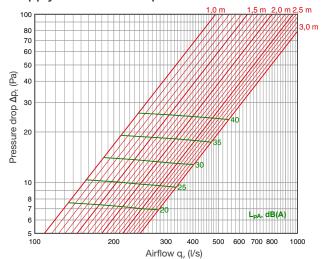




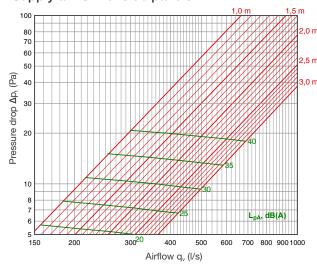
## Supply air: SP×1+side panels



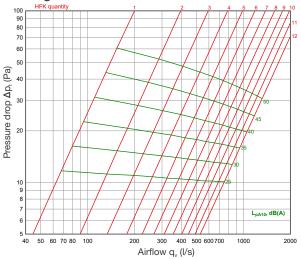
## Supply air: SP×2+side panels



## Supply air: SP×3+side panels



## HFK - grease filter



#### Acoustic data

		Correction of sound level K <sub>okt</sub> (dB) (Hz)							
Supply air	63	125	250	500	1000	2000	4000	8000	
"AirGrip"	-6	-8	-5	-3	0	-1	-7	-20	
SP×1	-1	0	3	2	-1	-3	-11	-23	
SP×2	0	1	5	4	-1	-8	-20	-27	
SP×3	7	5	6	4	-2	-13	-21	-30	
SP×1+side panels	-1	-1	2	2	0	-5	-15	-28	
SP×2+side panels	3	1	5	4	-1	-9	-21	-27	
SP×3+side panels	8	5	6	4	-3	-13	-22	-30	
	± 4 dB	± 4 dB	±4dB	±2dB	±2dB	±2dB	±2dB	±2dB	

## Sound attenuation of HFK

 $L_{wokt} = L_{pA} + K_{okt}$ 

HFK	Sound level correction factor K <sub>okt</sub> (dB)  Mean frequency of octave band (Hz)							
	63	125	250	500	1000	2000	4000	8000
K	4	3	0	1	0	-4	-15	-21



#### **Dimensions**

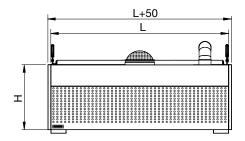
ETS NORD kitchen canopy solutions are modular in design and can be made to any size, to satisfy the needs for any customer project. Individual sections have the following specifications:

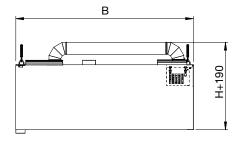
## Section dimensions (mm)

L Length 1000, 1100, ..., 2400, 2500

B Width 900 (available with Spot LED) 1000, 1100, ..., 1900, 2000

H Height 400, 550, 400/550

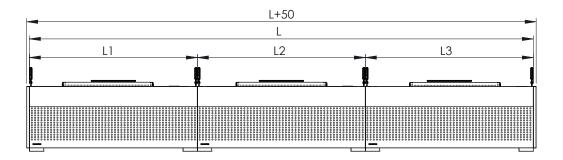




## Canopy lengthening with modular sections

- Hoods consisting of several sections are made without a partition wall.
- The maximum size of one section is 2500×2000 mm.
- Preferred length dimensions are 1000, 1500, 2000 mm.
- For connecting the sections see the installation manual.



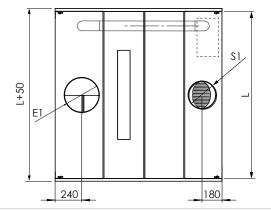




## HZ-C wall installation, 1-part, E1 - one exhaust air chamber



# B 88 1 06 I + H



## Section dimensions (mm)

L Length 1000, 1100, ..., 2400, 2500

B Width 900 (available with Spot LED)
1000, 1100, ..., 1900, 2000

H Height 400, 550

S1, Ød 160 (F=40), 200 (F=40), 250 (F=43)

E1, Ød 200 (F=40), 250 (F=43), 315 (F=43)

## HZ-C-2 island installation, 2-part, E1 - one exhaust air chamber

## Section dimensions (mm)

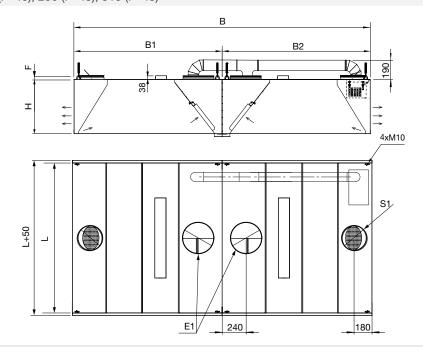
L Length 1000, 1100, ..., 2400, 2500

B Width 1800 (available with Spot LED) 2000, 2200, ..., 3800, 4000

B1/B2 900 (No lighting) 1000,1100, ..., 1800

H Height 400, 550

S1, Ød 160 (F=40), 200 (F=40), 250 (F=43) E1, Ød 200 (F=40), 250 (F=43), 315 (F=43)



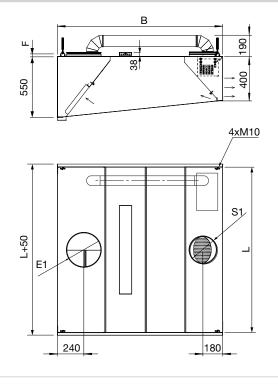


## HZ-C trapezoid canopy wall installation, 1-part, E1 - one exhaust air chamber



## Section dimensions (mm)

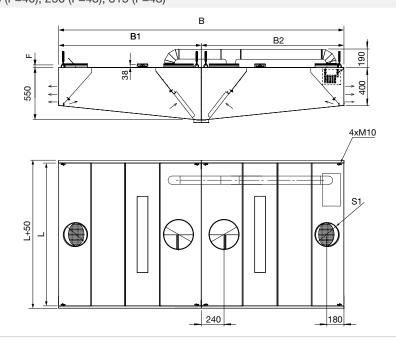
L Length	1000, 1100,, 2400, 2500
B Width	900 (available with Spot LED) 1000, 1100,, 1900, 2000
H Height	400/550
S1, Ød	160 (F=40), 200 (F=40), 250 (F=43)
E1, Ød	200 (F=40), 250 (F=43), 315 (F=43)



## HZ-C-2 trapezoid canopy island installation, 2-parts, E1 – one exhaust air chamber

## Section dimensions (mm)

L Length 1000, 1100, ..., 2400, 2500 1800 (available with Spot LED) B Width 2000, 2200, ..., 3800, 4000 B1/B2 900 (No lighting) Width 1000,1100, ..., 1800 H Height 400/550 S1, Ød 160 (F=40), 200 (F=40), 250 (F=43) E1, Ød 200 (F=40), 250 (F=43), 315 (F=43)





## **Product marking**

```
HZ-C - aSAP - L×B×H - S1=d×n - E1=d×n - SP×0 - HFK×n - XXX×n - RAL 9005
Marking -
 HZ-C
          -1 section in width
 HZ-C-2 -2 sections in width
aSAP-
 aSAP - a Self Assembly Package
Dimensions -
 L - Lenath
 B - Width
 H - Height
Supply air
 S1 - Supply air chamber on one side
 Ød - Diameter of supply air connection
 n - Quantity of supply air connections
Exhaust air
 E1 - One exhaust air chamber
 Ød - Diameter of exhaust air connection
     - Quantity of exhaust air connections
Front panel -
 SPx0 - No Perforation, only "AirGrip" supply air curtain system
 SP×1 - Perforation pattern 1 - (per L=1000mm) 130 l/s, 40 Pa, 40 dB(A)
 SP×2 - Perforation pattern 2 - (per L=1000mm) 190 l/s, 37 Pa, 40 dB(A)
 SP×3 - Perforation pattern 3 - (per L=1000mm) 250 l/s, 25 Pa, 40 dB(A)
 SP×K - Perforation pattern on L/R side panels - (SP×KL, SP×KR, SP×KLR)
Grease filters -
 HFK
 n - Grease filter quantity
Lighting -
 LED-4000-600 - L=600, 17W, 4000K
 LED-3000-600 - L=600, 17W, 3000K
 LED-4000-1200 - L=1200, 34W, 4000K
 LED-3000-1200 - L=1200, 34W, 3000K
 DALI2-4000-600 - L=600, 20W, 4000K
 DALI2-3000-600 - L=600, 20W, 3000K
 DALI2-4000-1200 - L=1200, 37W, 4000K
 DALI2-3000-1200 - L=1200, 37W, 3000K
                - 8W, 4000K
 SpotLED-4000
                - 8W, 3000K
 SpotLED-3000
 n - Quantity of lighting fixtures
RAL Colour -
 RAL colour, when coated
```

#### Example:

HZ-C 4000×1500×550 - S1=250×4 - E1=315×2 - SP×2 - HFK×6 - LED-4000-1200×2 HZ-C-aSAP 4000×1500×550 - S1=250×4 - E1=315×2 - SP×2 - HFK×6 - DALI2-3000-1200×2 - RAL9005

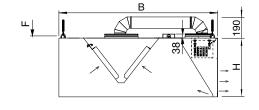
S1

180

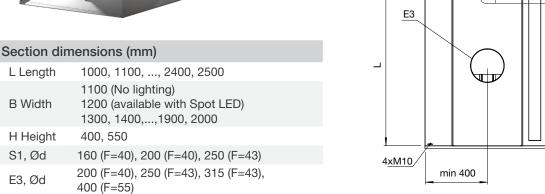


## HZ-V wall installation, 1-part , S1 - supply air, E3 - with HCl exhaust air module



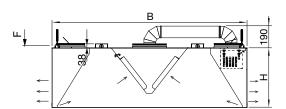


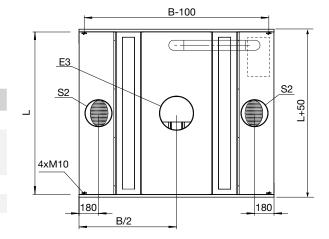
B-100



## HZ-V island installation, 1-part, S2 - supply air, E3 - with HCl exhaust air module







## Section dimensions (mm)

L Length	1000, 1100,, 2400, 2500
B Width	1500 (No lighting) 1600,1700 (1 row lighting) B/2*=670 mm 1800, 1900, 2000 (2 rows lighting)
H Height	400, 550
S2, Ød	160 (F=40), 200 (F=40), 250 (F=43)
E3, Ød	200 (F=40), 250 (F=43), 315 (F=43), 400 (F=55)



#### **Product marking**

```
HZ-V - aSAP - LxBxH - S1=dxn - E3=dxn - SPx0 - HFKxn - XXXxn - RAL 9005
Marking -
 HZ-V - 1 section in width
aSAP -
 aSAP
        - a Self Assembly Package
Dimensions -
 L - Length
 B - Width
 H - Height
Supply air
 S1
      - Supply air chamber on one side
     - Supply air chambers on two sides
 Ød - Diameter of supply air connection
      - Quantity of supply air connections
Exhaust air -
 E3 - HCl exhaust air module
 Ød - Diameter of exhaust air connection
      - Quantity of exhaust air connections
Front panel -
 SP×0 - No Perforation, only "AirGrip" supply air curtain system
 SP×1 - Perforation pattern 1 - (per L=1000mm) 130 l/s, 40 Pa, 40 dB(A)
 SP×2 - Perforation pattern 2 - (per L=1000mm) 190 l/s, 37 Pa, 40 dB(A)
 SP×3 - Perforation pattern 3 - (per L=1000mm) 250 l/s, 25 Pa, 40 dB(A)
 SP×K - Perforation pattern on L/R side panels - (SP×KL, SP×KR, SP×KLR)
Grease filters -
 HFK
 n - Grease filter quantity
Lighting -
 LED-4000-600 - L=600, 17W, 4000K
 LED-3000-600 - L=600, 17W, 3000K
 LED-4000-1200 - L=1200, 34W, 4000K
 LED-3000-1200 - L=1200, 34W, 3000K
 DALI2-4000-600 - L=600, 20W, 4000K
 DALI2-3000-600 - L=600, 20W, 3000K
 DALI2-4000-1200 - L=1200, 37W, 4000K
 DALI2-3000-1200 - L=1200, 37W, 3000K
                - 8W, 4000K
 SpotLED-4000
                - 8W, 3000K
 SpotLED-3000
 n - Quantity of lighting fixtures
RAL Colour -
 RAL colour, when coated
```

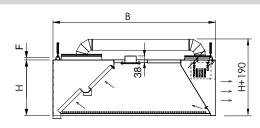
## Example:

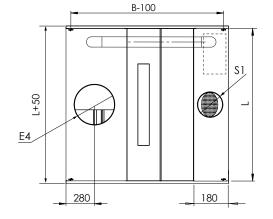
HZ-V 3000×1800×550 - S2=250×8 - E3=400×2 - SP×2 - HFK×12 - LED-4000-1200×2 HZ-V-aSAP 3000×1500×550 - S1=250×4 - E3=400×2 - SP×2 - HFK×12 - DALI2-3000-1200×2 - RAL9005



## HZ-G wall installation, 1-part, E4 - one exhaust air chamber, HFK filters in dual row







## Section dimensions (mm)

L Length 1000, 1100, ..., 2400, 2500

B Width 1100 (available with Spot LED) 1200, 1300, ..., 1900, 2000

H Height 550

S1, Ød 160 (F=40), 200 (F=40), 250 (F=43)

E4, Ød 200 (F=40), 250 (F=43), 315 (F=43), 400 (F=55)

# HZ-G-2 island installation, 2-part, E4 – one exhaust air chamber, HFK filters in dual row Section dimensions (mm)

L Length 1000, 1100, ..., 2400, 2500

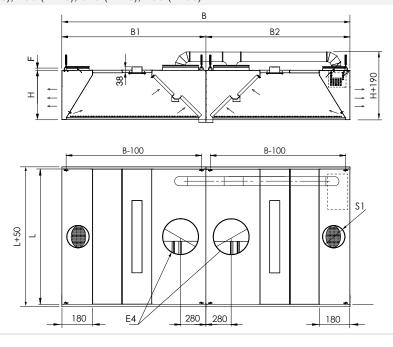
B Width 2200 (available with Spot LED)
2400, 2600, ..., 3800, 4000

B1/B2 1100 (available with Spot LED)
Width 1200, 1300, ..., 1900, 2000

H Height 550

S1, Ød 160 (F=40), 200 (F=40), 250 (F=43)

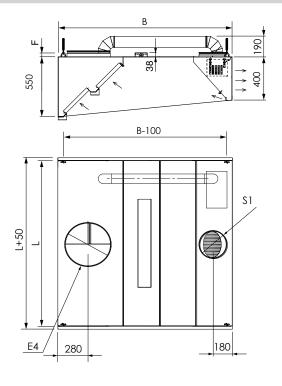
E4, Ød 200 (F=40), 250 (F=43), 315 (F=43), 400 (F=55)





## HZ-G trapezoid canopy wall installation, 1-part, E4 - one exhaust air chamber, HFK filters in dual row





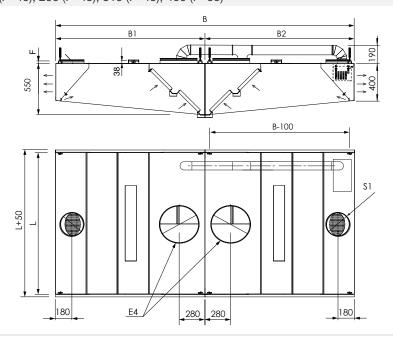
## Section dimensions (mm)

L Length	1000, 1100,, 2400, 2500
B Width	1100 (available with Spot LED) 1200, 1300,, 1900, 2000
H Height	400/550
S1, Ød	160 (F=40), 200 (F=40), 250 (F=43)
E4, Ød	200 (F=40), 250 (F=43), 315 (F=43), 400 (F=55)

## HZ-G-2 trapezoid canopy island installation, 2-parts, E4 – one exhaust air chamber, HFK filters in dual row.

## Section dimensions (mm)

L Length	1000, 1100,, 2400, 2500
B Width	2200 (available with Spot LED) 2400, 2600,, 3800, 4000
B1/B2 Width	1100 (available with Spot LED) 1200, 1300,, 1900, 2000
H Height	400/550
S1, Ød	160 (F=40), 200 (F=40), 250 (F=43)
E4. Ød	200 (F=40), 250 (F=43), 315 (F=43), 400 (F=55)





## **Product marking**

```
HZ-G - aSAP - L×B×H - S1=d×n - E4=d×n - SP×0 - HFK×n - XXX×n - RAL 9005
Marking -
 HZ-G
           - 1 section in width
 HZ-G-2

    2 sections in width

aSAP-
 aSAP
       - a Self Assembly Package
Dimensions
 L - Lenath
 B - Width
 H - Height
Supply air
     - Supply air chamber on one side
 Ød - Diameter of supply air connection
      - Quantity of supply air connections
Exhaust air
 E4 - HFK filters in dual row
 Ød - Diameter of exhaust air connection
      - Quantity of exhaust air connections
Front panel -
 SP×0 - No Perforation, only "AirGrip" supply air curtain system
 SP×1 - Perforation pattern 1 - (per L=1000mm) 130 l/s, 40 Pa, 40 dB(A)
 SP×2 - Perforation pattern 2 - (per L=1000mm) 190 l/s, 37 Pa, 40 dB(A)
 SP×3 - Perforation pattern 3 - (per L=1000mm) 250 l/s, 25 Pa, 40 dB(A)
 SP×K - Perforation pattern on L/R side panels - (SP×KL, SP×KR, SP×KLR)
Grease filters
 HFK
 n - Grease filter quantity
Lighting -
 LED-4000-600
                 - L=600, 17W, 4000K
 LED-3000-600 - L=600, 17W, 3000K
 LED-4000-1200 - L=1200, 34W, 4000K
 LED-3000-1200 - L=1200, 34W, 3000K
 DALI2-4000-600 - L=600, 20W, 4000K
 DALI2-3000-600 - L=600, 20W, 3000K
 DALI2-4000-1200 - L=1200, 37W, 4000K
 DALI2-3000-1200 - L=1200, 37W, 3000K
                - 8W, 4000K
 SpotLED-4000
                - 8W, 3000K
 SpotLED-3000
 n - Quantity of lighting fixtures
RAL Colour -
 RAL colour, when coated
```

#### Example:

HZ-G 4000×3000×550 - S1=250×12 - E4=400×4 - SP×3 - HFK×24 - LED-4000-1200×2 HZ-G-aSAP 4000×3000×550 - S1=250×12 - E4=400×4 - SP×3 - HFK×24 - DALI2-3000-1200×2 - RAL9005



## **Ozone Cleaning System**

ETS NORDs ozone cleaning technology is specifically designed for restaurants and industrial kitchens where the requirements for minimizing grease and odor within the exhaust system are high.

## **Function**

Ozone (O<sub>3</sub>) is a very effective oxidant, and when mixed into a kitchen exhaust airstream it breaks down grease and odor particles to water vapor, carbon dioxide and dry minerals, all natural products of oxidation which exit the exhaust system.

Created by the process of electrical discharge, the ozone starts doing its work in the canopy exhaust chamber and thereafter throughout the greater exhaust system.

For best results with odor reduction, the reaction time for ozone within a kitchen exhaust system should be at least two seconds. However, longer exposure can further improve results. This time should be taken into account during the design phase of the kitchen exhaust system.

## Benefits obtained with ozone cleaning:



Effective grease reduction



Significantly improved fire safety



Enables the use of heat recovery



Effectively reduces odors



Effective at killing bacteria



Low maintenance costs



Without ozone cleaning system



With ozone cleaning system



## **OZ Ozone Unit**

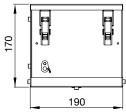
Ozone units can be installed into supply air modules or above the exhaust chamber.

## Technical properties

Material: AISI 316L stainless steel Working temperature: -25 to +40°C Dimensions: 385×170×190 mm

Each ozone unit is equipped with a pressure safety switch which only allows the unit to start when the required negative pressure is ensured. Its main switch has a 3.15 A thermal fuse.



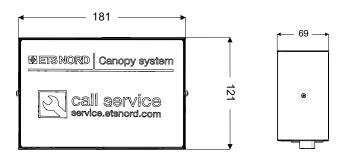




NOTE! HZ Canopy needs supply air to function! The Ozone Module must not be installed if the hood serving it doesn't have a supply air duct installed.

## Control panel

All ozone units, whether they are installed within kitchen canopies or EOZ ozone generators, are managed by an intelligent central control panel. The control panel monitors the operation of each ozone unit and will trigger an alarm in case of any failure or the need for maintenance. Compared with ozone and UV solutions from other manufacturers, only one control panel is needed per kitchen, regardless of the number of ozone units installed.



The control panel monitors all ozone units on the premises with an advanced control and reporting technology and can be connected to either BACnet or Modbus-driven systems, enabling remote management via either the local network or Internet.

#### Advantages:

- · Compatibility with building automation
- · Remote monitoring (IoT Internet of Things)
- Data visualization and history
- · Easy and safe to use









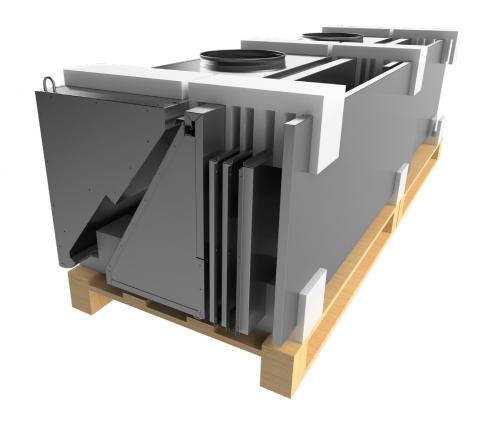
This symbol indicates that when the end-user wishes to discard the device, it must be taken to a proper waste station for recycling.

For further technical information and installation, please find detailed information from the Ozone documentation on our website or contact your ETS NORD representative.



## aSAP Solution - a Self Assembly Package

- When access to the construction site or kitchen area is limited, an ETS NORD aSAP self-assembly package can be the perfect solution.
- Narrow passages and complex floor plans no longer get in the way!
- This is a compact, easy to ship and a fast assembly version of packaging
- The canopy is delivered as ready-made modules with installation instructions.





## **Accessories**

## **CP** Cover plates

Cover plates are made of stainless steel (AISI 304, surface 2K).

Cover plates are mounted in the area between the canopy and ceiling, when conduits and other components are to be concealed.

CP-F - Front plate

CP-B - Back plate

CP-L - Left plate

CP-R - Right plate



## FET "Helping Hand" filter removal tool

- With the ETS NORD "Helping Hand" filter tool, professional kitchen operators can safely and easily service their grease filters.
- Helping Hand allows grease filters to be removed and replaced without the cumbersome need to climb on or reach over kitchen equipment.
- The daily filter washing process is significantly simplified, thus ensuring its completion by the responsible staff.
- The tool's length is fully adjustable, thereby enhancing ergonomic comfort.





## **HFK Grease Filter**

HFK is a high efficiency grease filter designed for use in ventilation hoods of commercial kitchens or other food production facilities. They are positioned in the hood exhaust plenum above cooking appliances (stoves, grills, etc.) and separate grease and other particles out from the exhaust air stream.

The ETS NORD HFK grease filter is protected by utility patent no. 01310.

- High efficiency captures 97% of 10 micron particles
- Functions well even with variable air volume systems
- Low pressure drop provides energy-efficient operation
- Flame resistance class A according to DIN 18869-5
- Easy to maintain
- Grease particle separation is measured according to VDI 2052 standard.

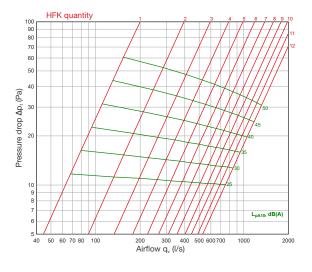


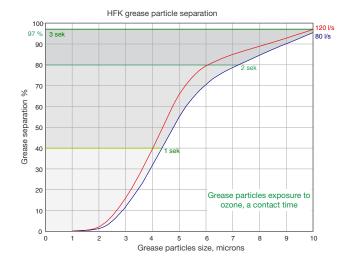
HFK filters are manufactured from AISI 304 stainless steel. They are assembled with rivets to ensure their durability through many years of use in challenging kitchen environments.

## Operation

The greasy effluent from cooking appliances is pulled through the openings in the front panel of the filter. Our patented double-triangular cross-section within the chamber causes a high speed centrifugal swirling of the air. The rapid change of trajectory of the grease particles causes them to collide with the filter surfaces, resulting in their effective separation from the air stream. The grease then drains from the filter down and into the grease collection channel of the hood. The filtered air continues on into the kitchen exhaust system through the top and bottom orifices of the filter.

The optimal operating conditions of the HFK Grease Filter are under a pressure drop from 12-48 Pa with an airflow through each filter from 70-130 l/s, ensuring an energy efficient operation.









## Sound attenuation of HFK

 $L_{wokt} = L_{pA} + K_{okt}$ 

HFK	Sound level correction factor K <sub>okt</sub> (dB)  Mean frequency of octave band (Hz)							
	63	125	250	500	1000	2000	4000	8000
K	4	3	0	1	0	-4	-15	-21

## Installation

 $HFK\ Grease\ Filters\ are\ easily\ inserted\ into\ the\ filter\ installation\ rails\ extending\ across\ the\ entire\ length\ of\ the\ hood.$ 



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Let's move the air together!

