



## **NORD**canopy HM Watermist Canopy

Designed for kitchens with charcoal grills and open flames

---

Protects ventilation system from sparkles and heat

---

Laser welded structure

---

“AirGrip” air intake system

---

Energy efficient LED lights

---

Registered design no. 007972823-0001

## HM Watermist Canopy



ETS NORD's Watermist canopies are suitable for professional kitchens where open flames and charcoal grills are being used. These appliances generate heat, soot and sparkles which pose a threat to ventilation system. Watermist canopies have a built-in cold water system. Water is sprayed through special nozzles which create fine water mist to stop sparkles reduces extract air temperature and helps reduce soot spreading into ventilation ducts. Therefore, the fire hazard is decreased.

The food safety of ETS NORD's canopies has been verified with the HACCP international certificate. The system consists of different selection of exhaust and supply modules and lighting options.

NORDcanopy products are manufactured from stainless steel according to standards EN 10088- 2:2024, EN 1.4301 or AISI 304 (AISI 304, surface 2K).

HM kitchen canopy ensures a clean, hygienic and comfortable work environment by removing pollutants, excessive heat and grease from your commercial kitchen operation. The same unit can also supply fresh replacement air to provide ultimate comfort for the kitchen staff.

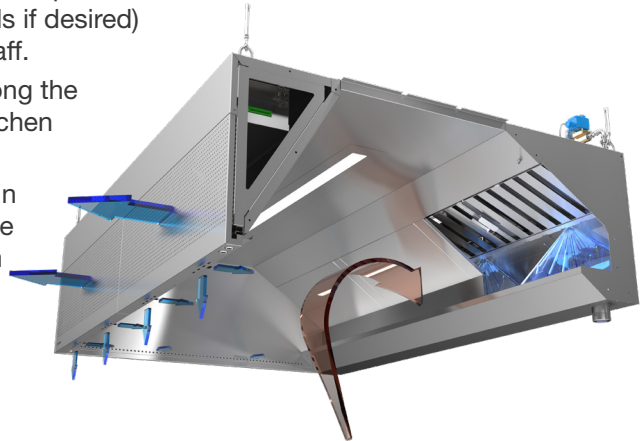
### Advantages of Canopies with Watermist Feature

- Can be used with open flames and charcoal grilles
- Effective removal of sparkles and soot in exhaust air
- Lowering the exhaust air temperature
- Improved fire safety

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

**Function**

- Supply air is supplied into the room through the front panel of the kitchen canopy (also through its side panels if desired) providing fresh air in the vicinity of the kitchen staff.
- Air supplied by the “AirGrip” air intake system along the lower perimeter of the canopy helps route the kitchen effluent into the extract area.
- The exhaust air is directed into a fine water curtain created by nozzles. The fine mist helps reduce the entry of soot, charcoal, and grease particles from kitchen equipment into the ventilation system, extinguishes sparks, and lowers the temperature.
- Exhaust air then moves through labyrinth filters to capture water drops.
- Water is drained through 2” pipe.
- Watermist canopy is controllable with 2 buttons, located on the bottom of the front panel. One button is light switch and the other is for the water system.
- Various solutions are available according to market specifics: HM 1.0 for the United Arab Emirates and HM 1.1 for European markets.
- For large air volumes, it is possible to order a canopy with extraction on both sides. In this case, we offer the HCAH horizontal ventilation ceiling supply module with the "AirGrip" air capture system. The canopy's electrical box and control buttons are installed in the supply module.



**Water system**

The water system for Watermist Canopy consists of stainless steel pressfitting tube system. Water is sprayed into the chamber through water nozzles. Water consumption for 1 m canopy length is 0,9 L/min (at water pressure 2 bar).

The contaminated water is directed into the sewage pipe through a 2" connection. It is prohibited to reduce the diameter of the connection when connecting to the sewage system. The connection pipe must be equipped with an odor lock to prevent odors and ensure later cleaning possibilities. The HMi drain connection in the floor must have a diameter of DN75.

**HM 1.0 water supply unit**

The HM 1.0 water supply is suitable for servicing a maximum of one HM exhaust chamber up to five nozzles. A HM canopy with two exhaust chambers uses two HM 1.0 water supply units.

The suitable water pressure is set using a pressure reducer valve with a ½" connection.

The water flow is controlled by a solenoid valve NC (in-out).



**HM 1.1 water supply unit**

The HM 1.1 water supply unit is suitable for a maximum 5-meter HM canopy. For longer canopies, multiple water supply units must be used.

The suitable water pressure is set using a pressure reducer valve with a ½" connection. The water flow is controlled by a solenoid valve NC (in-out). If necessary, the water supply unit can be ordered with a NO solenoid valve.

The presence of pressure in the water pipe is checked using a pressure switch.

The water flow sensor signals a complete clogging of the nozzles.



**HM 1.0 control unit**

Max. current	Voltage	Frequency	Max. power	Circuit breaker
3.15 A	230 V	50 Hz	98 W	C10A

Residual current circuit breaker is strongly recommended to use in electrical connection. Kitchen canopy and the water piping system should be connected to electrical earthing system, according to IEC 60364.

There is one control unit for each section of the canopy.



**HM 1.1 control unit**

Max. current	Voltage	Frequency	Max. power	Circuit breaker
3.6 A	230 V/AC	50 Hz	320 W	C10A

Residual current circuit breaker is strongly recommended to use in electrical connection. Kitchen canopy and the water piping system should be connected to electrical earthing system, according to IEC 60364.

One HM 1.1 control unit allows to control one HM 1.1 water supply unit.



**HM 1.1 exhaust shut-off damper**

For HM canopy exhaust connections, we recommend installing ETS NORD KRK regulating dampers or KRTS-4-T round regulating and shut-off dampers if needed. These can be ordered as part of the canopy package. KRK and KRTS-4-T dampers are made of hot-dip galvanized steel as standard. The KRK damper body thickness is 1,2 mm. It is also possible to choose acid-resistant (AISI 316L) or zinc-magnesium-coated (ZM310) steel. No plastic parts are used in the construction of the dampers.

The dampers are equipped with spring-return (fail-safe) actuators, which are controlled from the HM electrical box. When the canopy's water system is activated, the dampers open, and when the water system is turned off, they close. The actuator supply voltage is 24 V/DC, and their total power must not exceed 60 VA (volt-amperes).



Actuator selection using Belimo as an example:

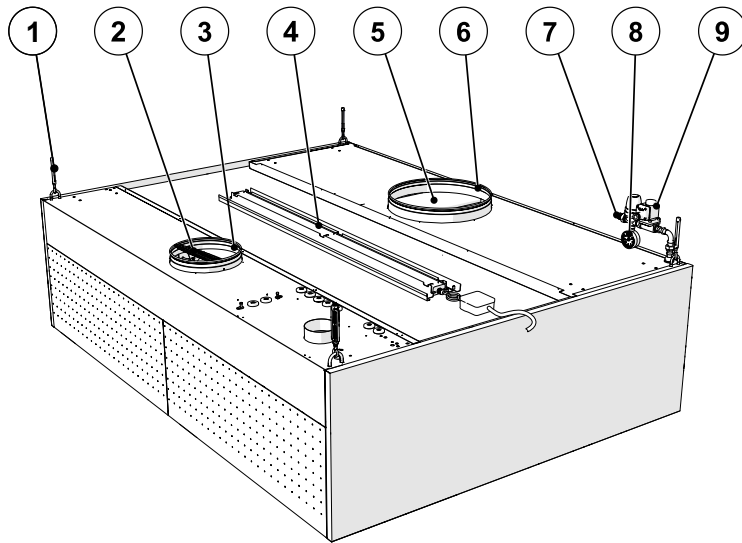
Belimo actuator (fail-safe)	Torque (Nm)	Power consumption (VA)	Max quantity per HM control unit (tk)
TF24	2,5	5	12
LF24	4	7	8
NF24A	10	8,5	7

**Recommended data**

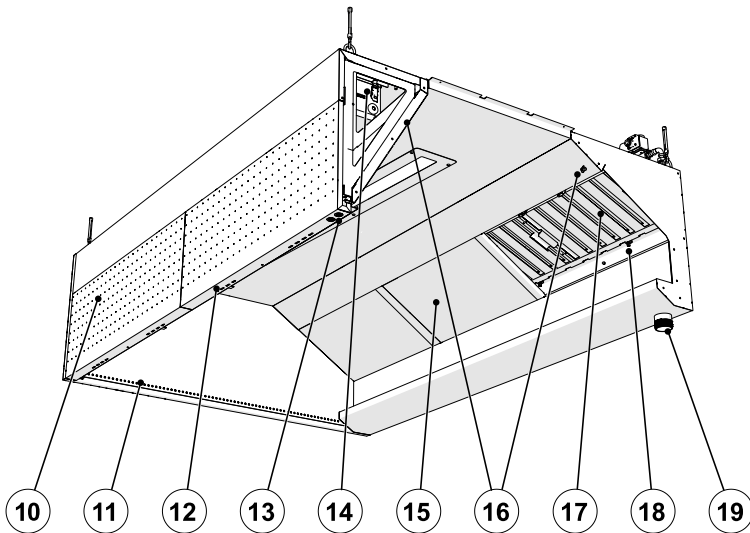
Section length L	Extraction airflow (l/s) ( $\Delta p_{tot}$ 20-50 Pa)	Supply airflow (with "AirGrip" air nozzle system) per linear meter of panel (l/s)			
		SP×1	SP×2	SP×3	Side panel
1000	210-360				
1500	315-540	10-61 Pa	10-40 Pa	10-28 Pa	10-40 Pa
2000	420-720	71-175 l/s	110-220 l/s	165-275 l/s	22-40 l/s
2500	525-900				

**Construction**

**HM Watermist canopy with HM 1.0 components**

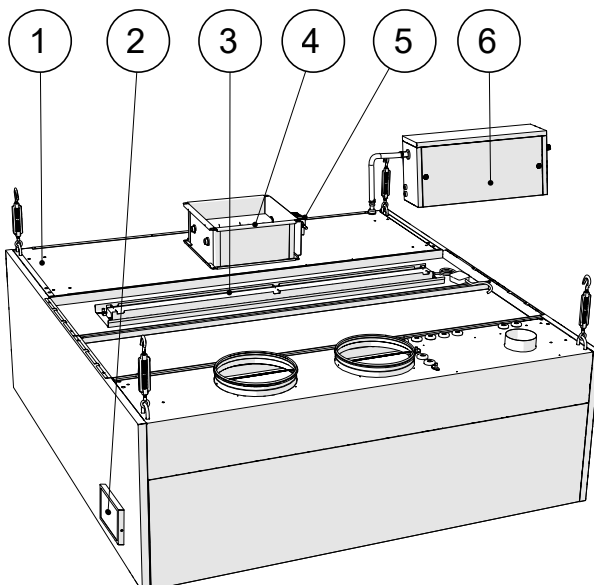


- 1 – Suspension points
- 2 – Supply air adjustment plate
- 3 – Supply air connection
- 4 – Lighting
- 5 – Exhaust air adjustment plate
- 6 – Exhaust air connection
- 7 – Water connection 1/2" (HM 1.0)
- 8 – Pressure reducer valve (HM 1.0)
- 9 – Solenoid valve (HM 1.0)



- 10 – Front panel
- 11 – “AirGrip” air nozzle system
- 12 – Auxiliary air supply
- 13 – Control buttons
- 14 – Control box (HM 1.0)
- 15 – Access hatch
- 16 – Airflow measuring nipples
- 17 – HFM filter
- 18 – Water nozzles
- 19 – Water drainage 2"

**HM 1.1 components**



- 1 – HM Watermist canopy
- 2 – LED notification panel
- 3 – LED luminaries
- 4 – HM 1.1 exhaust shut-off damper
- 5 – Shut-off damper actuators
- 6 – HM 1.1 water supply unit

- 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 possible spillage of grease and water from the inside of the chamber, thereby reducing the possibility of bacteria forming in the joints of the modules.
- The side walls of the canopy are a closed structure and airtight allowing for routing supply air and the use of the “AirGrip” air capture on the sides, contributing thereby to more efficient removal of pollution.
- Easy-to-clean surfaces.
- Access to the chambers and the possibility to clean the supply ducts is ensured through the easy-to-remove front panel of the canopy. Exhaust ducts can be connected and insulated via the removable ceiling panel.
- A sectioned canopy is supplied without partition walls.
- Adjustable suspension hooks are included.



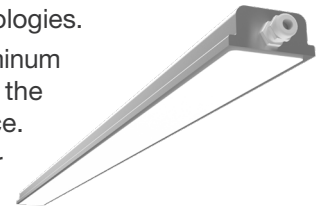
## Lighting

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.



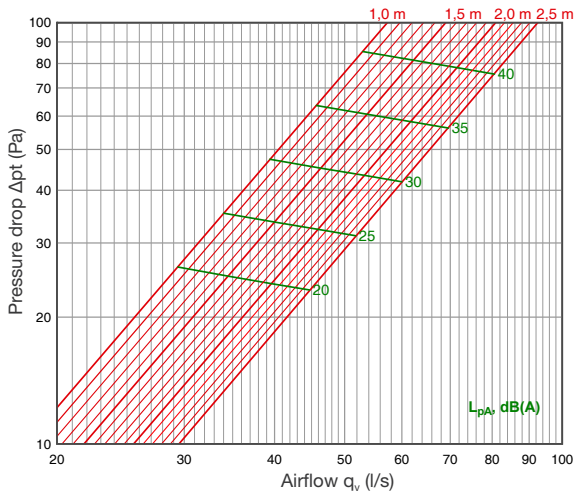
### LED luminaries (standard), IP66

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 ≤ L < 2900	LED-4000-1200	1200	34	4000	90	6498
1400 ≤ L < 2900	LED-3000-1200	1200	34	3000	90	6498

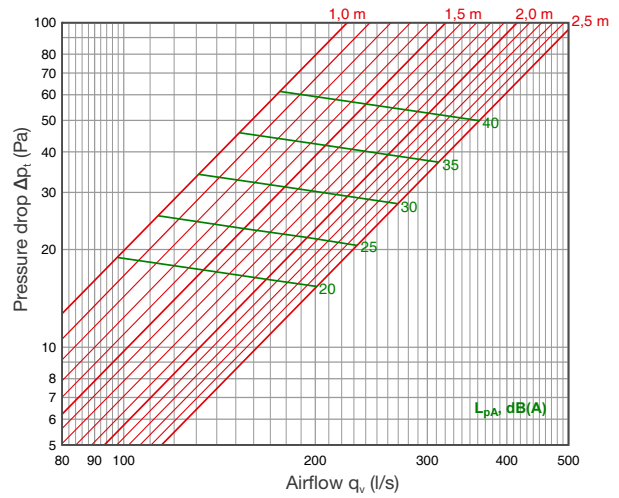
Technical data

The supply panels always contain the “AirGrip” air capture system.

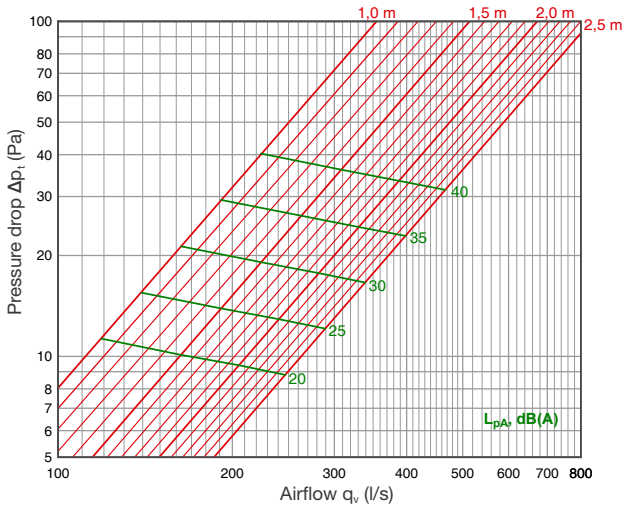
Supply air: „AirGrip”



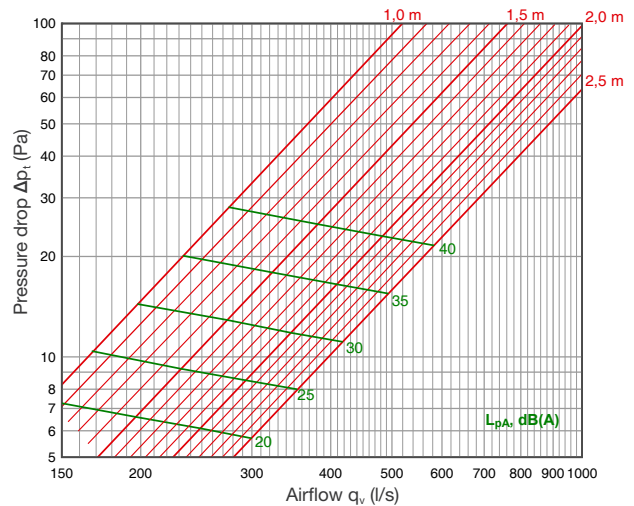
Supply air: SPx1



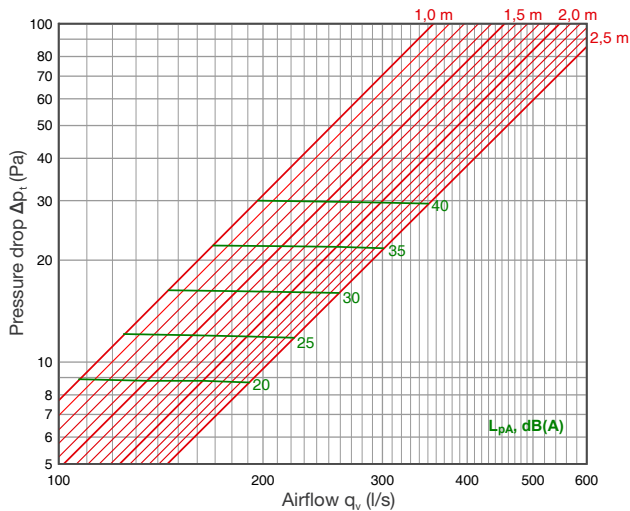
Supply air: SPx2



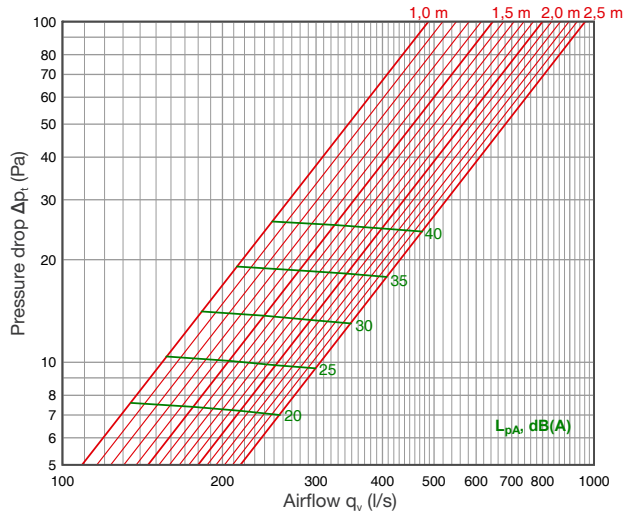
Supply air: SPx3



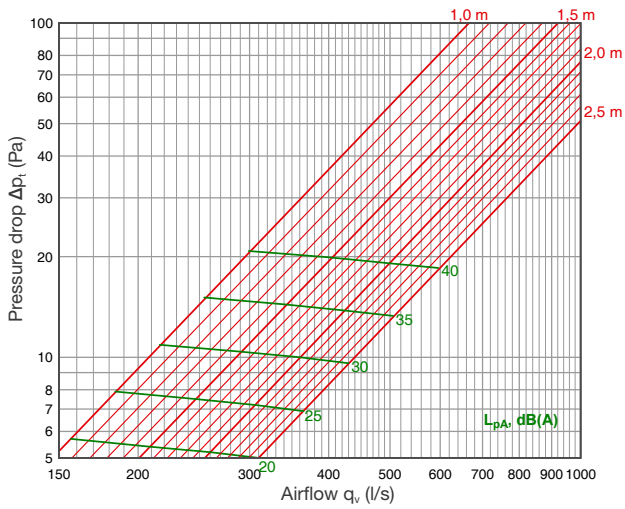
Supply air: SPx1 + küljed



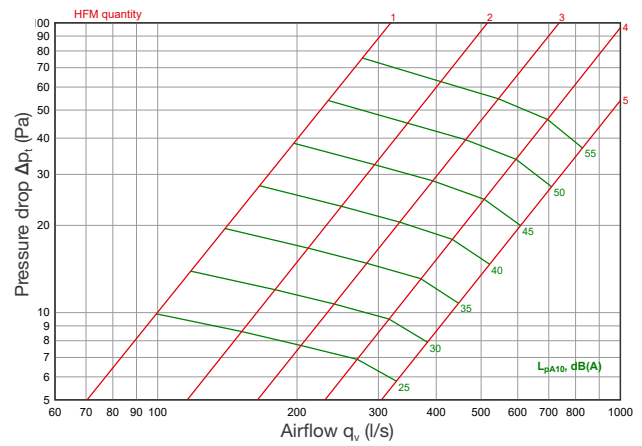
Supply air: SPx2 + küljed



Supply air: SP×3 + küljed



Extract air with HFM labyrinth filters\*



\*Technical data applies to whole extract side.

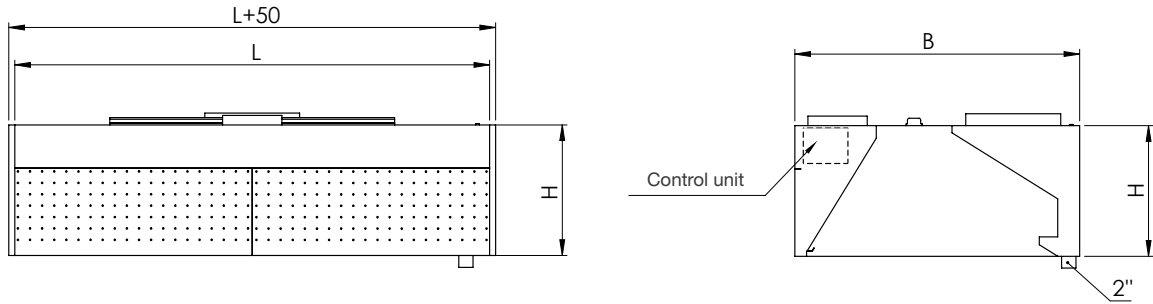
Acoustic data

Supply air	Correction of sound level $K_{okt}$ (dB)							
	(Hz)							
	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	± 4 dB	± 2 dB	± 2 dB	± 2 dB	± 2 dB	± 2 dB

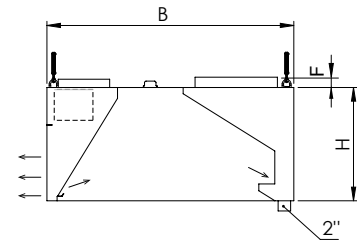


**Section dimensions**

Dimensions (mm)	
L Length	1000, 1100, ..., 2400, 2500
B Width	1100, ..., 1900, 2000
H Height	550

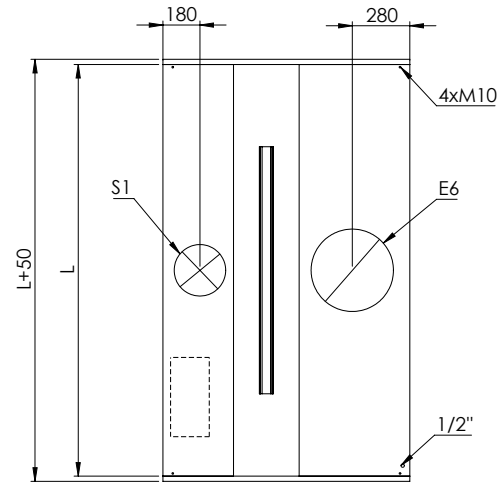


HM wall installation, 1-part

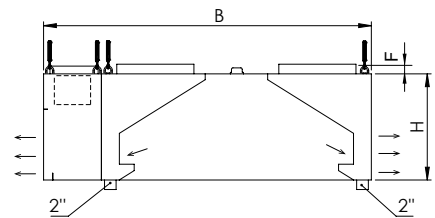


Dimensions (mm)

L Length	1000, 1100, ..., 2400, 2500
B Width	1100, 1200, ..., 1900, 2000
H Height	550
S1, Ød	200 (F=40), 250 (F=43)
S1, a×b	100×200, 200×200, 250×200, 300×250 (F=40)
E6, Ød	315 (F=43), 400 (F=55)
E6, a×b	200×300, 300×300, 400×300, 500×300, 600×300 (F=40)

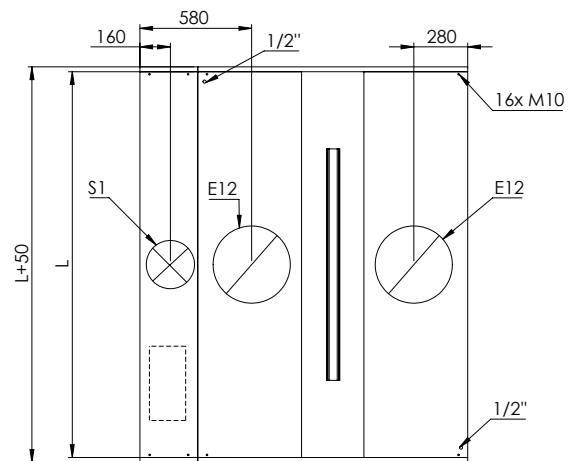


HM wall installation, double exhaust air chamber with HCAH horizontal supply module



Dimensions (mm)

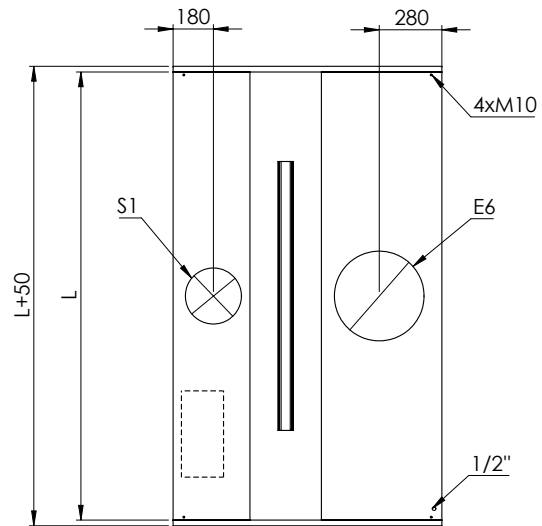
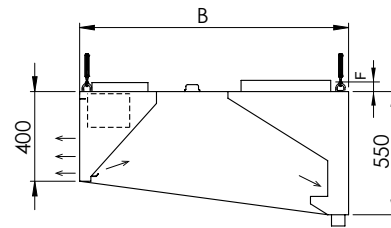
L Length	1000, 1100, ..., 2400, 2500
B Width	1600, 1700, ..., 2200, 2300
H Height	550
S1, Ød	250 (L=1000–1900), 2×250 (L=2000–2500)
S1, a×b	100×200, 200×200, 250×200, 300×250 (F=40)
E12, Ød	2×315 (F=43), 2×400 (F=55)
E12, a×b	2×200×300, 2×300×300, 2×400×300, 2×500×300, 2×600×300 (F=40)



**HM trapezoid canopy wall installation, 1-part, E6 – one exhaust air chamber**

**Dimensions (mm)**

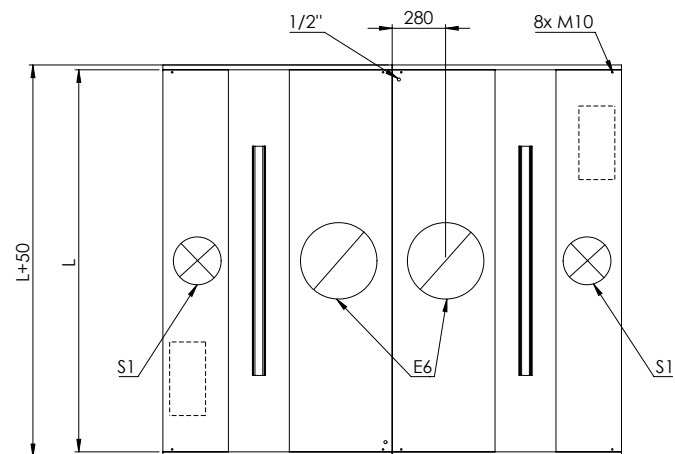
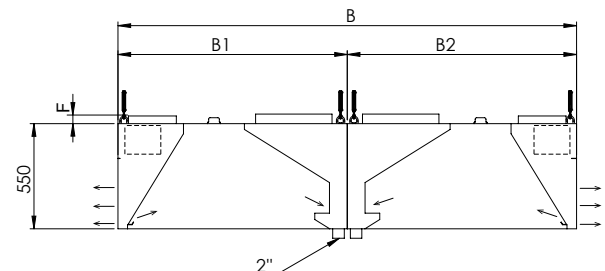
L Length	1100, 1200, ..., 2400, 2500
B Width	1100, 1200, ..., 1900, 2000
H Height	400/550
S1, Ød	200 (F=40), 250 (F=43)
S1, a×b	100×200, 200×200, 250×200, 300×250 (F=40)
E6, Ød	315 (F=43), 400 (F=55)
E6, a×b	200×300, 300×300, 400×300, 500×300, 600×300 (F=40)



**HM-2 island installation, 2-part**

**Dimensions (mm)**

L Length	1000, 1100, ..., 2400, 2500
B Width	2200, 2400, ..., 3800, 4000
B1/B2 Width	1100, 1200, ..., 2000
H Height	550
S1, Ød	200 (F=40), 250 (F=43)
S1, a×b	100×200, 200×200, 250×200, 300×250 (F=40)
E6, Ød	315 (F=43), 400 (F=55)
E6, a×b	200×300, 300×300, 400×300, 500×300, 600×300 (F=40)



**HM-2 island installation, double exhaust air chamber with HCAH horizontal supply module**

**Dimensions (mm)**

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

B Width 3200, 3400, ..., 4400, 4600

B1/B2 Width 1600, 1700, ..., 2200, 2300

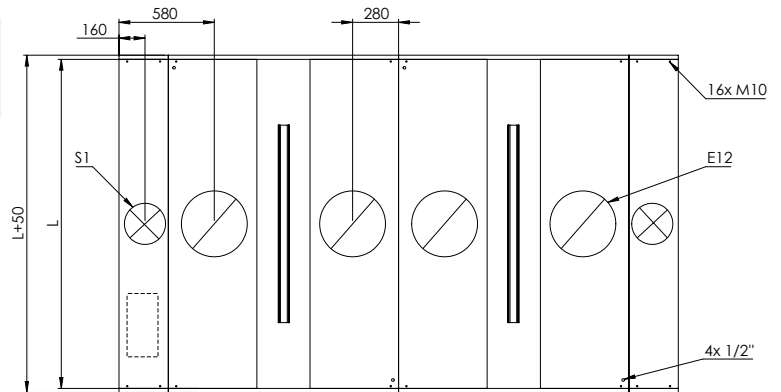
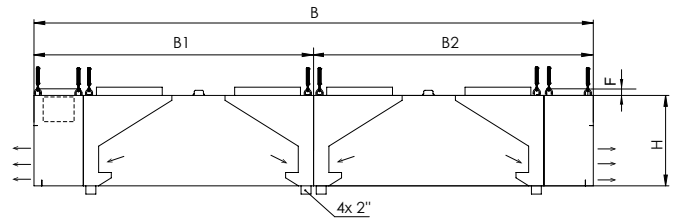
H Height 550

S1, Ød 2×200 (F=40), 2×250 (F=43)

S1, a×b 2×100×200, 2×200×200, 2×250×200, 2×300×250 (F=40)

E12, Ød 4×315 (F=43), 4×400 (F=55)

E12, a×b 4×200×300, 4×300×300, 4×400×300, 4×500×300, 4×600×300 (F=40)



**HM-2 trapezoid canopy island installation, 2-parts, E6 - one exhaust air chamber**

**Dimensions (mm)**

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

B Width 2200, 2400, ..., 3800, 4000

B1/B2 Width 1100, 1200, ..., 2000

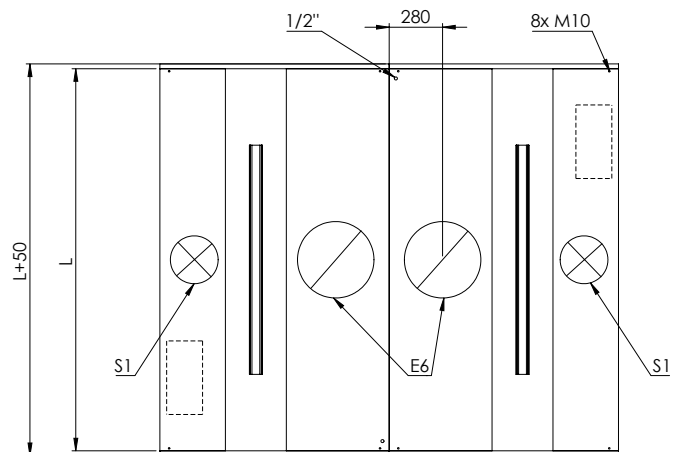
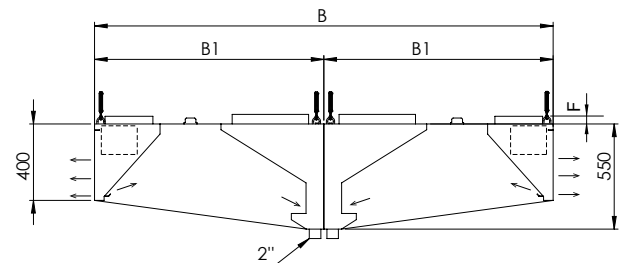
H Height 400/550

S1, Ød 2×200 (F=40), 2×250 (F=43)

S1, a×b 2×100×200, 2×200×200, 2×250×200, 2×300×250 (F=40)

E6, Ød 2×315 (F=43), 2×400 (F=55)

E6, a×b 2×200×300, 2×300×300, 2×400×300, 2×500×300, 2×600×300 (F=40)



**Product marking**

**HM - aSAP - LxBxH - S1=dxn - E6=dxn - SPx0 - HFMxn - LED-4000-600xn - RAL 9005**

<p><b>Marking</b></p> <p>HM - 1 section in width HM-2 - 2 sections in width</p> <p><b>aSAP</b></p> <p>aSAP - a Self Assembly Package</p> <p><b>Dimensions</b></p> <p>L - Length B - Width H - Height</p> <p><b>Supply air</b></p> <p>S1 - Supply air chamber on one side HCAH - Horizontal supply module SF - Integrated supply air fan Ød - Diameter of supply air connection n - Quantity of supply air connections</p> <p><b>Exhaust air</b></p> <p>E6 - One exhaust air chamber, HFM filters in one row E12 - Two exhaust air chamber, HFM filters in one row Ød - Diameter of exhaust air connection n - Quantity of exhaust air connections</p> <p><b>Front panel</b></p> <p>SPx0 - No Perforation, only "AirGrip" supply air curtain system SPx1 - Perforation pattern 1 - (per L=1000mm) 130 l/s, 40 Pa, 40 dB(A) SPx2 - Perforation pattern 2 - (per L=1000mm) 190 l/s, 37 Pa, 40 dB(A) SPx3 - Perforation pattern 3 - (per L=1000mm) 250 l/s, 25 Pa, 40 dB(A) SPxK - Perforation pattern on L/R side panels - (SPxKL, SPxKR, SPxKLR)</p> <p><b>Labyrinth filters</b></p> <p>HFM n - Labyrinth filter quantity</p> <p><b>Lighting</b></p> <p>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 n - Quantity of lighting fixtures</p> <p><b>RAL colour</b></p> <p>RAL colour, when coated</p>	
---	--

**Example:**

**HM - 4000x1500x550 - S1=250x4 - E6=400x2 - SPx1 - HFMx8 - LED-4000-1200x2**

**HM - aSAP - 4000x1500x550 - S1=250x4 - E6=400x2 - SPx1 - HFMx8 - LED-3000-1200x2 - RAL9005**

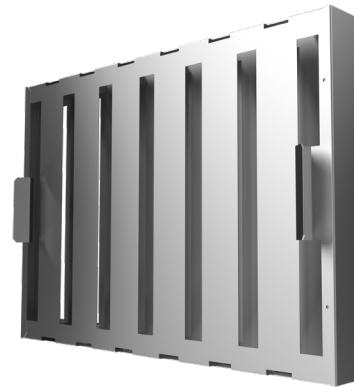
## HFM Labyrinth filter

HFM is a labyrinth filter which is designed for use in ventilation canopies of commercial kitchens or other food production facilities. This type of filter is specifically designed for catching small water droplets on mist canopies.

Filters are positioned in the canopy exhaust chamber above cooking appliances (stoves, grills, etc.) in order to separate grease and water droplets from the exhaust air stream.

### Material and design

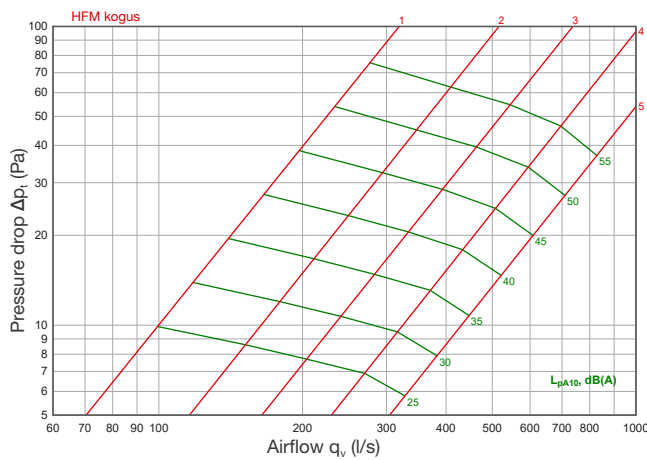
HFM filters are manufactured from AISI 304 stainless steel. They are assembled with rivets to ensure their durability through many years of use in challenging kitchen environments.



### Operation

Polluted air from cooking appliances is extracted through the canopy's exhaust chamber, where a misting process is conducted. Moist air is then directed through the labyrinth filter, forcing water particles to condense on the inner surface of the filter and drain into water collection channel. Filtered air continues into kitchen exhaust system through the orifices of the filter.

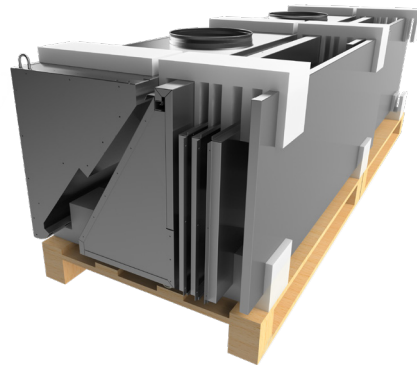
### Extract air with HFM labyrinth filters\*



\*Technical data applies to whole extract side.

**aSAP Solution - a Self Assembly Package**

- When access to the job site or kitchen space is limited, an ETS NORD aSAP self-assembly package can be the perfect solution.
- Narrow passageways and complex floor plans no longer get in the way!
- This is a compact, easy to ship, 5-step assembly version of our canopies to be put together at the job site.
- The canopy is delivered as ready-made modules with installation instructions.



**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. The height of the cover plates can be 50–1100 mm. When canopy is color coated, cover plates are also coated with the same color.

- CP-F – Front plate
- CP-B – Back plate
- CP-L – Left plate
- CP-R – Right plate

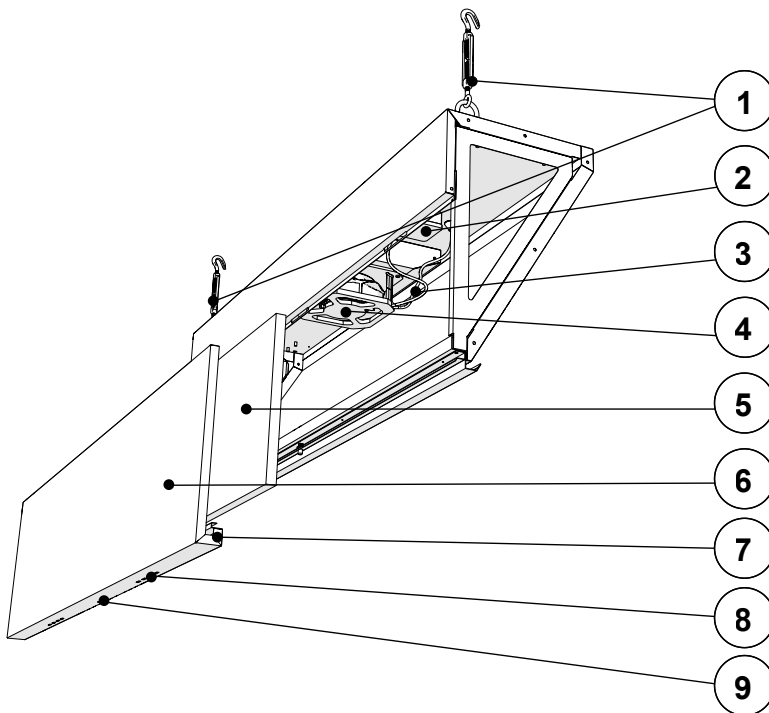


**SF Integrated supply air fan**

The SF integrated supply air fan is an effective solution for utilizing the 'AirGrip' function when connecting the ventilation systems supply air to the canopy isn't feasible.

- Available for ordering as a part of the canopy or for retrofitting.
- The fan is operated together with the canopy lighting.
- Comes with a filter to enhance durability.
- Suitable for HR, HV and HM kitchen canopies.





- 1 – Suspension points
- 2 – Junction box and potentiometer
- 3 – Power cables
- 4 – Fan
- 5 – Polyester wool (optional)
- 6 – Front panel
- 7 – 'AirGrip' air capture system
- 8 – Auxiliary supply
- 9 – Front panel lock

Technical information	
Nominal voltage	230 V, AC
Power consumption	max. 85W (in potentiometer position 4...5 consumption is 35...40 W)
Nominal frequency	50Hz
Input current	max. 0,8 A
IP rating of the fan	IP54
Ambient temperature range during operation	-25...+60 °C
Ambient temperature range during storage	-40...+80 °C
Weight	3,6 kg
Fan size	278×300×152 mm
Take-off connection diameter	250 mm
Filter size	275×275×22 mm
Filter class	ISO Coarse (G4)





### ETS NORD AS

Address: Peterburi tee 53  
11415 Tallinn  
Estonia

Phone: +372 680 7360  
info@etsnord.ee  
www.etsnord.ee

### ETS NORD Finland

Address: Pakkasraitti 4  
04360 Tuusula  
Finland

Phone: +358 401 842 842  
info@etsnord.fi  
www.etsnord.fi

### ETS NORD Sweden

Address: Järsjögatan 7  
69235 Kumla  
Sweden

Phone: +46 19 554 20 50

Address: Pinjegatan 5  
21363 Malmö  
Sweden

Phone: +46 40-94 68 70

Address: Förrådsvägen 5  
151 58 Södertälje  
Sweden

Phone: +46 8 550 301 40  
info@etsnord.se  
www.etsnord.se

### ETS NORD International

info@etsnord.com  
www.etsnord.com

### ETS NORD Ventilation Manufacturing LLC UAE

Sepin Rayo  
sepin.rayo@etsnord.com  
+971 5257 02916



*Let's move the air together!*