

DEC

POLLUTION CONTROL / ECOLOGY UNIT



despel

despel

POLLUTION CONTROL UNITS



Air pollution in an industrial city

DEC DESCRIPTION

DESPEL Exhaust Air Filtering Systems

CHEF'S Choice Pollution Control Units

With an ever increasing environmental awareness and the common global goal to reduce emissions and pollutions, Despel has a responsibility of contributing through the filtration of cooking fumes arising from commercial kitchen applications. In order to effectively filter all the grease, gaseous and other particles, proper filtration of the extracted fumes from these commercial cooking appliances is required. A Despel ecology unit is meant as a second stage filtration system, when a proper kitchen hood suitable for the desired appliance comes in first.

Ecology units are ventilation devices that eliminate oil and odor when exhausting. The most important criterion in the selection and design of an ecology unit is to determine the correct configuration according to the characteristics of the kitchen. Central type ecology units (DEC) are industrial machines specially designed for large volume kitchens and suitable for heavy working conditions.

It is indispensable especially for hotel kitchens, cafeterias and food facility kitchens with its wide flow range and flow sizes allowing many areas to be ventilated with a single device. It is also a model that should be used when density is used in large volume restaurant kitchens. Optimum exhaust and odor filtration is provided with different configurations consisting of electrostatic separator filter (ESP), activated carbon filter, UV-C lamp ozone filter modules according to kitchen and cooking type.

Despel pollution control units produced in the range of 3000 - 30000 m³/h are plug&play models on the electrical panel and have advanced automation options for requirement-based kitchen ventilation. DEC series ecology units are the choice of many brands as a design that directs industrial kitchen ventilation specifications. Long before installation, our products undergo comprehensive testing. This includes structural integrity, aerodynamic performance, sound levels, mechanical operation, vibration, environmental impact and more.

- 10 years parts warranty
- Max. Onsite service within 48 hours*
- Continuous warranty with maintenance contract (>**)
- Filtering efficiency up to 99%***
- Unit diversity according to cooking types
- High efficiency and long life fan models
- Special filters with high odor retention
- Special construction for heavy oiled and intensive kitchens
- Automation control system integrated with the unit
- Easy to maintain plate electrostatic filters
- Wide range with 6 kinds of standard flow rate
- Fire prevention systems
- Optional replacement fan / motor set unit options
- Plug or double inlet fan options according to usage area
- Test report : 2006/42/EC Machinery Directive,
- Test report : 2014/35/EU Low Voltage Directive
- Compatible with Modbus / Bacnet systems

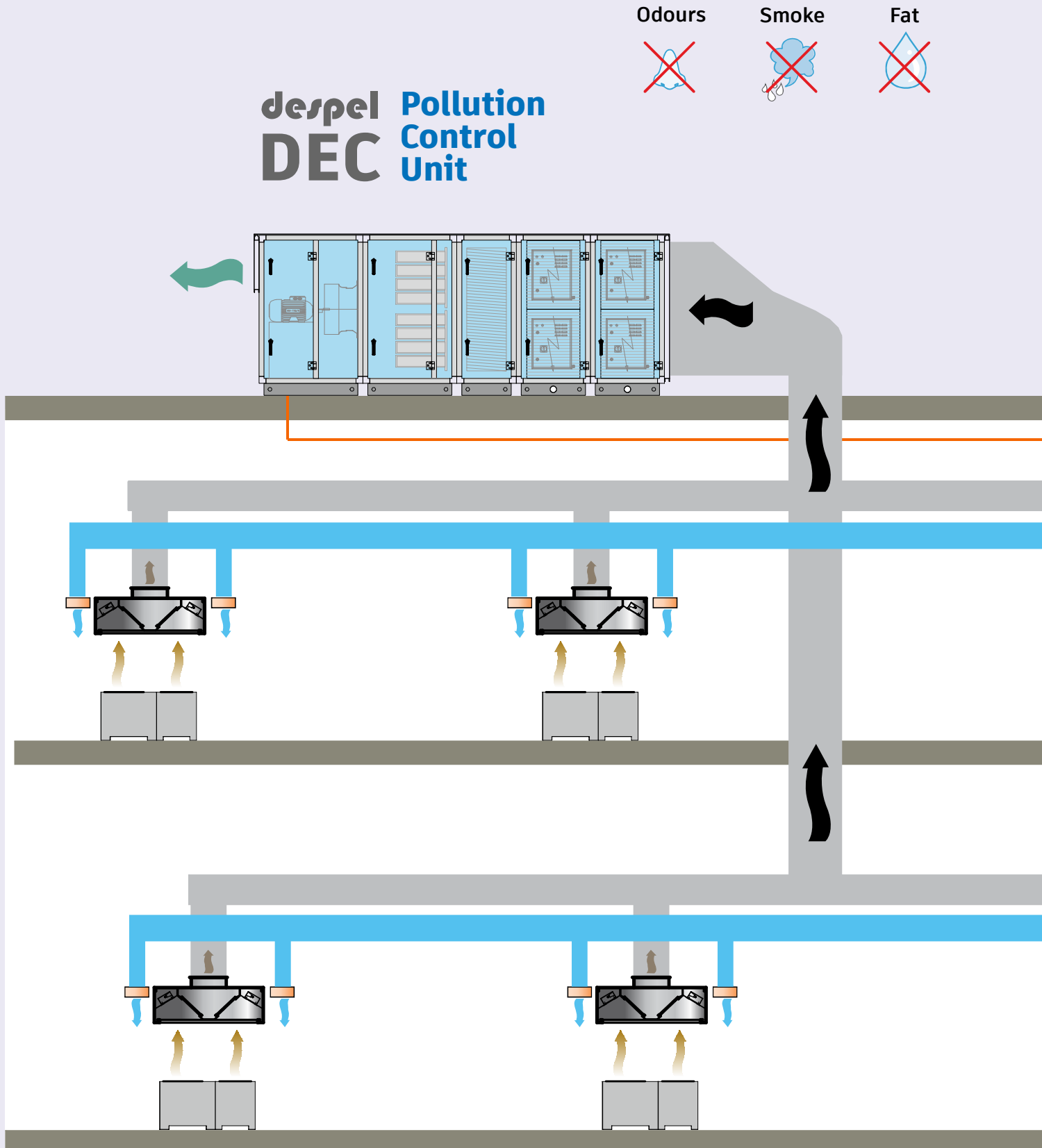
QUALITY

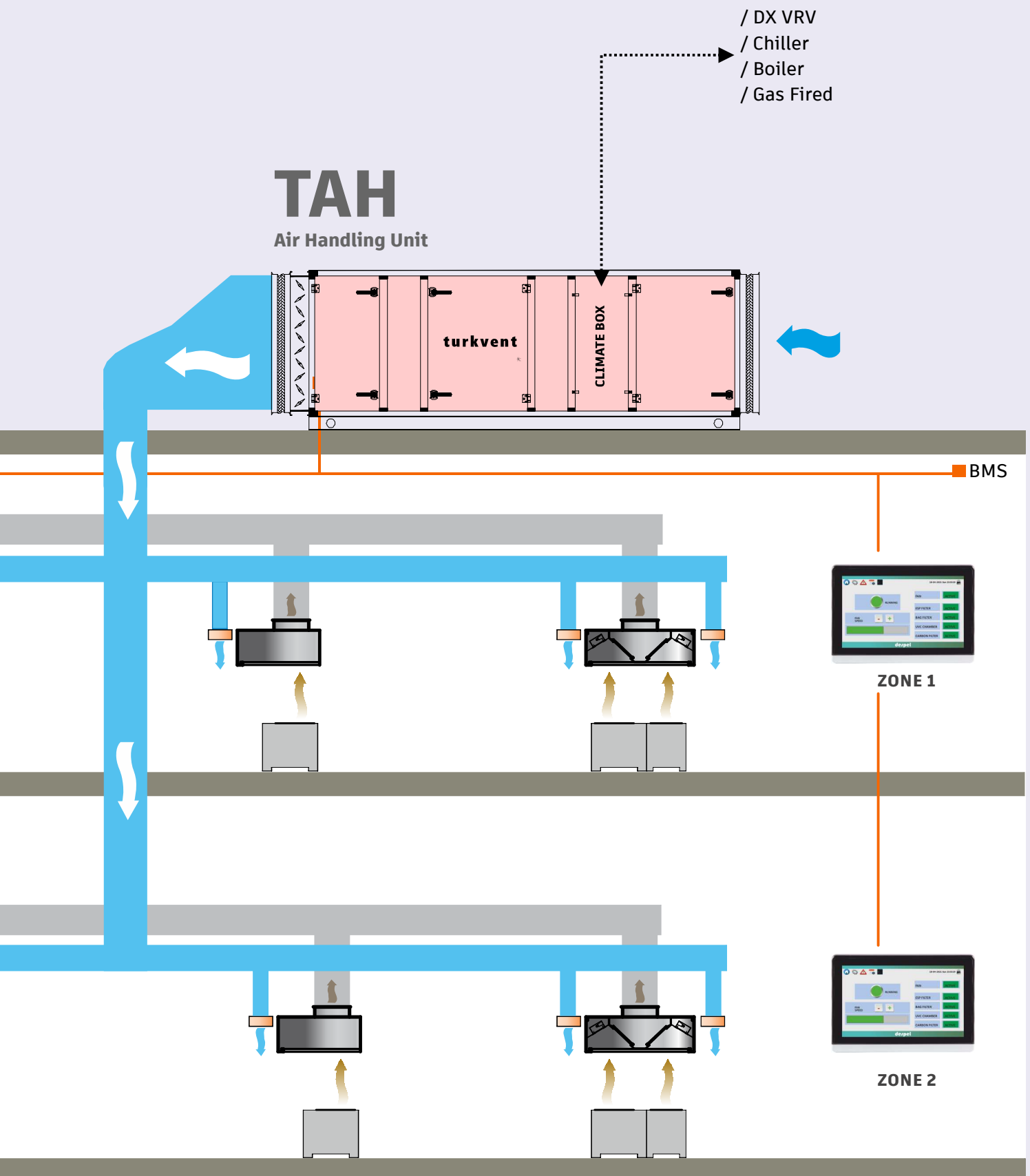
doesn't have to
be complicated!



DEC SAMPLE SCHEME

Central type ecology units are designed in standard models that are easy to install and easy to service. In addition, the fresh air unit is produced as standard models in capacities and sizes suitable for each model.





DEC MODELS

Odours



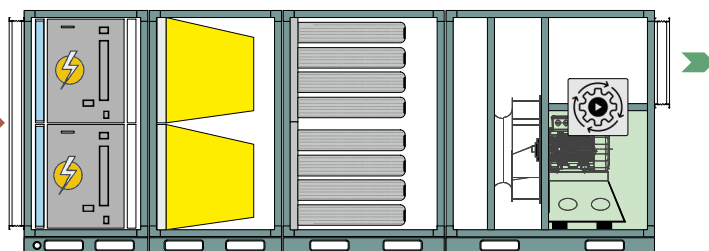
Smoke



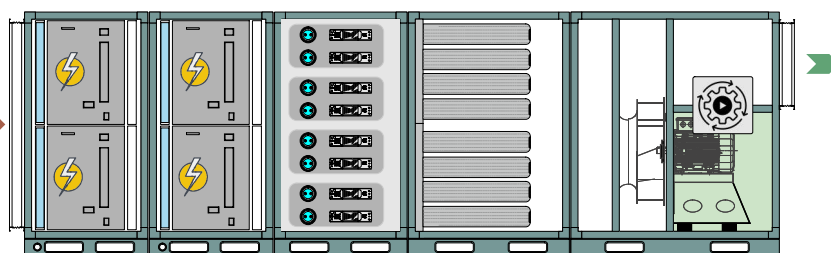
Fat



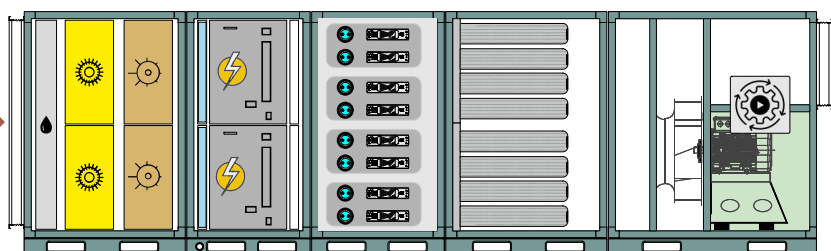
ECO



MED



PRO

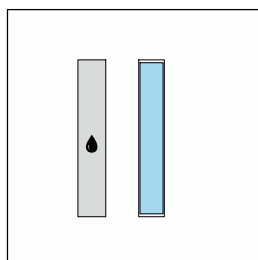


DEC MAIN PARTS

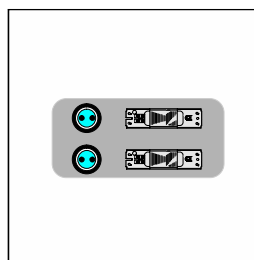
Built to Last Engineered to Work

Don't need complexity. You need answers. At Despel, we do the hard work for you. Everything we do from engineering to aftermarket service is designed to make it easy for you to succeed.

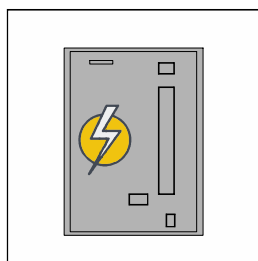
The most problematic part of ecology units is cleaning and maintenance. Leave all maintenance work with our technical service maintenance contract, you focus on your business. During cooking in industrial kitchens, unwanted factors such as steam, smoke, soot and bad odor that occur in cookers such as grills, ovens, barbecues and cookers may adversely affect the personnel working in our kitchens and cause disturbances in the surrounding areas and thus the formation of complaints. It serves. As a result of these complaints to the competent authorities, most businesses have to stop their activities. For this reason, ecology units are used in order to protect the environment, people and your business, and not to cause loss of prestige and money. You can simplify the most dirty and hard work in your business with our ecological filter systems.



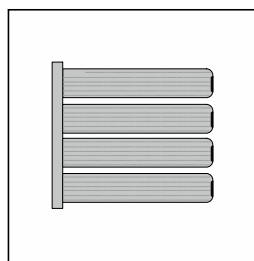
DROP ELIMINATOR & METALIC FILTER
(Big particles filter)



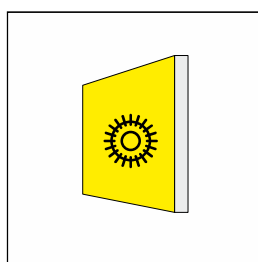
UVC OZONE CHAMBER
(Odor filter)



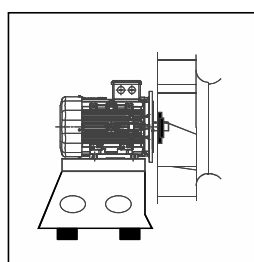
ELECTROSTATIC FILTER
(Smoke and oil filter)



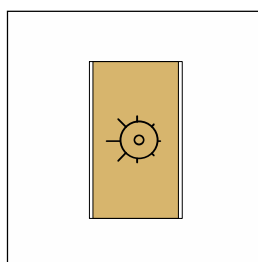
ACTIVATED CARBON FILTER
(Odor and gas filter,
Cylindrical activated carbon)



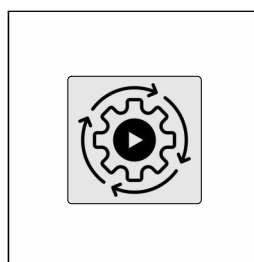
BAG OR COMPACT FILTER
(Small particulars filter,
A bag filter with a metal frame,
A compact filter, also known
as a rigid bag.)



RADIAL FAN
(High performance impeller)
(Motor isolated from air flow,
satisfies VDI 2052 for commercial
kitchens)



EPA FILTER
(Efficient particulate air filter,
E12 efficiency %99,5,
EN 1822-1:2009)



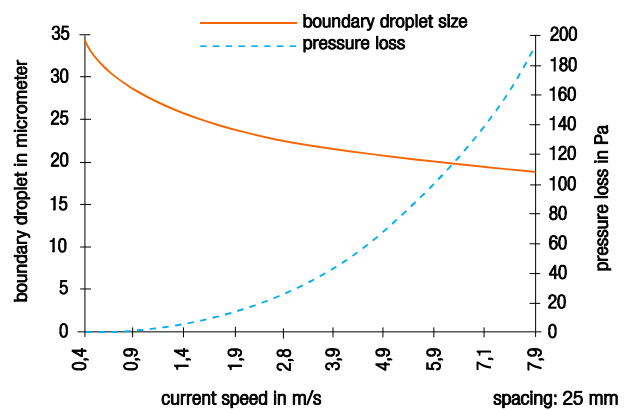
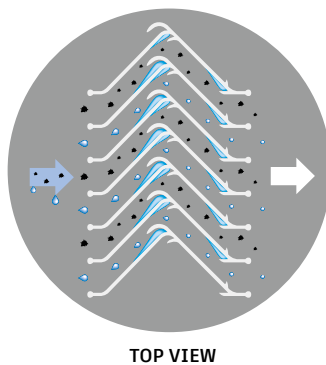
AUTOMATION
(Control board on unit, wall
type Touch panel in kitchen)

PRE - FILTERS

Droplet Separator

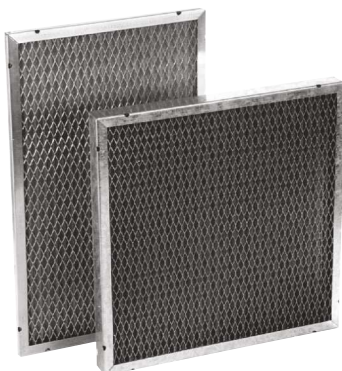
The streamlined separator deflects the droplet laden gas stream, as a result the momentum of the droplets causes them to impinge onto the profile surface.

The droplets coalesce together and form a liquid film, the influence of gravity causes the liquid to drain to the bottom of the profiles. Specially shaped separation chambers improve performance by enhancing the separation of finer droplets and ensuring problem free discharge of liquid.



Permanent Metal Filters

These permanent metal filters are washable, reusable and lightweight. They're also an excellent first line of defense in high-moisture and high-temperature conditions. Simply wash the filter and coat it with an adhesive spray to renew its high dust-holding capacity.



- Ideally suited for high moisture and high temperature conditions
- Lightweight construction makes filters easy to handle
- Designed with drain holes to ensure removal of excess water
- Frame made from galvanized
- Lightweight construction, easy to handle, install, and clean
- Effective grease removal
- Reduces maintenance coast

DEC MAIN PARTS

ELECTROSTATIC FILTER

ALL MODELS INCLUDES DE HEAVY ESP

Electronic air cleaners for industrial air purification ; Our filtration units for commercial cooking applications are designed to treat oil, grease, smoke and odor emissions from exhaust ducts in compliance with national and local codes. kitchen exhaust system will give you the best kitchen environment possible.

Our range of electrostatic air cleaners are designed to combat indoor pollutants with efficient energy consumption.

Ready to say “good riddance” to air pollutants in your plant? Invest in your workers’ health and safety with the Despel DE Series.

- Constant and consistent airflow
- High collection efficiency on sub-micron particles
- Reusable filter components
- Cheaper life-cycle cost
- Hinged side access door
- Power supply mounted out of airstream

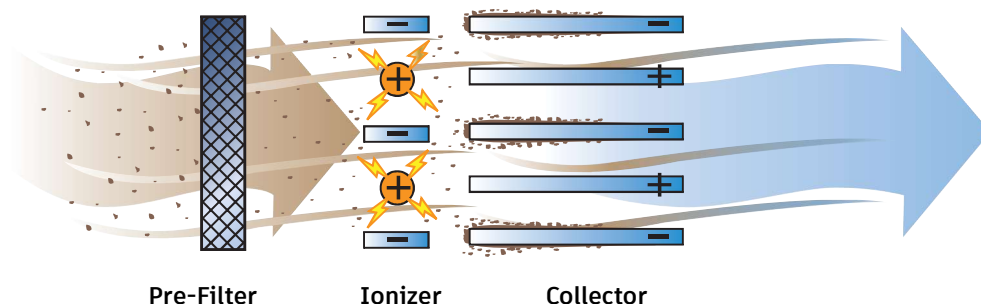
DESPEL DE HEAVY SERIE



How clean is the air in your industrial plant?

If you need to remove harmful air pollutants like smoke, fumes, oil/coolant smoke, and mist, our electronic air cleaners will have you breathing easier in no time. The DE-Series cleans contaminated indoor air and recirculates it back to the work area, reducing energy costs by not having to exhaust conditioned air to the outside.

These units work well for air with a high concentration of particles, like that of a kitchen hood exhaust system. Kitchen air quality can easily be reduced from the smoke, grease, and odors of cooking. But electrostatic precipitators keep airflow constant, meaning they are continually cleaning and refreshing the air. An electrostatic precipitator in your kitchen exhaust system will give you the best kitchen environment possible.



The above diagram shows, in a basic visual, how an electrostatic precipitator works. As air passes into the combined ioniser / collector cell, the particulates in the air stream are polarised. As they continue through the ioniser and between the collector cell plates, the polarised particulates are repelled away from the positively charged plates and attracted to the earthed plates where they stick and so are filtered out of the air flow.

BAG & EPA FILTERS

BAG Filters

The Bag filter is made from layered, meltblown synthetic media, protected by a scrim on the air-leaving side. Layering the media provides both a high-efficiency final filter layer that effectively filters fine particulate, and an integral lofted prefilter layer that captures larger particulate. Meltblown synthetic media is stronger than fiberglass, and is both non-shedding and water-resistant.



- High-loft layered melt blown synthetic media, stronger than fibreglass
- Non-shedding and water-resistant media
- Ultrasonically-welded pocket configuration that guarantees complete pocket inflation and eliminates crowding or leakage
- Strong and robust material that displays excellent abrasion resistance and performs well in 100% RH condition

EPA Filters

Absolute filters are classified E11 according to EN1822:2009. They are the ideal solution for upgrading an existing non-HEPA HVAC installation into a HEPA installation. The recessed mini-pleat media pack means that absolute filters are easy to handle and install, while high-quality MDF cell sides ensure a smooth non-shedding construction.



- Efficiency > 98% (efficient for 0,3 μm)
- Classified E11 according to EN1822:2009
- Recessed pack ensures easy handling
- One-piece gasket provides leak-tight seal
- High airflow filter for make-up air and exhaust air applications
- Filter Frame : ABS
- Media : Glass fiber
- Max temperature ($^{\circ}\text{C}$) : 70 $^{\circ}$ C
- Relative Humidity : 100%
- Recommended final pressure drop : 2x Initial pressure drop
- Separator : Hot-melt
- Gasket : Polyurethane, endless foamed
- Sealant : Polyurethane
- Max Airflow : 1,1 x nominal flow
- Max. final pressure drop : 600 Pa

This filter can be installed with the pleats in either the vertical or horizontal position. Absolute filters offer low media resistance, which results in low energy consumption and long service life. A one-piece gasket around the perimeter of the filter ensures leaktight installation. This filter is made of fully incinerable materials, and the temperature limit is 70 $^{\circ}$ C.

DEC MAIN PARTS

ODOUR & GAS FILTERS

UV-C OZONE CHAMBER

The units feature high output UV-c lamps which produce ozone. Grease and odours from the cooking process are attacked first by UV-c light in a process known as photolysis. Ozone then continues to act as the exhaust air moves through the ductwork by a process known as ozonolysis.



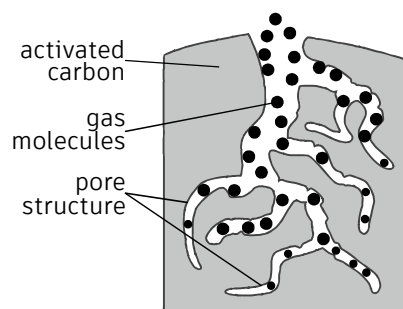
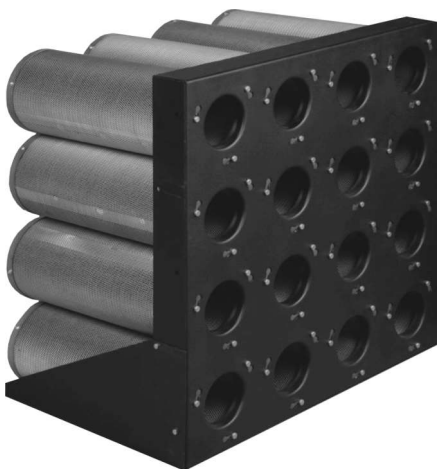
- Perfectly matched power supplies with long-life lamps
- High-density UV-C and ozone technology
- Eliminates oil and gas odors
- Low cost and limited maintenance requirements
- Extends the life of carbon filters and increases their efficiency

Units also known as 'odour neutralisers'. Ozone breaks down odour molecules. It does not mask smells, it eliminates them. When independently tested ozone (as used in our ecology units) successfully removes up to 90% of odours. [European Standard EN13725:2003]

ACTIVATED CARBON

Activated carbon filters are well known for their use in controlling gaseous odours. Traditionally, they are used as a sponge, absorbing gaseous odours as air passes through. The downside is that they quickly get saturated, and so need regular replacement. Newer ozone-based (ozonolysis) technologies are proving to be an increasingly popular and effective alternative for gaseous odour control.

Iodine : 900 mg/g (AWWA B 600-78)
Specified Surface Area : 1000 m²/g
Density : 550kg/m³ (ASTM D 2854)
CCI Adsorption : 50 % (ASTM D3467)



In the figure, we see the absorption of gas molecules and their placement in the pores in activated carbon.

However, recent research is showing that activated carbon is very good at removing ozone from airmaking activated carbon filters a useful complement to ozone-based systems. Used in this way, carbon filters last longer, as ozone acts to remove odours in the gas phase and further oxidises any residual odour molecules which become trapped on the activated carbon surface.

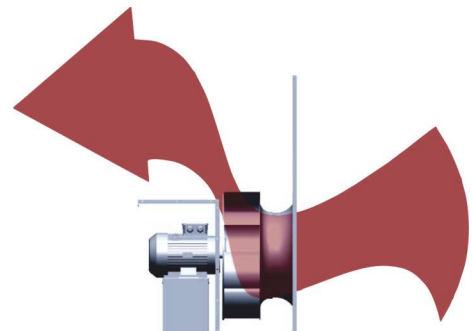
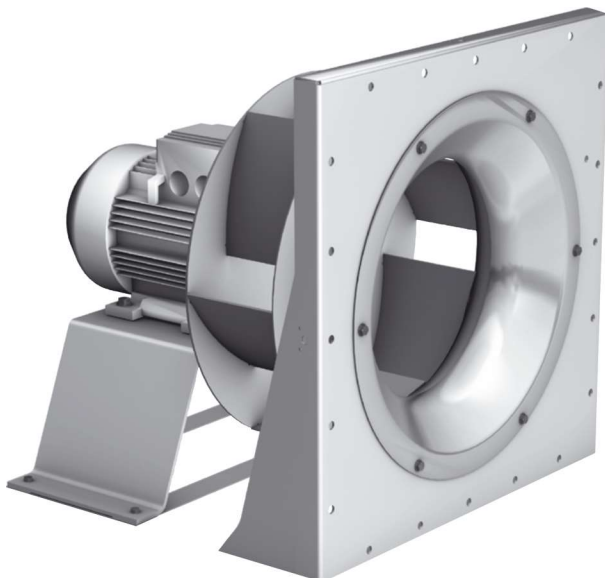
MOTOR & POLLUTED AIR EXTRACT FANS

Kitchen ventilation systems often have relatively high resistance against which a fan has to operate. Therefore, fans need to be sized to cope with a design pressure of a minimum additional 10% pressure margin. Backward curved centrifugal plug impellers are preferred as they are less prone to imbalance and are easier to clean, more efficient operation with frequency inverters and maintain due to their open construction.

The new generation efficient plug series in our fan range and the actual versions of impeller technology are used in our units.. The result: More efficiency and reduced turbulent conditions. And that is highly effective as the plug series ensures : Alower energy consumption / Alower costs / Alower noise levels

When placing the plug fans in the unit, the motor is taken out of the air stream considering the longer working life as a design. Plug fan electric motors fully enclosed, fan cooled (TEFC) squirrel cage type,"F" insulation at 40°C ambient temperature as continuous operating conditions. Motor selections were made with a voltage tolerance of 10% and a frequency tolerance of 5% . Plug fans that we use in ecology units are directly coupled, ie the motor and fan run on the same shaft at the same speed. The implants are made of epoxy / electrostatic painted steel and the base carrier frame is made of galvanized steel AISI316.

The fan and motor are mounted on a common carrier frame and are isolated from the housing by vibration dampers and flexible connections. The impeller section is free of intervention covers. It is only accessible by panel dismantling. Since the engine part is outside the airflow, service can be carried out from the intervention cover even during operation.



DEC MAIN PARTS

AUTOMATION CONTROL BOARD

Our engineers designs all controls systems entirely in-house, this advantage ensures that the most efficient, lowest cost and highest quality packages are available. Offering a unique combination of controls features and flexibility, tailored to an infinite variety of HVAC applications, software engineers are some of the best in the industry utilising the latest methods for energy management, sensor response, together with a range of building automation interfaces, all are standard features from units controls.

Quick change plug connectors between unit sections and electrical components can also be ordered. This service reduces onsite installation, giving the installer peace of mind from a complete ventilation package. Optionally, fan speed control can be provided by communicating with sensors according to filter pollution.

Our company provides a number of communicating protocols including BACnet® or Modbus®, allowing fast and simple integration of the HVAC controls onsite, no matter what the building automation and control system is. Information supplied by the automation packages can form an integral part of the intelligent building and automation system and can help reduce energy consumption of buildings.

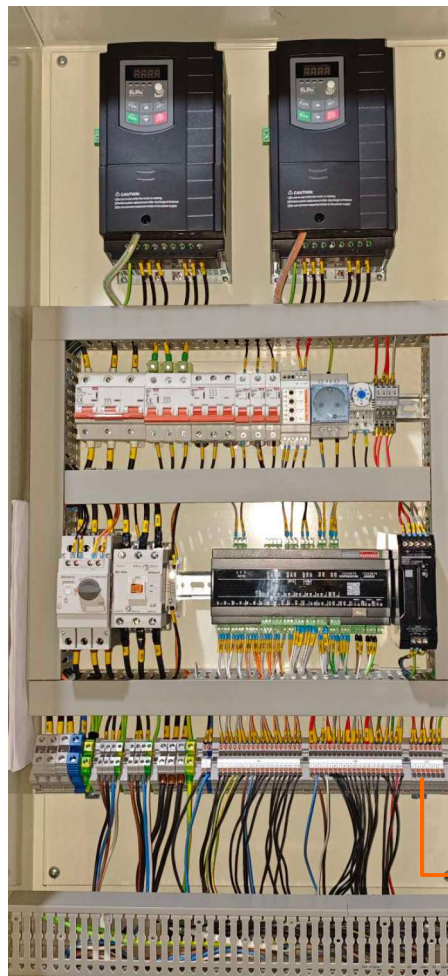
The post-installation commissioning by a our controls specialist provides an essential service to ensure efficient operation of the equipment. This results in significant value to all parties by delivering a system that performs as specified, intended and paid for.



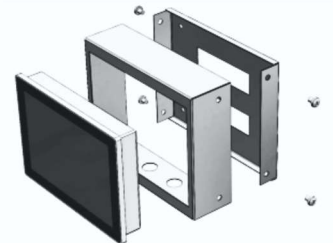
PLC



Frequency Converter



INDOOR - WALL TYPE



7" Multi-Touch Panel



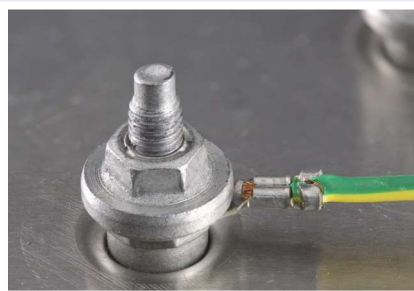
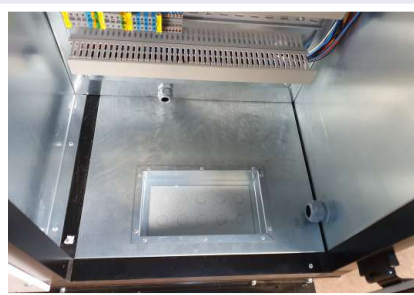
DEC MAIN PARTS

HOUSING

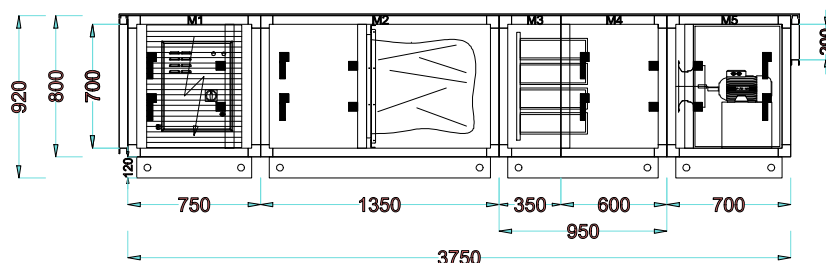
The casing is built out of a aluminium framework (optional: galvanized steel or welded stainless steel AISI316L) holding double walled panels and, if required, provided with inspection doors. The thickness of the framework is at least 1mm, depending on size and application. The double walled panels are made of galvanized steel (optional: stainless steel AISI316) and insulated with 50mm thermal and acoustic insulation , Rock- wool type 70kg/m³, other insulation are possible on request. Sheet thicknesses are available from 1mm up to 2mm. Air handling units outdoors are provided with pitched roof plates and 50mm overhanging eaves.

The inspection doors are fitted with aluminum casting locks and hinges which are mounted on the outside of the panels to avoid thermal bridges. Doors that close overpressure sections are provided with a safeguard to prevent dangerous situations. Not self- adhesive EPDM rubbers are used to prevent air leakage.

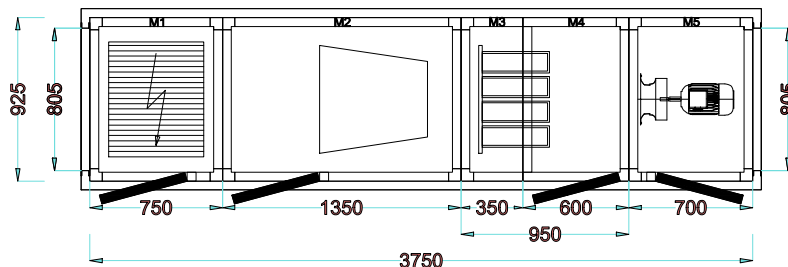
A special ventilation grille is designed on the panels in order to cool the filter systems containing electronic cards. These outdoor ventilation grilles are also equipped with a Pol 20 filter against outdoor dust. The carrier chassis of the modules are made of special electrostatic powder coated galvanized sheet with a wall thickness of 2mm to 4mm according to the model sizes. A special cable tray design is available on the inside of the chassis for ease of wiring between modules. These cable ducts are controlled from the intervention covers opened on the front of the chassis and are also connected to the equipment to be connected by cable passages opened on the bottom panel. Grounding all components are provided with 16mm² earth-bonding.



RIGHT VIEW



TOP VIEW



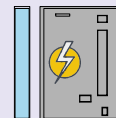
GENERAL SPECIFICATIONS

Airflow 3000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 925 x H 920 x L 3750
Air Velocity 1,44 m/s	Filter 2 Bag Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 671 kg
Fan Model RLM E6-2831	Filter 3 Activated Carbon Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
		Inside Sheet Material 1 mm Galvanize	Motor Power 1,5 kW
			Total Absorbed Power 1,9 kW

Specific Fan Power (SFP Total) 112 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,88	External Static Pressure 400 Pa
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FILTER (M1)

Model	Electrostatic Filter	Section weight	164 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	3300 m ³ /h	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE30	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	1		
Pre-filter	Metalic Cassette Filter		
Total power	77 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



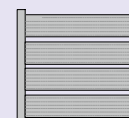
FILTER (M2)

Model	Bag Filter	Section weight	158 kg
Section length	1350 mm	Efficiency class EN779	
Max. Air flow rate	3400 m ³ /h @ 110 Pa	Filter frame	F7
Design pressure drop	214 Pa	Media type	Galvanised steel
		Max. Operating Temp.	Meltblown synthetic media
		Air velocity	80 °C
		Size / qty.	2,38 m/s 1 pcs. 592x592x600mm



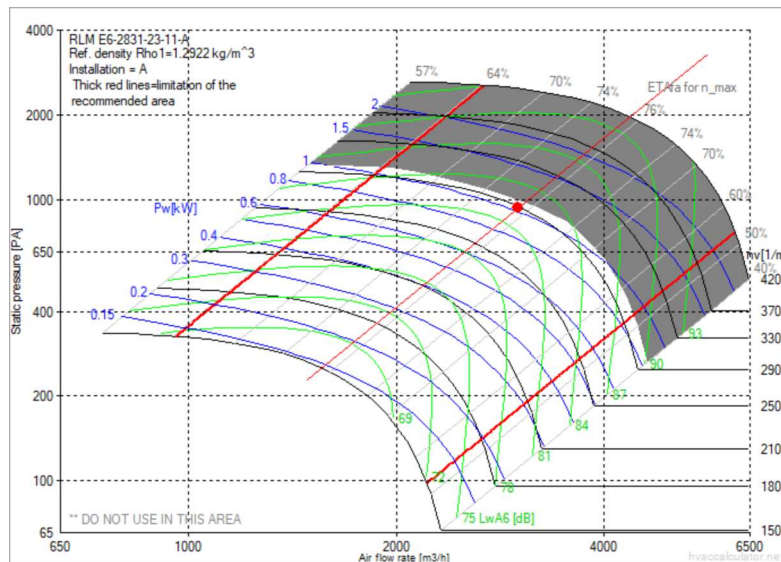
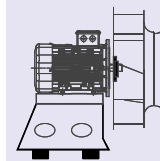
FILTER (M3/M4)

Model	Activated Carbon	Section weight	197 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	5280 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	259 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	16 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	64 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
3000 m ³ /h	AC-AGM 90 S-2	Nicotra-Gebhardt-RLM E6-2831-23-11-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
533 Pa	1,5 kW/3P/380V/50V-Hz	6,8 %	700 mm
External Static Pressure	Motor Speed	Section Weight	
400 Pa	3000 (2835) rpm	150 kg	
Total Static Pressure	Fan Bush Number		
933 Pa	1610		
Total Pressure	Motor Shaft Diameter		
975 Pa	Ø24 mm		
Total / Static Efficiency			
79,00 / 75,00 %			
Motor / Invertor Efficiency			
79,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
1,03 / 1,3 kW	1,34 kW		
Fan Speed	Running Frequency		
2886 rpm (Max. 2990 rpm)	50,90 Hz (Max. 52,73 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
112 W/(m ³ /s)	2,04 A (Max. 2,96 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	75,0	72,0	76,0	72,0	76,0	76,0	75,0	68,0	82,0	dBA
Inlet Side	67,0	67,0	76,0	73,0	72,0	68,0	68,0	62,0	77,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
1,5 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag dirtiness info
- Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

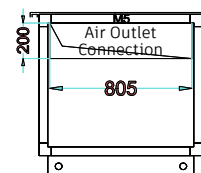
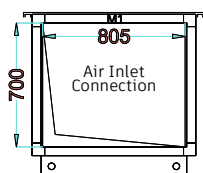
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	53,0	49,0	41,0	42,0	42,0	38,0	26,0	48,5	dBA
Air Outlet Induct Sound Power Level	72,0	76,0	72,0	76,0	76,0	75,0	68,0	82,0	dBA
Air Inlet Induct Sound Power Level	48,0	57,0	54,0	53,0	53,0	53,0	47,0	60,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

3000 m³/h

Air Velocity

1,48 m/s

Dimensions

W 805 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

3000 m³/h

Air Velocity

5,18 m/s

Dimensions

W 805 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

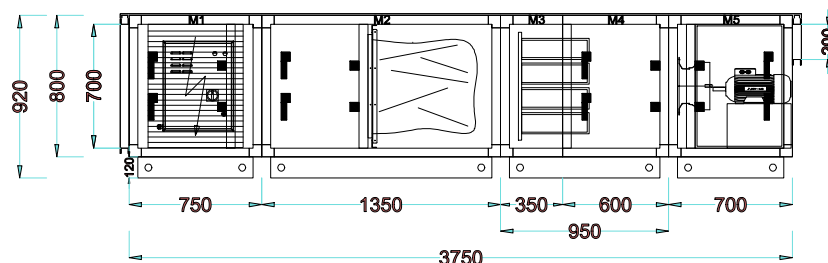
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OPTIONS (non-standard)

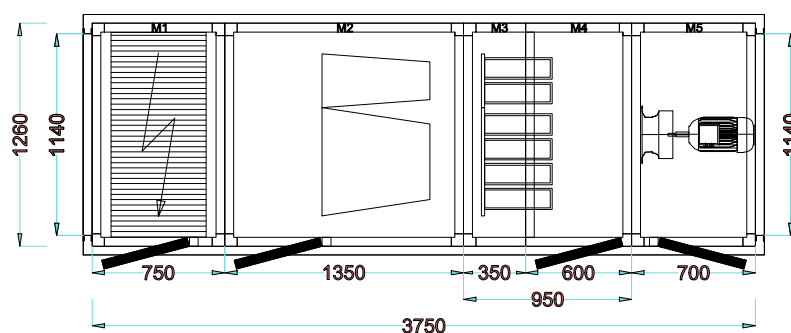
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC ECO 050 Technical Specifications

RIGHT VIEW



TOP VIEW



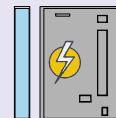
GENERAL SPECIFICATIONS

Airflow 5000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 920 x L 3750
Air Velocity 1,71 m/s	Filter 2 Bag Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 837 kg
Fan Model RLM E6-3135	Filter 3 Activated Carbon Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
		Inside Sheet Material 1 mm Galvanize	Motor Power 3 kW
			Total Absorbed Power 2,44 kW

Specific Fan Power (SFP Total) 122,3 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,86	External Static Pressure 450 Pa
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FILTER (M1)

Model	Electrostatic Filter	Section weight	210 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	6600 m ³ /h	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns 1 1/2"
Case x qty.	DE60	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Type	Plate - Cell		
Total cell qty.	2		
Pre-filter	Metalic Cassette Filter		
Total power	154 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



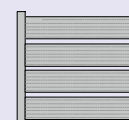
FILTER (M2)

Model	Bag Filter	Section weight	194 kg
Section length	1350 mm	Efficiency class EN779	F7
Max. Air flow rate	5100 m ³ /h @ 110 Pa	Filter frame	Galvanised steel
Design pressure drop	219 Pa	Media type	Meltblown synthetic media
		Max. Operating Temp.	80 °C
		Air velocity	2,67 m/s
		Size / qty.	1 pcs. 592x592x600mm 1 pcs. 592x287x600mm



FILTER (M3/M4)

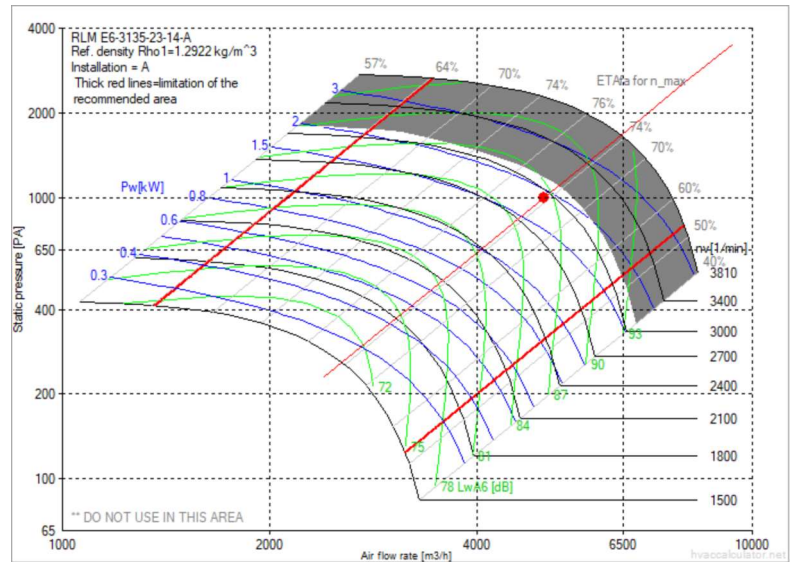
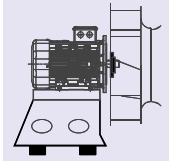
Model	Activated Carbon	Section weight	248 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	7920 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	24 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	96 kg		



DEC ECO 050 Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
5000 m ³ /h	AC-AGM 100 L-2	Nicotra-Gebhardt-RLM E6-3135-23-14-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
551 Pa	3 kW/3P/380V/50V-Hz	17,02 %	700 mm
External Static Pressure	Motor Speed	Section Weight	
450 Pa	3000 (2850) rpm	185 kg	
Total Static Pressure	Fan Bush Number		
1001 Pa	1610		
Total Pressure	Motor Shaft Diameter		
1075 Pa	Ø28 mm		
Total / Static Efficiency			
79,00 / 74,00 %			
Motor / Invertor Efficiency			
83,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
1,88 / 2,26 kW	2,33 kW		
Fan Speed	Running Frequency		
2948 rpm (Max. 3090 rpm)	51,72 Hz (Max. 54,21 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
122,3 W/(m ³ /s)	3,54 A (Max. 5,64 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	81,0	78,0	83,0	78,0	81,0	78,0	79,0	72,0	86,0	dBA
Inlet Side	73,0	72,0	83,0	79,0	73,0	71,0	70,0	63,0	81,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

3 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag dirtiness info
- Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC ECO 050

Technical Specifications

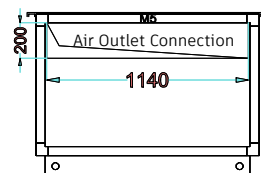
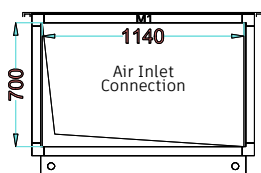
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	59,0	56,0	47,0	47,0	44,0	42,0	30,0	53,5	dBA
Air Outlet Induct Sound Power Level	78,0	83,0	78,0	81,0	78,0	79,0	72,0	85,5	dBA
Air Inlet Induct Sound Power Level	53,0	64,0	60,0	54,0	56,0	55,0	48,0	64,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

5000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

5000 m³/h

Air Velocity

6,09 m/s

Dimensions

W 1140 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

No

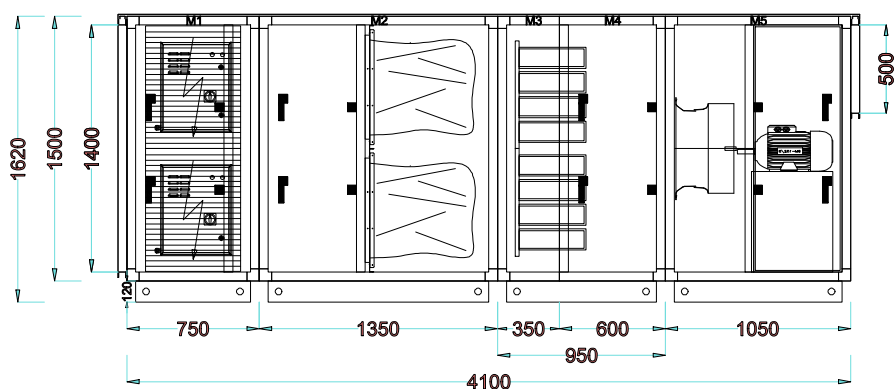
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

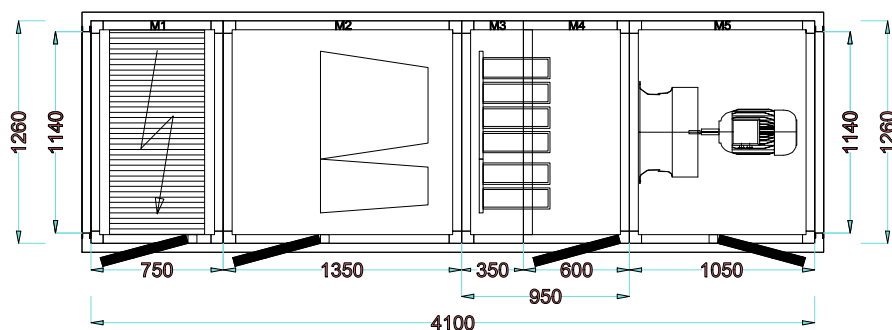
DEC ECO 100

Technical Specifications

RIGHT VIEW



TOP VIEW



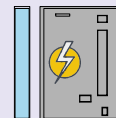
GENERAL SPECIFICATIONS

Airflow 10000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 1620 x L 4100
Air Velocity 1,71 m/s	Filter 2 Bag Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1278 kg
Fan Model RLM E6-5663	Filter 3 Activated Carbon Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
		Inside Sheet Material 1 mm Galvanize	Motor Power 5,5 kW
			Total Absorbed Power 4,96 kW

Specific Fan Power (SFP Total) 122,7 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,89	External Static Pressure 500 Pa
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FILTER (M1)

Model	Electrostatic Filter	Section weight	330 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	13200 m ³ /h (6600 x 2)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns
Case x qty.	DE60 x 2	Features	1 1/2"
Type	Plate - Cell		Short circuit, arc protection and auto restore PS.
Total cell qty.	4		BMS terminals provided
Pre-filter	Metalic Cassette Filter		Auto power cut-off when door is opened
Total power	308 W		Indicator LEDs for normal or wash indicator
Voltage	1 ph / 220-240 V / 50Hz		Set of Terminals for remote LED
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



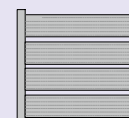
FILTER (M2)

Model	Bag Filter	Section weight	243 kg
Section length	1350 mm	Efficiency class EN779	F7
Max. Air flow rate	10200 m ³ /h @ 110 Pa	Filter frame	Galvanised steel
Design pressure drop	219 Pa	Media type	Meltblown synthetic media
		Max. Operating Temp.	80 °C
		Air velocity	2,67 m/s
		Size / qty.	2 pcs. 592x592x600mm 2 pcs. 592x287x600mm



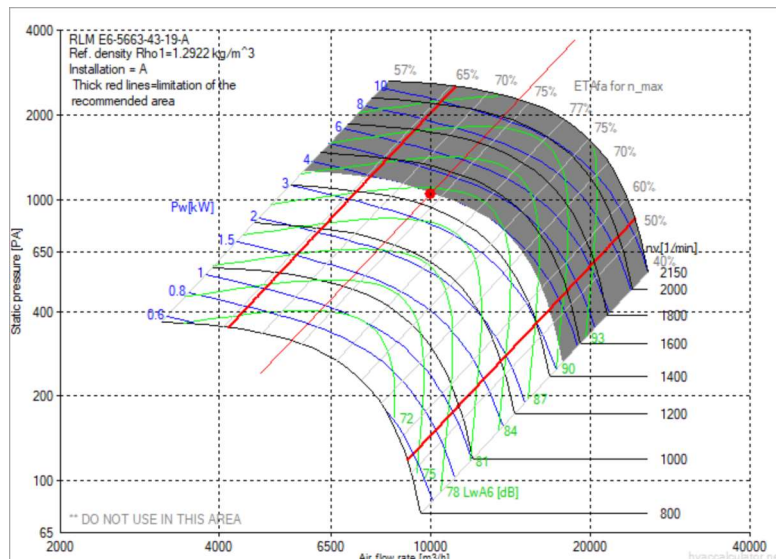
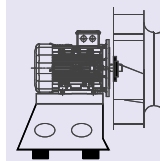
FILTER (M3/M4)

Model	Activated Carbon	Section weight	366 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	15840 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	48 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	192 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
10000 m ³ /h	AC-GM 132 S-4	Nicotra-Gebhardt-RLM E6-5663-43-19-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
551 Pa	5,5 kW/3P/380V/50V-Hz	1,01 %	1050 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	1500 (1430) rpm	338 kg	
Total Static Pressure	Fan Bush Number		
1051 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1081 Pa	Ø38 mm		
Total / Static Efficiency			
76,00 / 74,00 %			
Motor / Invertor Efficiency			
86,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
3,96 / 4,59 kW	4,73 kW		
Fan Speed	Running Frequency		
1460 rpm (Max. 1480 rpm)	51,05 Hz (Max. 51,75 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
122,7 W/(m ³ /s)	7,19 A (Max. 9,99 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	78,0	87,0	81,0	78,0	78,0	76,0	71,0	66,0	83,0	dBA
Inlet Side	75,0	85,0	80,0	76,0	73,0	70,0	68,0	62,0	79,0	dBA

*The fan system effect is taken into account in the fan performance
 *The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
5,5 kW
Main Controller (PLC)
Yes

- Standard Specifications**
- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
 - Variable fan speed control
 - Electrostatic Filter/Bag dirtiness info
 - Activated carbon filter integrity monitor (Time Counter)
 - Door switch info
 - Adaptation to fire safety system / fire mode
 - Air volume set, monitoring and control from the room HMI Box
 - Detailed daily and weekly time scheduling

DEC ECO 100

Technical Specifications

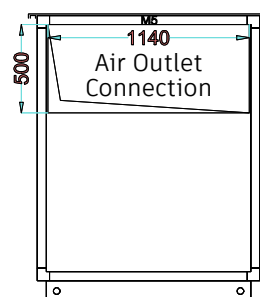
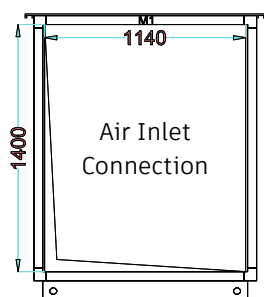
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	68,0	54,0	47,0	44,0	42,0	34,0	24,0	54,5	dBa
Air Outlet Induct Sound Power Level	87,0	81,0	78,0	78,0	76,0	71,0	66,0	83,0	dBa
Air Inlet Induct Sound Power Level	66,0	61,0	57,0	54,0	55,0	53,0	47,0	62,0	dBa

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBa

AIR CONNECTIONS



Airflow

10000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 1400 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

10000 m³/h

Air Velocity

4,87 m/s

Dimensions

W 1140 mm x H 500 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

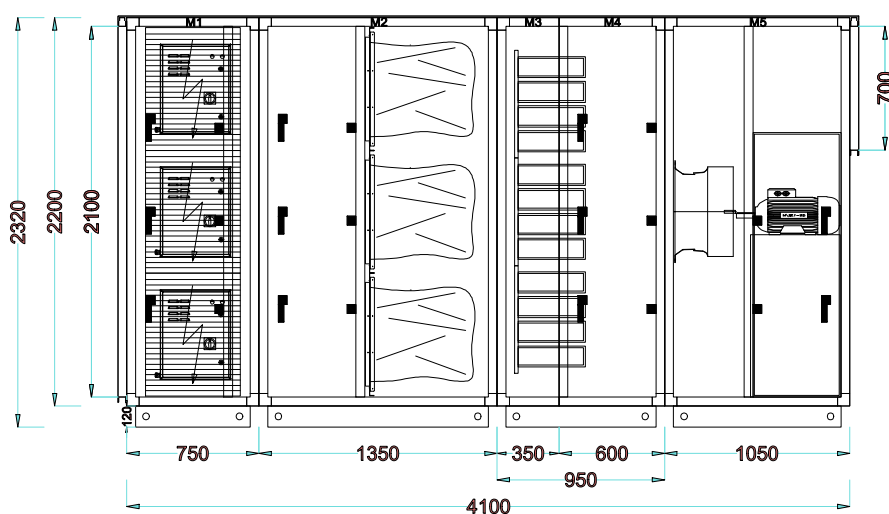
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OPTIONS (non-standard)

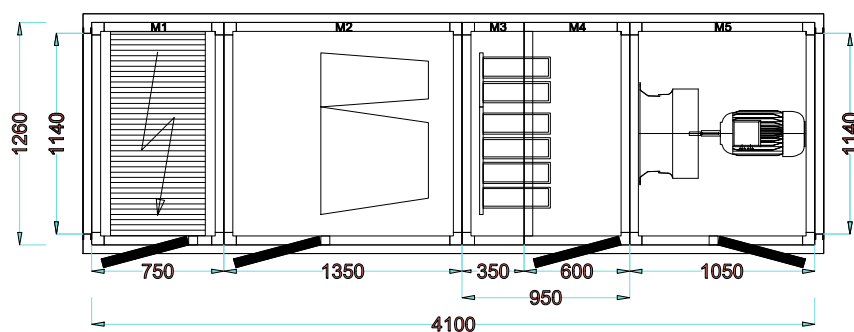
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC ECO 150 Technical Specifications

RIGHT VIEW



TOP VIEW



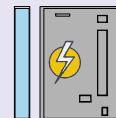
GENERAL SPECIFICATIONS

Airflow 15000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 2320 x L 4100
Air Velocity 1,71 m/s	Filter 2 Bag Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1627 kg
Fan Model RLM E6-5663	Filter 3 Activated Carbon Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
		Inside Sheet Material 1 mm Galvanize	Motor Power 7,5 kW
			Total Absorbed Power 7,14 kW

Specific Fan Power (SFP Total) 113,6 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,88	External Static Pressure 500 Pa
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FILTER (M1)

Model	Electrostatic Filter	Section weight	446 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	19800 m ³ /h (6600 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE60 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	462 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



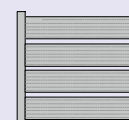
FILTER (M2)

Model	Bag Filter	Section weight	291 kg
Section length	1350 mm	Efficiency class EN779	F7
Max. Air flow rate	15300 m ³ /h @ 110 Pa	Filter frame	Galvanised steel
Design pressure drop	219 Pa	Media type	Meltblown synthetic media
		Max. Operating Temp.	80 °C
		Air velocity	2,67 m/s
		Size / qty.	3 pcs. 592x592x600mm 3 pcs. 592x287x600mm



FILTER (M3/M4)

Model	Activated Carbon	Section weight	485 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	23760 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	72 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	288 kg		

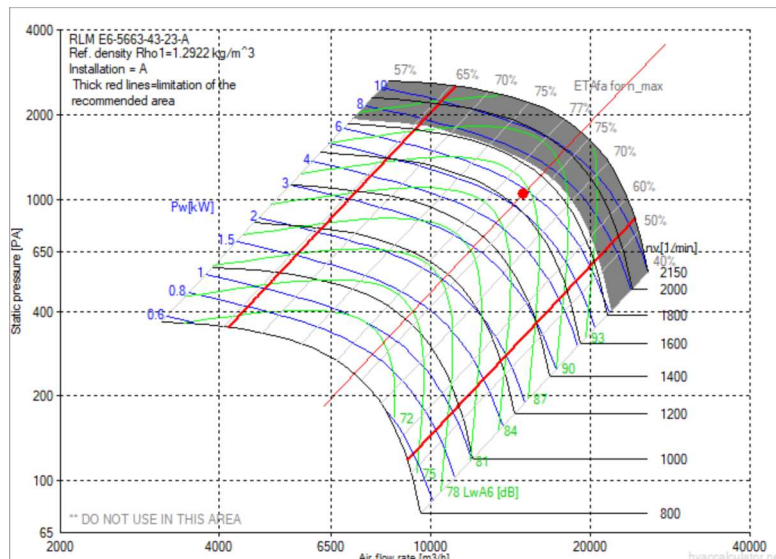
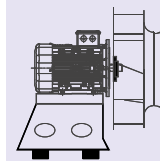


DEC ECO 150

Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
15000 m ³ /h	AC-GM 132 M-4	Nicotra-Gebhardt-RLM E6-5663-43-23-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
551 Pa	7,5 kW/3P/380V/50V-Hz	40,19 %	1050 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	1500 (1430) rpm	405 kg	
Total Static Pressure	Fan Bush Number		
1051 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1119 Pa	Ø38 mm		
Total / Static Efficiency			
81,00 / 76,00 %			
Motor / Invertor Efficiency			
87,40 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
5,77 / 6,6 kW	6,8 kW		
Fan Speed	Running Frequency		
1671 rpm (Max. 1830 rpm)	58,43 Hz (Max. 63,99 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
113,6 W/(m ³ /s)	10,33 A (Max. 13,43 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	81,0	86,0	82,0	82,0	82,0	79,0	77,0	74,0	87,0	dBA
Inlet Side	78,0	84,0	81,0	78,0	76,0	74,0	72,0	69,0	82,0	dBA

*The fan system effect is taken into account in the fan performance
*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
7,5 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag dirtiness info
- Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC ECO 150

Technical Specifications

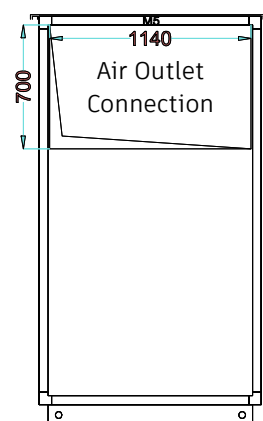
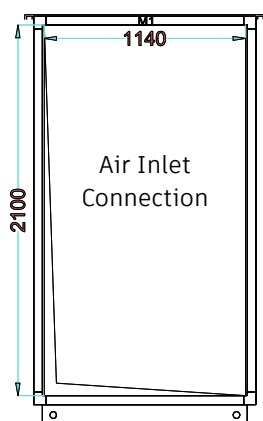
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	67,0	55,0	51,0	48,0	45,0	40,0	32,0	56,5	dBA
Air Outlet Induct Sound Power Level	86,0	82,0	82,0	82,0	79,0	77,0	74,0	87,0	dBA
Air Inlet Induct Sound Power Level	65,0	62,0	59,0	57,0	59,0	57,0	54,0	65,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

15000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

15000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

10 Pa

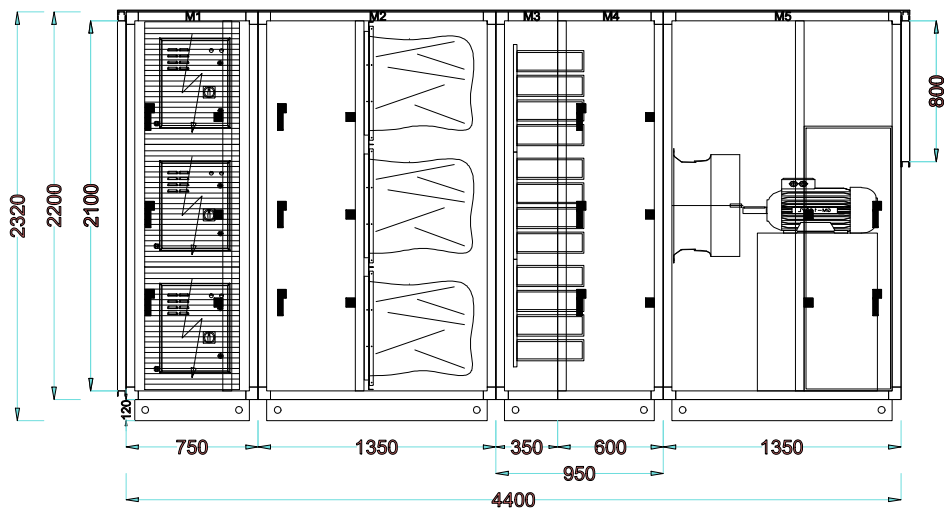
Control

No

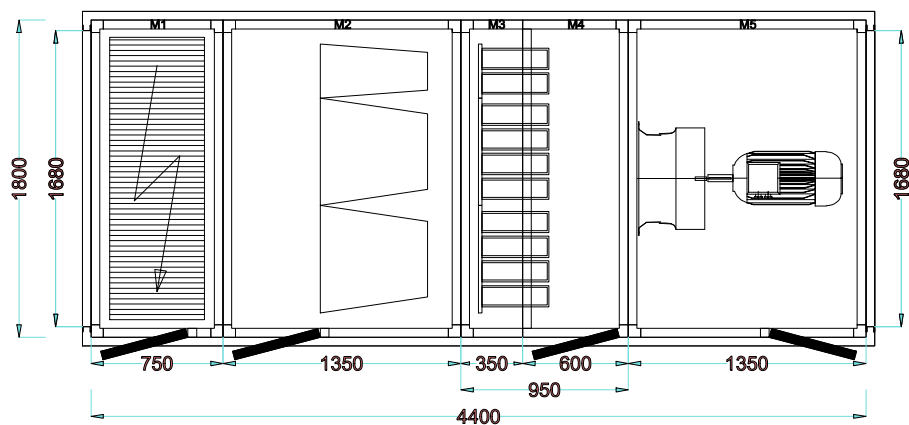
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

RIGHT VIEW



TOP VIEW



GENERAL SPECIFICATIONS

Airflow

24000 m³/h

Air Velocity

1,87 m/s

Fan Model

RLM E6-6371

Filter 1

Electrostatic Filter

Filter 2

Bag Filter

Filter 3

Activated Carbon Filter

Model / Frame

50x50 mm

Insulation Material

50 mm Rockwool 70 kg/m³

Outside Sheet Material

0,8 mm Painted Galvanize

Inside Sheet Material

1 mm Galvanize

Dimensions (mm) (Size+Pedestal)

W 1800 x H 2320 x L 4400

Total Weight

2260 kg

Base Height

120 mm

Motor Power

15 kW

Total Absorbed Power

12,86 kW

Specific Fan Power (SFP Total)

92,97 W/(m³/s)

ErP Code

NRVU-UVU

fs-Pref (W-S)

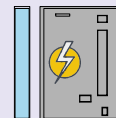
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External Static Pressure

600 Pa

FILTER (M1)

Model	Electrostatic Filter	Section weight	587 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	24900 m ³ /h (8300 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns 1 1/2"
Case x qty.	DE80 x 3	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Type	Plate - Cell		
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	546 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



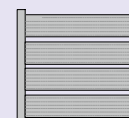
FILTER (M2)

Model	Bag Filter	Section weight	347 kg
Section length	1350 mm	Efficiency class EN779	F7
Max. Air flow rate	24750 m ³ /h @ 110 Pa	Filter frame	Galvanised steel
Design pressure drop	217 Pa	Media type	Meltblown synthetic media
		Max. Operating Temp.	80 °C
		Air velocity	2,55 m/s
		Size / qty.	6 pcs. 592x592x600mm 3 pcs. 592x287x600mm



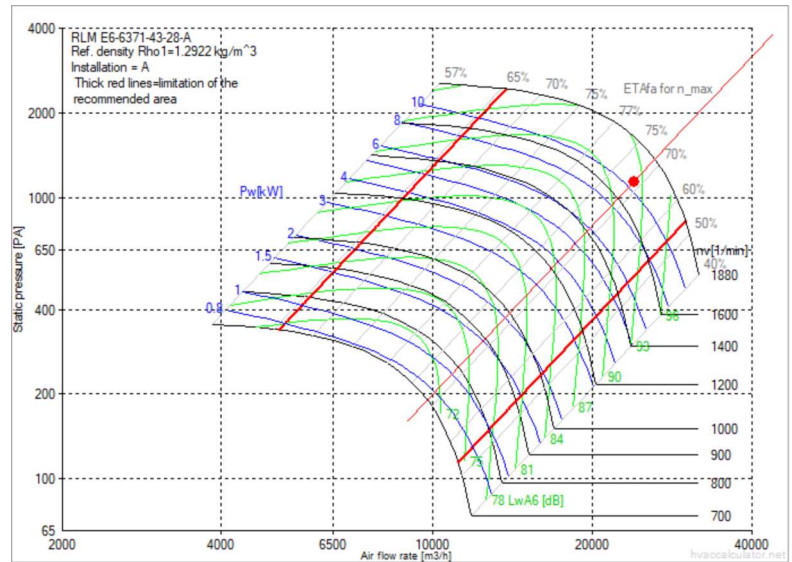
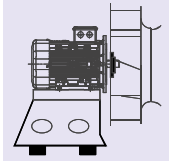
FILTER (M3/M4)

Model	Activated Carbon	Section weight	690 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	39600 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	266 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	120 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	480 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
24000 m ³ /h	AC-GM 160 L-4	Nicotra-Gebhardt-RLM E6-6371-43-28-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
543 Pa	15 kW/3P/380V/50V-Hz	40,19 %	1450 mm
External Static Pressure	Motor Speed	Section Weight	
600 Pa	1500 (1460) rpm	636 kg	
Total Static Pressure	Fan Bush Number		
1143 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1253 Pa	Ø42 mm		
Total / Static Efficiency			
78,00 / 71,00 %			
Motor / Inverter Efficiency			
89,50 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
10,7 / 11,96 kW	12,31 kW		
Fan Speed	Running Frequency		
1715 rpm (Max. 1880 rpm)	58,73 Hz (Max. 64,38 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
109,3 W/(m ³ /s)	18,71 A (Max. 26,23 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	86,0	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Inlet Side	83,0	89,0	86,0	83,0	81,0	79,0	77,0	74,0	87,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
15 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag dirtiness info
- Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

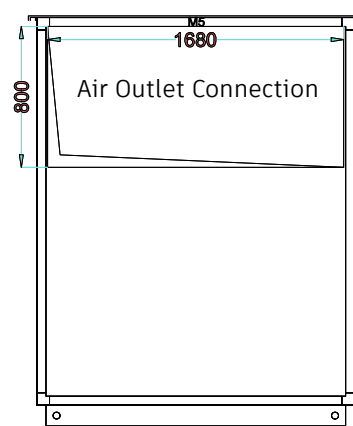
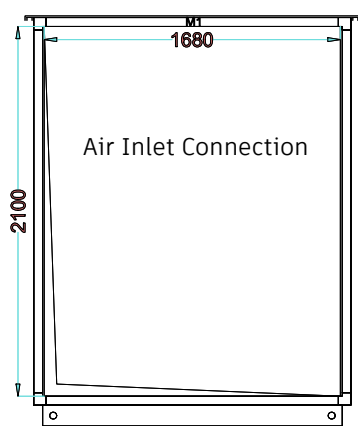
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	72,0	60,0	56,0	53,0	50,0	45,0	37,0	61,5	dBA
Air Outlet Induct Sound Power Level	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Air Inlet Induct Sound Power Level	70,0	67,0	64,0	62,0	64,0	62,0	59,0	70,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

24000 m³/h

Air Velocity

1,89 m/s

Dimensions

W 1680 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

24000 m³/h

Air Velocity

4,96 m/s

Dimensions

W 1680 mm x H 800 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

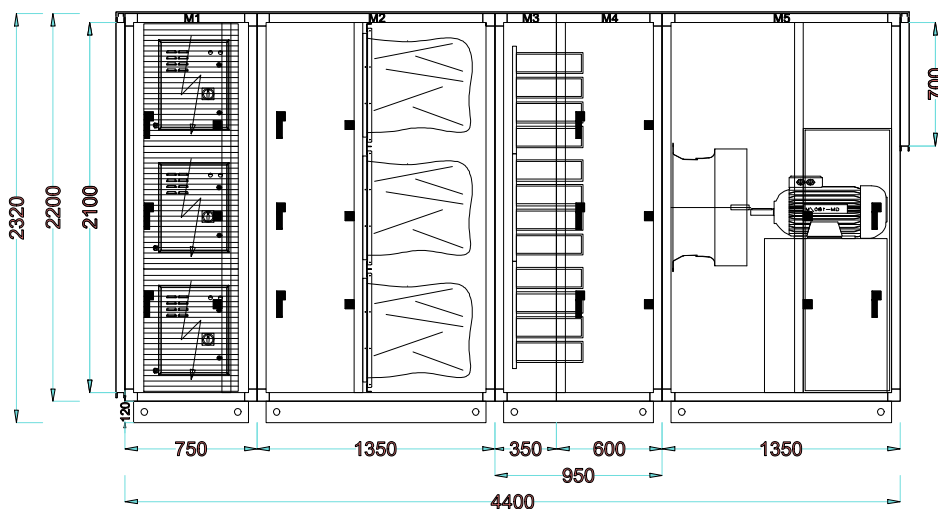
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OPTIONS (non-standard)

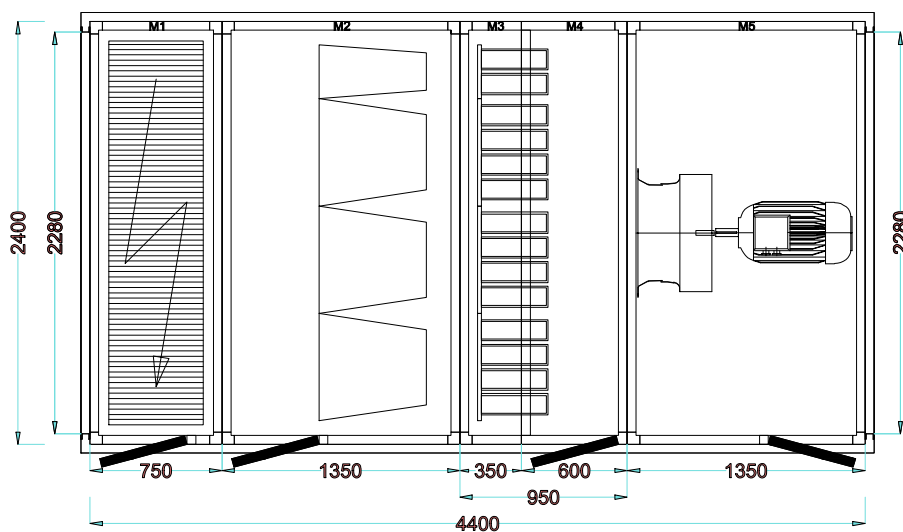
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC ECO 300 Technical Specifications

RIGHT VIEW



TOP VIEW



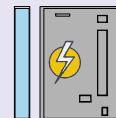
GENERAL SPECIFICATIONS

Airflow 30000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 2400 x H 2320 x L 4400
Air Velocity 1,73 m/s	Filter 2 Bag Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 2792 kg
Fan Model RLM E6-7180	Filter 3 Activated Carbon Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
		Inside Sheet Material 1 mm Galvanize	Motor Power 18,5 kW
			Total Absorbed Power 15,44 kW

Specific Fan Power (SFP Total) 92,97 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,93	External Static Pressure 600 Pa
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FILTER (M1)

Model	Electrostatic Filter	Section weight	730 kg
Section length	750 mm	Pass type	Single Pass
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns 1 1/2"
Case x qty.	DE100 x 3	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Type	Plate - Cell		
Total cell qty.	9		
Pre-filter	Metalic Cassette Filter		
Total power	693 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



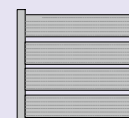
FILTER (M2)

Model	Bag Filter	Section weight	408 kg
Section length	1350 mm	Efficiency class EN779	F7
Max. Air flow rate	35700 m ³ /h @ 110 Pa	Filter frame	Galvanised steel
Design pressure drop	212 Pa	Media type	Meltblown synthetic media
		Max. Operating Temp.	80 °C
		Air velocity	2,27 m/s
		Size / qty.	9 pcs. 592x592x600mm 3 pcs. 592x287x600mm



FILTER (M3/M4)

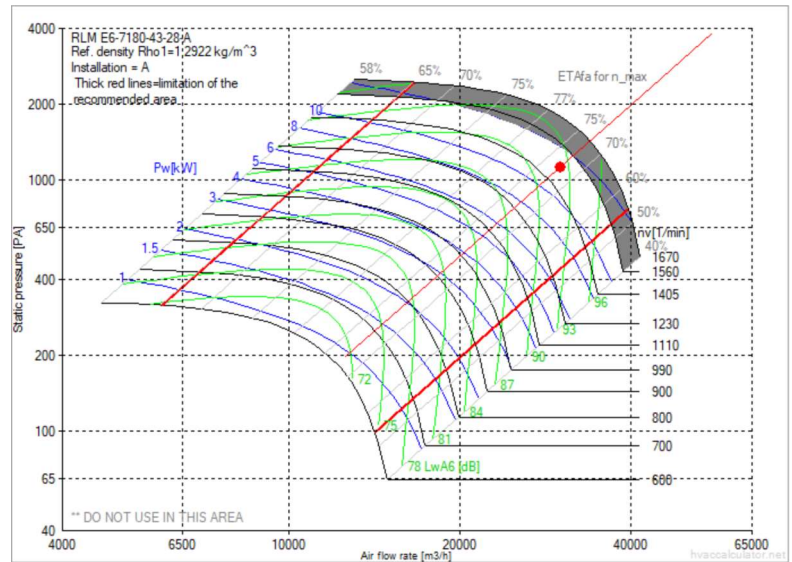
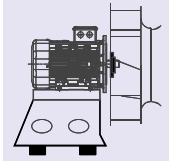
Model	Activated Carbon	Section weight	899 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	55440 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	254 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	168 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	672 kg		



DEC ECO 300 Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
30000 m ³ /h	AC-GM 180 M-4	Nicotra-Gebhardt-RLM E6-7180-43-28-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
526 Pa	18,5 kW/3P/380V/50V-Hz	16,28%	1450 mm
External Static Pressure	Motor Speed	Section Weight	
600 Pa	1500 (1455) rpm	755 kg	
Total Static Pressure	Fan Bush Number		
1126 Pa	2517		
Total Pressure	Motor Shaft Diameter		
1234 Pa	Ø48 mm		
Total / Static Efficiency	Absorbed Power With VFD		
80,00 / 73,00 %	14,75 kW		
Motor / Inverter Efficiency	Running Frequency		
90,10 / 97,00 %	50,68 Hz (Max. 53,42 Hz)		
Shaft Power / Absorbed Power	Air Density		
12,9 / 14,32 kW	1,2 kg/m ³		
Fan Speed	Electrical Current		
1480 rpm (Max. 1560 rpm)	22,41 A (Max. 32,13 A)		
Specific Fan Power (SFPe int)			
92,97 W/(m ³ /s)			



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	86,0	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Inlet Side	86,0	91,0	86,0	83,0	81,0	79,0	77,0	74,0	87,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

18,5 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag dirtiness info
- Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC ECO 300

Technical Specifications

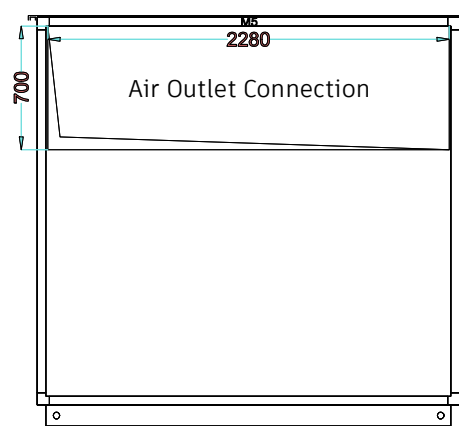
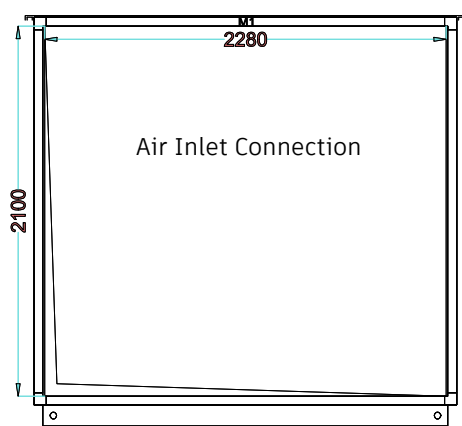
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	72,0	60,0	56,0	53,0	50,0	45,0	37,0	61,5	dBA
Air Outlet Induct Sound Power Level	91,0	87,0	87,0	87,0	87,0	82,0	79,0	92,0	dBA
Air Inlet Induct Sound Power Level	72,0	67,0	64,0	62,0	64,0	62,0	59,0	70,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

30000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 2280 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

30000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 2280 mm x H 700 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

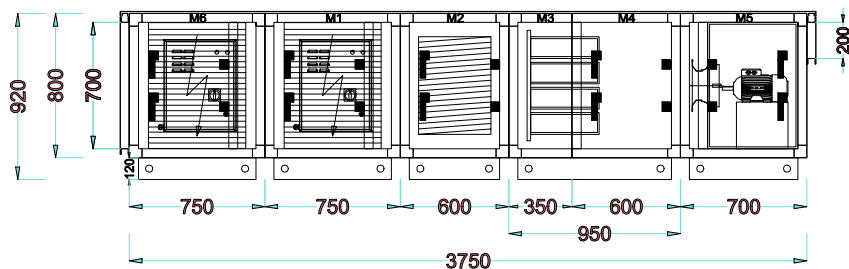
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OPTIONS (non-standard)

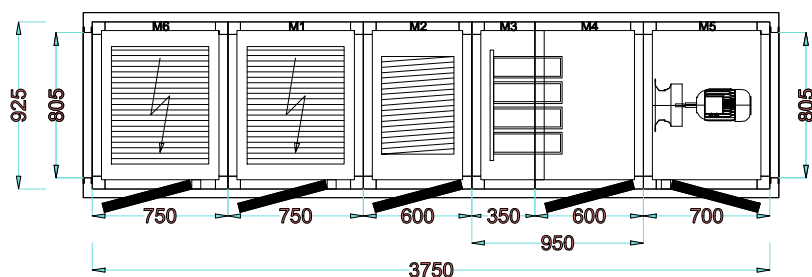
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC MED 025 Technical Specifications

RIGHT VIEW



TOP VIEW

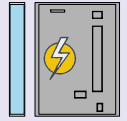


GENERAL SPECIFICATIONS

Airflow 3000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 925 x H 920 x L 3750
Air Velocity 1,44 m/s	Filter 2 Electrostatic Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 820 kg
Fan Model RLM E6-2831	Filter 3 UVC Ozone Chamber	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 Activated Carbon Filter	Inside Sheet Material 1 mm Galvanize	Motor Power 1,5 kW
			Total Absorbed Power 2,34 kW
Specific Fan Power (SFP Total) 247,2 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,93	External Static Pressure 400 Pa

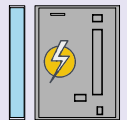
FILTER (M6)

Model	Electrostatic Filter	Section weight	167 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	3300 m ³ /h	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE30	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	1		
Pre-filter	Metalic Cassette Filter		
Total power	77 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	162 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	3300 m ³ /h	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE30	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	1		
Pre-filter	Metalic Cassette Filter		
Total power	77 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



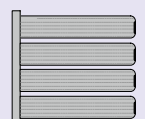
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	143 kg
Section length	600 mm	Ballast type	D-PH1-800
Max. Air flow rate	3000 m ³ /h	Ballast qty.	4
Design pressure drop	80 Pa	Total power	164 W
Case x qty.	DOZ-30-4A	Voltage	230V - 50Hz
Lamp type	D-GPH843	Rated life	9000 hours
Lamp qty.	4		
Tube diameter	15mm		
Arc length	762mm		



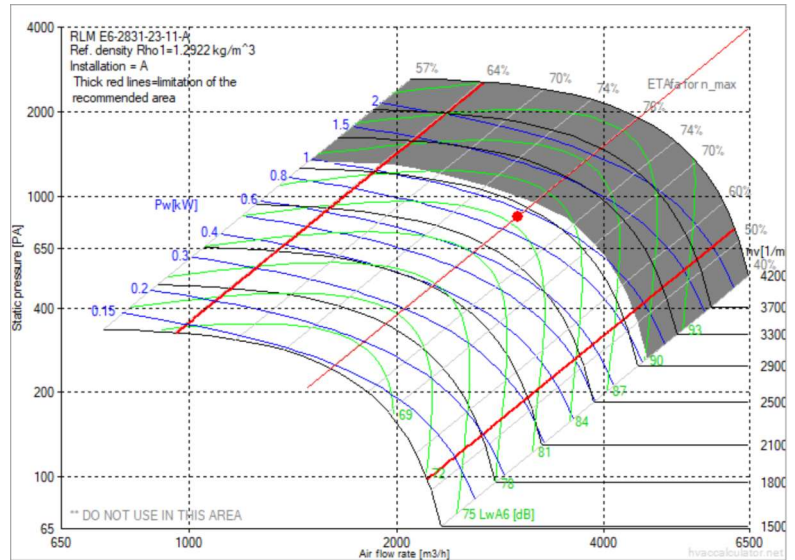
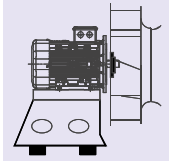
FILTER (M3/M4)

Model	Activated Carbon	Section weight	197 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	5280 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	259 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	16 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	64 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
5000 m ³ /h	AC-AGM 90 S-2	Nicotra-Gebhardt-RLM E6-2831-23-11-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
449 Pa	1,5 kW/3P/380V/50V-Hz	17,4 %	700 mm
External Static Pressure	Motor Speed	Section Weight	
400 Pa	3000 (2835) rpm	150 kg	
Total Static Pressure	Fan Bush Number		
849 Pa	1610		
Total Pressure	Motor Shaft Diameter		
891 Pa	Ø24 mm		
Total / Static Efficiency			
79,00 / 76,00 %			
Motor / Invertor Efficiency			
79,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
0,94 / 1,18 kW	1,22 kW		
Fan Speed	Running Frequency		
2802 rpm (Max. 2990 rpm)	49,42 Hz (Max. 52,73 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
247,2 W/(m ³ /s)	1,85 A (Max. 2,96 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	75,0	72,0	76,0	72,0	76,0	76,0	75,0	68,0	82,0	dBA
Inlet Side	67,0	67,0	76,0	73,0	72,0	68,0	68,0	62,0	77,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

1,5 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

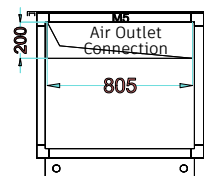
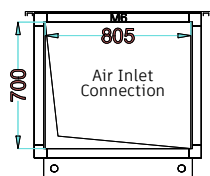
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	53,0	49,0	41,0	42,0	42,0	38,0	26,0	48,5	dBA
Air Outlet Induct Sound Power Level	72,0	76,0	72,0	76,0	76,0	75,0	68,0	82,0	dBA
Air Inlet Induct Sound Power Level	43,0	52,0	49,0	48,0	49,0	49,0	43,0	55,5	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

3000 m³/h

Air Velocity

1,48 m/s

Dimensions

W 805 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

3000 m³/h

Air Velocity

5,18 m/s

Dimensions

W 805 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

No

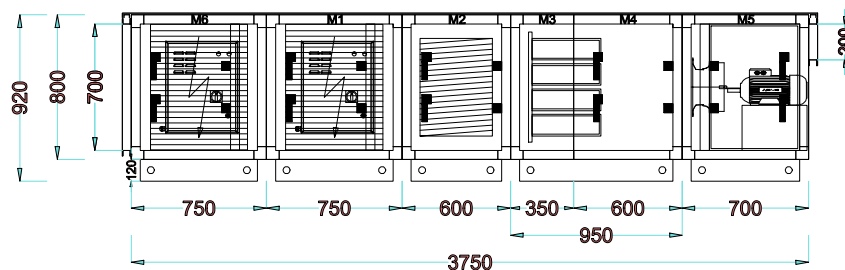
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

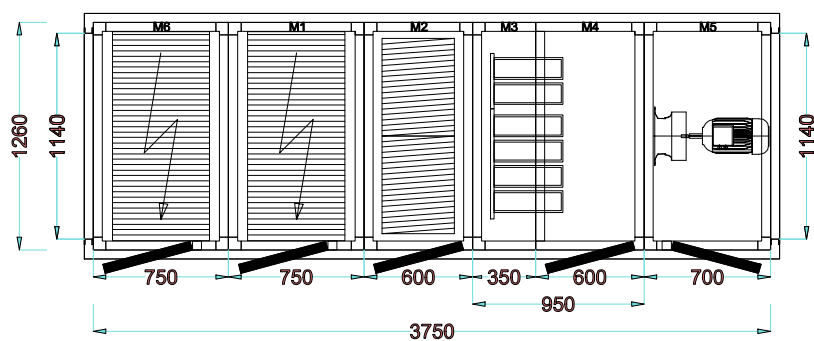
DEC MED 050

Technical Specifications

RIGHT VIEW



TOP VIEW

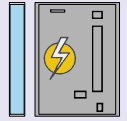


GENERAL SPECIFICATIONS

Airflow 5000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 920 x L 3750
Air Velocity 1,71 m/s	Filter 2 Electrostatic Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1165 kg
Fan Model RLM E6-3135	Filter 3 UVC Ozone Chamber	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 Activated Carbon Filter	Inside Sheet Material 1 mm Galvanize	Motor Power 3 kW
			Total Absorbed Power 2,35 kW
Specific Fan Power (SFP Total) 235,3 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,91	External Static Pressure 450 Pa

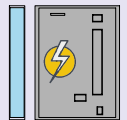
FILTER (M6)

Model	Electrostatic Filter	Section weight	212 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	6600 m ³ /h	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE60	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	2		
Pre-filter	Metalic Cassette Filter		
Total power	154 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	208 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	6600 m ³ /h	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE60	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	2		
Pre-filter	Metalic Cassette Filter		
Total power	154 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



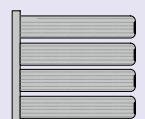
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	212 kg
Section length	600 mm	Ballast type	D-PH1-800
Max. Air flow rate	6000 m ³ /h	Ballast qty.	8
Design pressure drop	80 Pa	Total power	328 W
Case x qty.	DOZ-60-8A	Voltage	230V - 50Hz
Lamp type	D-GPH843	Rated life	9000 hours
Lamp qty.	8		
Tube diameter	15mm		
Arc length	762mm		



FILTER (M3/M4)

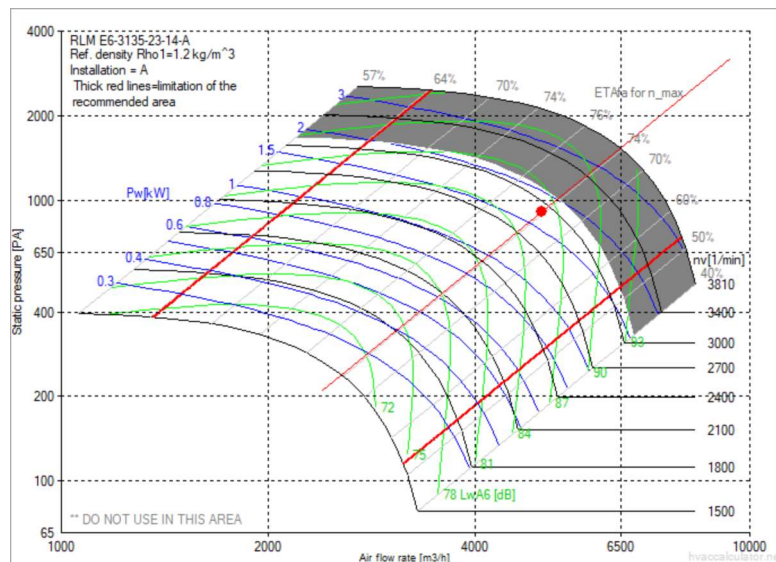
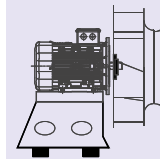
Model	Activated Carbon	Section weight	348 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	7920 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	24 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	96 kg		



DEC MED 050 Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
5000 m ³ /h	AC-AGM 100 L-2	Nicotra-Gebhardt-RLM E6-3135-23-14-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
462 Pa	3 kW/3P/380V/50V-Hz	27,91 %	700 mm
External Static Pressure	Motor Speed	Section Weight	
450 Pa	3000 (2850) rpm	185 kg	
Total Static Pressure	Fan Bush Number		
912 Pa	1610		
Total Pressure	Motor Shaft Diameter		
980 Pa	Ø28 mm		
Total / Static Efficiency			
79,00 / 74,00 %			
Motor / Invertor Efficiency			
83,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
1,72 / 2,07 kW	2,13 kW		
Fan Speed	Running Frequency		
2934 rpm (Max. 3090 rpm)	51,47 Hz (Max. 54,21 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
235,3 W/(m ³ /s)	3,24 A (Max. 5,64 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	81,0	78,0	83,0	78,0	81,0	78,0	79,0	72,0	86,0	dBA
Inlet Side	73,0	72,0	83,0	79,0	73,0	71,0	70,0	63,0	81,0	dBA

*The fan system effect is taken into account in the fan performance
*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
3 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC MED 050

Technical Specifications

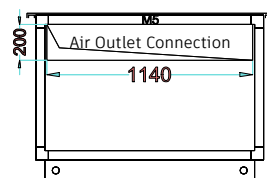
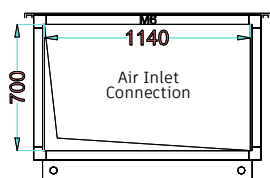
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	59,0	56,0	47,0	47,0	44,0	42,0	30,0	53,5	dBA
Air Outlet Induct Sound Power Level	78,0	83,0	78,0	81,0	78,0	79,0	72,0	85,5	dBA
Air Inlet Induct Sound Power Level	48,0	59,0	55,0	49,0	52,0	51,0	44,0	59,5	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

5000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

5000 m³/h

Air Velocity

6,09 m/s

Dimensions

W 1140 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

No

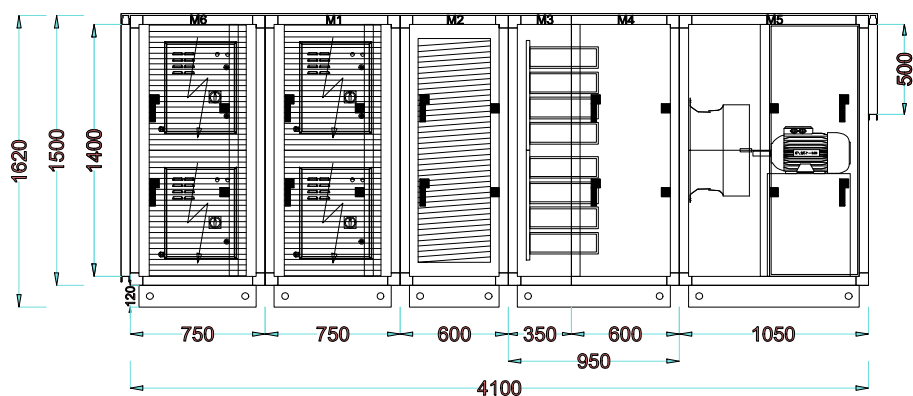
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

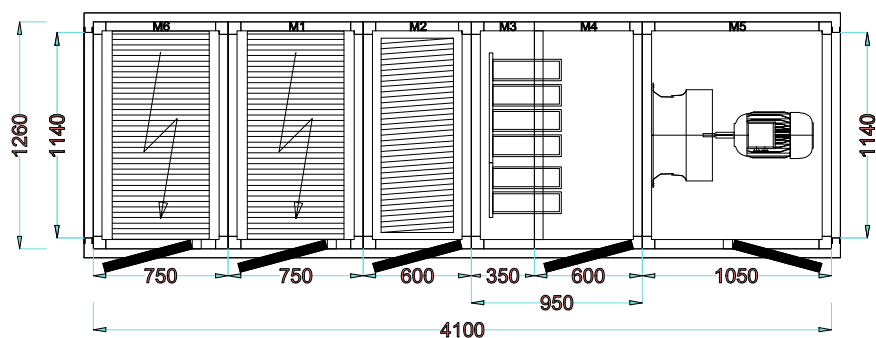
DEC MED 100

Technical Specifications

RIGHT VIEW



TOP VIEW



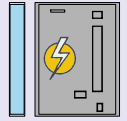
GENERAL SPECIFICATIONS

Airflow 10000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 1620 x L 4100
Air Velocity 1,71 m/s	Filter 2 Electrostatic Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1539 kg
Fan Model RLM E6-5663	Filter 3 UVC Ozone Chamber	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 Activated Carbon Filter	Inside Sheet Material 1 mm Galvanize	Motor Power 5,5 kW
			Total Absorbed Power 4,73 kW

Specific Fan Power (SFP Total) 233 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,92	External Static Pressure 500 Pa
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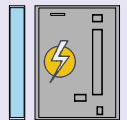
FILTER (M6)

Model	Electrostatic Filter	Section weight	330 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	12000 m ³ /h (6000 x 2)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns 1 1/2"
Case x qty.	DE60 x 2	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Type	Plate - Cell		
Total cell qty.	4		
Pre-filter	Metalic Cassette Filter		
Total power	308 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	326 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	12000 m ³ /h (6000 x 2)	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	Drain	From 0.01 microns - 10 microns 1 1/2"
Case x qty.	DE60 x 2	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Type	Plate - Cell		
Total cell qty.	4		
Pre-filter	Metalic Cassette Filter		
Total power	308 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



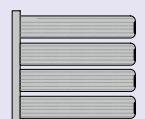
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	178 kg
Section length	600 mm	Ballast type	D-PH1-800
Max. Air flow rate	12000 m ³ /h (6000 x 2)	Ballast qty.	16
Design pressure drop	80 Pa	Total power	656 W
Case x qty.	DOZ-60-8A x 2	Voltage	230V - 50Hz
Lamp type	D-GPH843	Rated life	9000 hours
Lamp qty.	16		
Tube diameter	15mm		
Arc length	762mm		



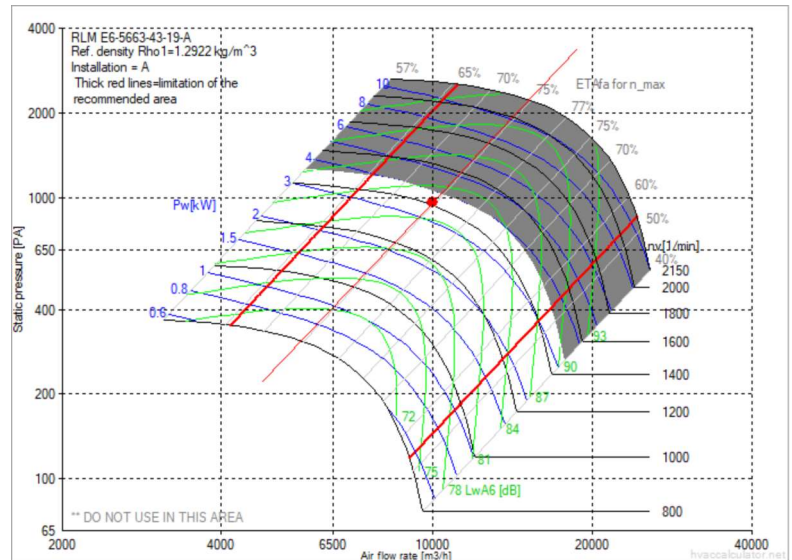
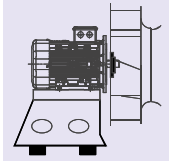
FILTER (M3/M4)

Model	Activated Carbon	Section weight	366 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	15840 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	48 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	192 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
10000 m ³ /h	AC-AGM 132 S-4	Nicotra-Gebhardt-RLM E6-5663-43-19-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
462 Pa	5,5 kW/3P/380V/50V-Hz	11,73 %	1050 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	1500 (1430) rpm	338 kg	
Total Static Pressure	Fan Bush Number		
962 Pa	2012		
Total Pressure	Motor Shaft Diameter		
992 Pa	Ø38 mm		
Total / Static Efficiency			
77,00 / 75,00 %			
Motor / Invertor Efficiency			
86,20 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
3,58 / 4,15 kW	4,28 kW		
Fan Speed	Running Frequency		
1412 rpm (Max. 1480 rpm)	49,37 Hz (Max. 51,75 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
233 W/(m ³ /s)	6,50 A (Max. 9,99 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	76,0	81,0	77,0	77,0	77,0	74,0	72,0	69,0	82,0	dBA
Inlet Side	73,0	79,0	76,0	73,0	71,0	69,0	67,0	64,0	77,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
5,5 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC MED 100

Technical Specifications

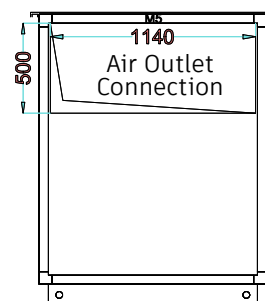
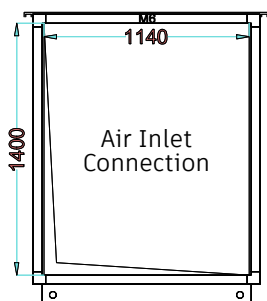
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	62,0	50,0	46,0	43,0	40,0	35,0	27,0	51,5	dBA
Air Outlet Induct Sound Power Level	81,0	77,0	77,0	77,0	74,0	72,0	69,0	82,0	dBA
Air Inlet Induct Sound Power Level	55,0	52,0	49,0	47,0	50,0	48,0	45,0	55,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

10000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 1400 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

10000 m³/h

Air Velocity

4,87 m/s

Dimensions

W 1140 mm x H 500 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

No

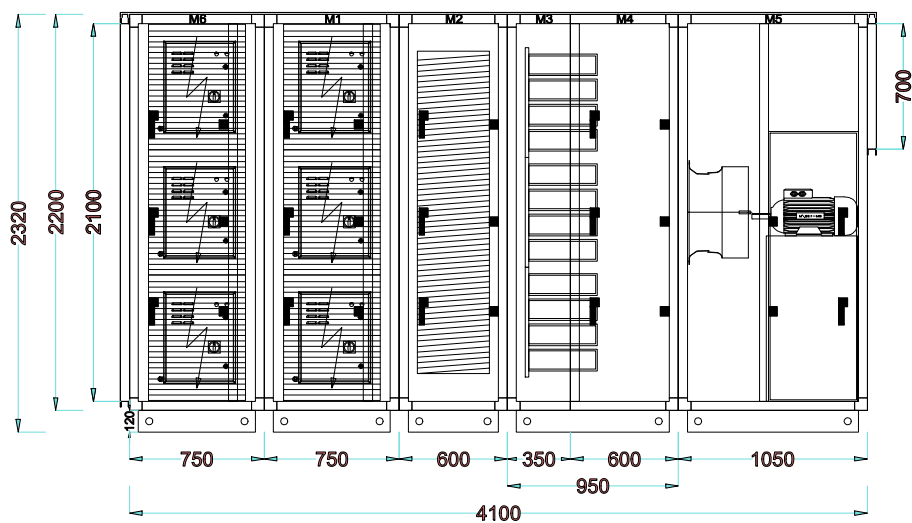
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

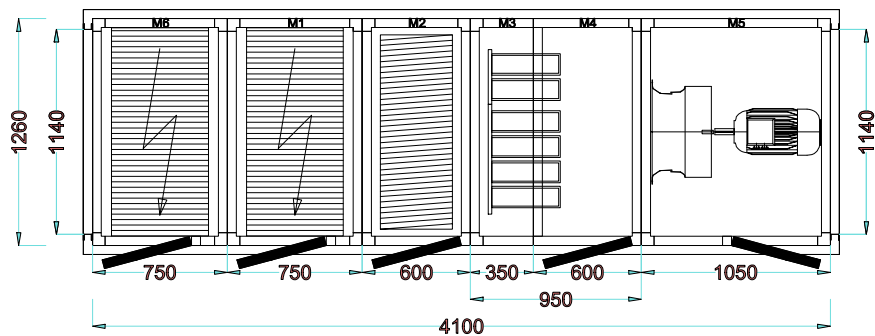
DEC MED 150

Technical Specifications

RIGHT VIEW



TOP VIEW



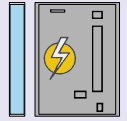
GENERAL SPECIFICATIONS

Airflow 15000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 2320 x L 4100
Air Velocity 1,71 m/s	Filter 2 Electrostatic Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1975 kg
Fan Model RLM E6-5663	Filter 3 UVC Ozone Chamber	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 Activated Carbon Filter	Inside Sheet Material 1 mm Galvanize	Motor Power 7,5 kW
			Total Absorbed Power 6,95 kW

Specific Fan Power (SFP Total) 218,4 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,93	External Static Pressure 500 Pa
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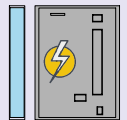
FILTER (M6)

Model	Electrostatic Filter	Section weight	446 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	18000 m ³ /h (6000 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE60 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	462 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	441 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	18000 m ³ /h (6000 x 3)	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE60 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	462 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



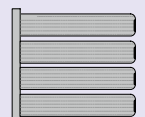
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	198 kg
Section length	600 mm	Ballast type	D-PH1-800
Max. Air flow rate	15000 m ³ /h (3000 x 5)	Ballast qty.	20
Design pressure drop	80 Pa	Total power	820 W
Case x qty.	DOZ-30-4A x 5	Voltage	230V - 50Hz
Lamp type	D-GPH843	Rated life	9000 hours
Lamp qty.	20		
Tube diameter	15mm		
Arc length	762mm		



FILTER (M3/M4)

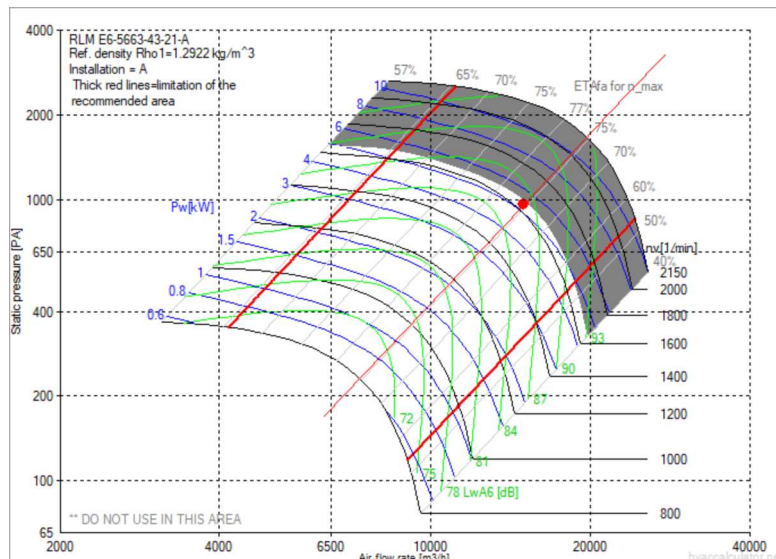
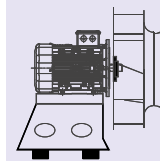
Model	Activated Carbon	Section weight	485 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	23760 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	72 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	288 kg		



DEC MED 150 Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
15000 m ³ /h	AC-AGM 132 M-4	Nicotra-Gebhardt-RLM E6-5663-43-21-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
462 Pa	7,5 kW/3P/380V/50V-Hz	3,19 %	1050 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	1500 (1430) rpm	405 kg	
Total Static Pressure	Fan Bush Number		
962 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1030 Pa	Ø38 mm		
Total / Static Efficiency			
81,00 / 75,00 %			
Motor / Invertor Efficiency			
87,40 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
5,33 / 6,1 kW	6,28 kW		
Fan Speed	Running Frequency		
1631 rpm (Max. 1650 rpm)	57,03 Hz (Max. 57,69 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
218,4 W/(m ³ /s)	9,54 A (Max. 13,43 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	80,0	85,0	81,0	81,0	81,0	78,0	76,0	73,0	86,0	dBA
Inlet Side	77,0	83,0	80,0	77,0	75,0	73,0	71,0	68,0	81,0	dBA

*The fan system effect is taken into account in the fan performance
 *The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
7,5 kW
Main Controller (PLC)
Yes

- Standard Specifications**
- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
 - Variable fan speed control
 - Electrostatic Filter/Bag/EPA dirtiness info
 - UVC/Activated carbon filter integrity monitor (Time Counter)
 - Door switch info
 - Adaptation to fire safety system / fire mode
 - Air volume set, monitoring and control from the room HMI Box
 - Detailed daily and weekly time scheduling

DEC MED 150

Technical Specifications

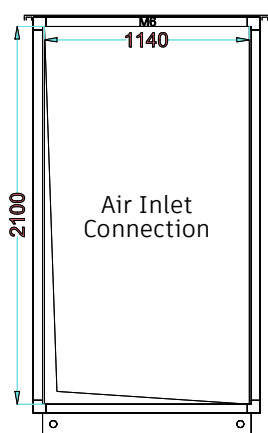
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	66,0	54,0	50,0	47,0	44,0	39,0	31,0	55,5	dBA
Air Outlet Induct Sound Power Level	85,0	81,0	81,0	81,0	78,0	76,0	73,0	86,0	dBA
Air Inlet Induct Sound Power Level	59,0	56,0	53,0	51,0	54,0	52,0	49,0	59,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

15000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 2100 mm

Connection Type

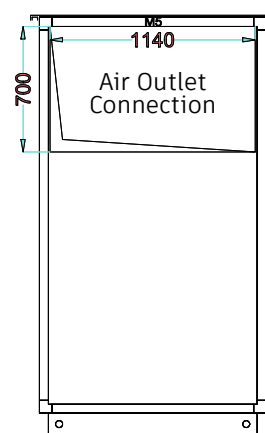
Flange

Pressure Drop

0 Pa

Control

No



Airflow

15000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

10 Pa

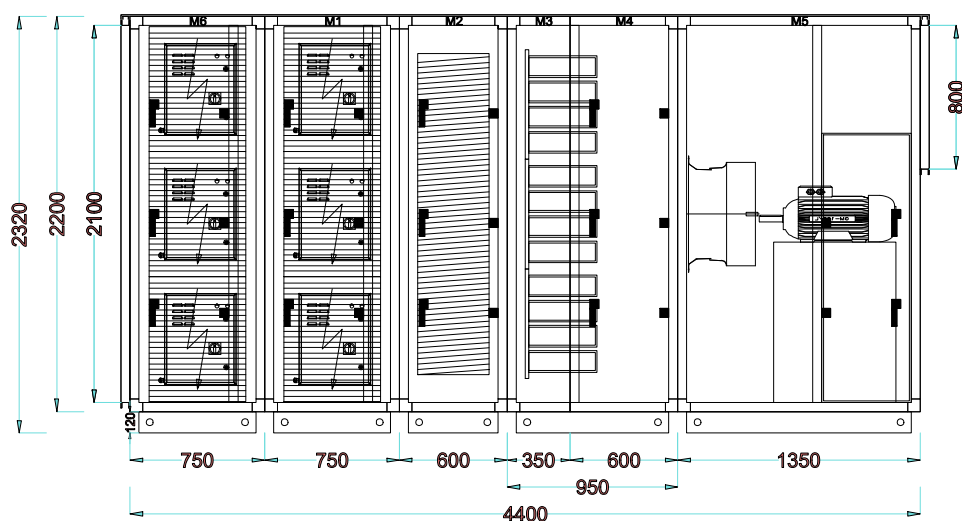
Control

No

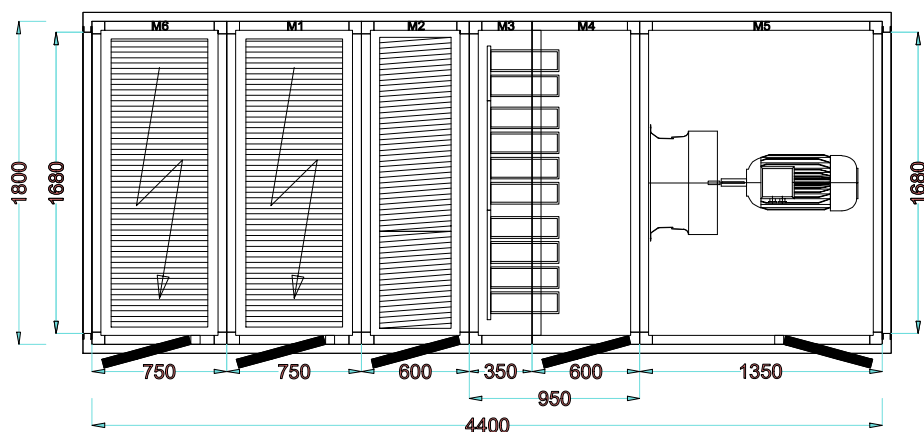
OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

RIGHT VIEW



TOP VIEW



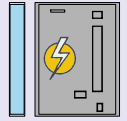
GENERAL SPECIFICATIONS

Airflow 24000 m ³ /h	Filter 1 Electrostatic Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1800 x H 2320 x L 4400
Air Velocity 1,87 m/s	Filter 2 Electrostatic Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 2742 kg
Fan Model RLM E6-6371	Filter 3 UVC Ozone Chamber	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 Activated Carbon Filter	Inside Sheet Material 1 mm Galvanize	Motor Power 15 kW
			Total Absorbed Power 12,72 kW

Specific Fan Power (SFP Total) 224,4 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 1	External Static Pressure 600 Pa
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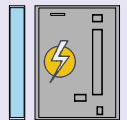
FILTER (M6)

Model	Electrostatic Filter	Section weight	587 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	24900 m ³ /h (8300 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE80 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	546 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	582 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	24900 m ³ /h (8300 x 3)	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE80 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	546 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



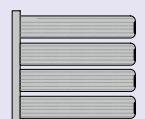
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	247 kg
Section length	600 mm	Ballast type	D-PH2-2/75
Max. Air flow rate	24000 m ³ /h (8000 x 3)	Ballast qty.	24
Design pressure drop	25 Pa	Total power	1320 W
Case x qty.	DOZ-80-8B x 3	Voltage	230V - 50Hz
Lamp type	D-GPH1148	Rated life	9000 hours
Lamp qty.	24		
Tube diameter	15mm		
Arc length	1068mm		



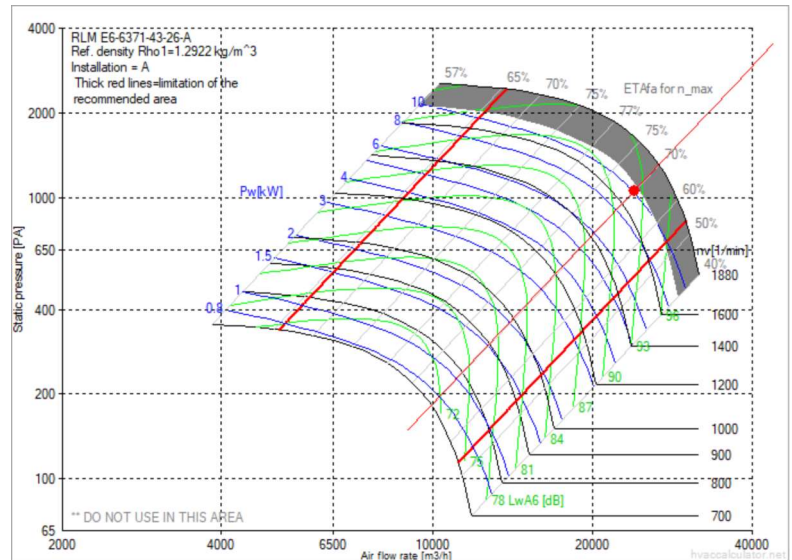
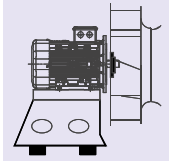
FILTER (M3/M4)

Model	Activated Carbon	Section weight	690 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	39600 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	266 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	120 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	480 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
24000 m ³ /h	AC-GM 160 L-4	Nicotra-Gebhardt-RLM E6-6371-43-26-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
456 Pa	15 kW/3P/380V/50V-Hz	8,91%	1350 mm
External Static Pressure	Motor Speed	Section Weight	
600 Pa	1500 (1460) rpm	636 kg	
Total Static Pressure	Fan Bush Number		
1056 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1166 Pa	Ø42 mm		
Total / Static Efficiency			
77,00 / 70,00 %			
Motor / Invertor Efficiency			
89,50 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
10,1 / 11,28 kW	11,62 kW		
Fan Speed	Running Frequency		
1686 rpm (Max. 1710 rpm)	57,74 Hz (Max. 58,56 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
224,4 W/(m ³ /s)	17,66 A (Max. 26,23 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	86,0	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Inlet Side	83,0	89,0	86,0	83,0	81,0	79,0	77,0	74,0	87,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
15 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

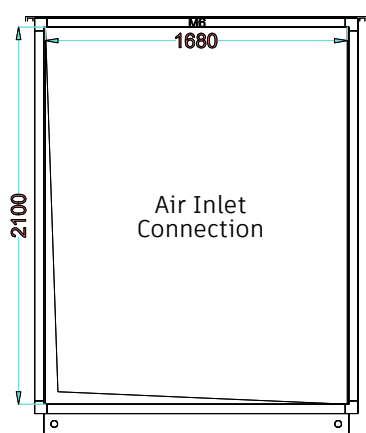
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	72,0	60,0	56,0	53,0	50,0	45,0	37,0	61,5	dBA
Air Outlet Induct Sound Power Level	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Air Inlet Induct Sound Power Level	65,0	62,0	59,0	57,0	60,0	58,0	55,0	65,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

24000 m³/h

Air Velocity

1,89 m/s

Dimensions

W 1680 mm x H 2100 mm

Connection Type

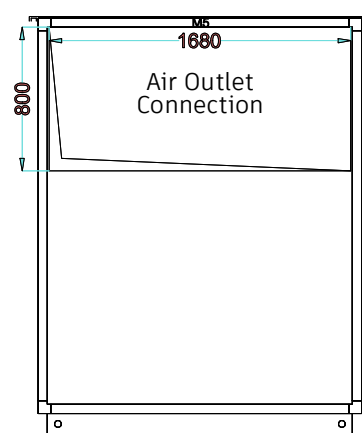
Flange

Pressure Drop

0 Pa

Control

No



Airflow

24000 m³/h

Air Velocity

4,96 m/s

Dimensions

W 1680 mm x H 800 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

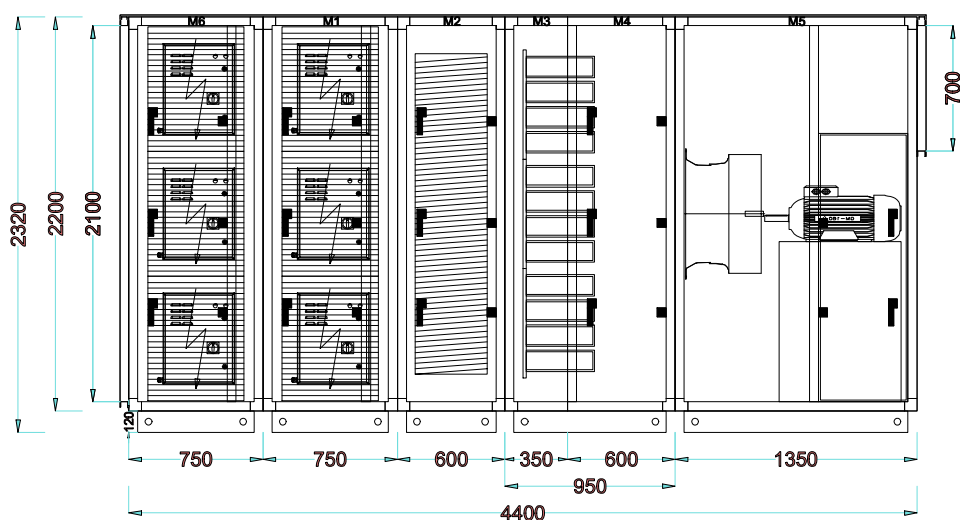
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OPTIONS (non-standard)

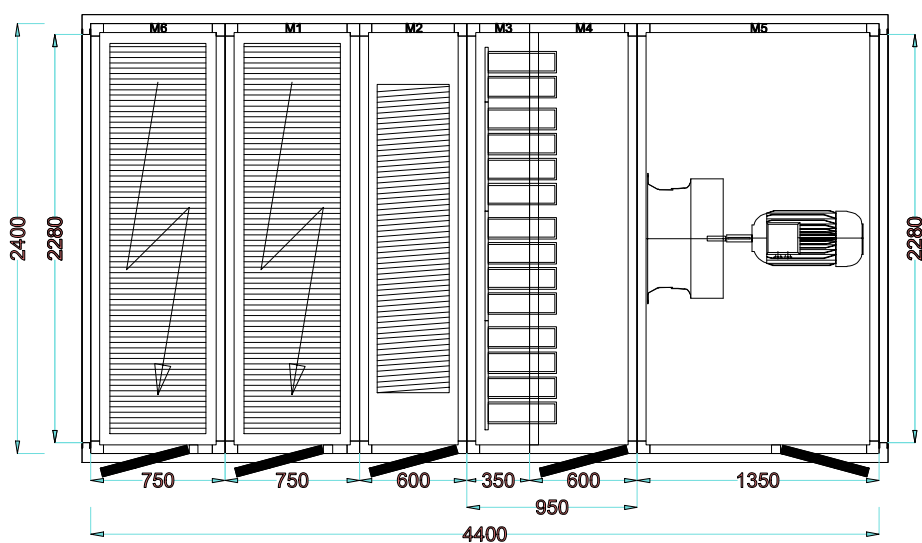
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC MED 300 Technical Specifications

RIGHT VIEW



TOP VIEW



GENERAL SPECIFICATIONS

Airflow

30000 m³/h

Air Velocity

1,73 m/s

Fan Model

RLM E6-7180

Filter 1

Electrostatic Filter

Filter 2

Electrostatic Filter

Filter 3

UVC Ozone Chamber

Filter 4

Activated Carbon Filter

Model / Frame

50x50 mm

Insulation Material

50 mm Rockwool 70 kg/m³

Outside Sheet Material

0,8 mm Painted Galvanize

Inside Sheet Material

1 mm Galvanize

Dimensions (mm) (Size+Pedestal)

W 2400 x H 2320 x L 4400

Total Weight

3333 kg

Base Height

120 mm

Motor Power

15 kW

Total Absorbed Power

15,08 kW

Specific Fan Power (SFP Total)

216 W/(m³/s)

ErP Code

NRVU-UVU

fs-Pref (W-S)

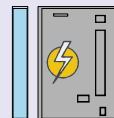
0,98

External Static Pressure

600 Pa

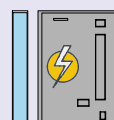
FILTER (M6)

Model	Electrostatic Filter	Section weight	730 kg
Section length	750 mm	Pass type	First Pass of Double Pass
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE100 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	9		
Pre-filter	Metalic Cassette Filter		
Total power	693 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M1)

Model	Electrostatic Filter	Section weight	721 kg
Section length	750 mm	Pass type	Second Pass of Double Pass
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Efficiency	98% double pass DOP Test 99% double pass ASHRAE 52.2-2012
Design pressure drop	50 Pa	From 0.01 microns - 10 microns	
Case x qty.	DE100 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	9		
Pre-filter	Metalic Cassette Filter		
Total power	693 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M2)

Model	UVC Ozone Chamber	Section weight	247 kg
Section length	600 mm	Ballast type	D-PH2-2/75
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Ballast qty.	30
Design pressure drop	25 Pa	Total power	1650 W
Case x qty.	DOZ-100-10B x 3	Voltage	230V - 50Hz
Lamp type	D-GPH1148	Rated life	9000 hours
Lamp qty.	30		
Tube diameter	15mm		
Arc length	1068mm		



FILTER (M3/M4)

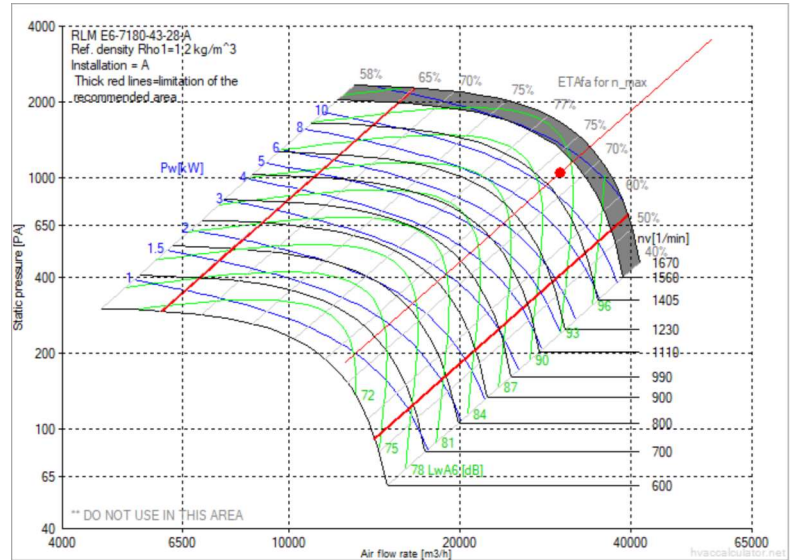
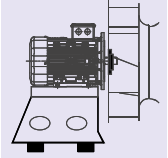
Model	Activated Carbon	Section weight	899 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	55440 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	254 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	168 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	588 kg		



DEC MED 300 Technical Specifications

EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
30000 m ³ /h	AC-GM 160 L-4	Nicotra-Gebhardt-RLM E6-7180-43-28-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
444 Pa	15 kW/3P/380V/50V-Hz	26,05%	1350 mm
External Static Pressure	Motor Speed	Section Weight	
600 Pa	1500 (1460) rpm	735 kg	
Total Static Pressure	Fan Bush Number		
1044 Pa	2517		
Total Pressure	Motor Shaft Diameter		
1144 Pa	Ø42 mm		
Total / Static Efficiency			
80,00 / 73,00 %			
Motor / Invertor Efficiency			
89,50 / 97,00 %			
Shaft Power / Absorbed Power	Absorbed Power With VFD		
11,9 / 13,3 kW	13,69 kW		
Fan Speed	Running Frequency		
1479 rpm (Max. 1560 rpm)	50,65 Hz (Max. 53,42 Hz)		
	Air Density		
	1,2 kg/m ³		
Specific Fan Power (SFPe int)	Electrical Current		
216 W/(m ³ /s)	20,81 A (Max. 26,23 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	86,0	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Inlet Side	86,0	91,0	86,0	83,0	81,0	79,0	77,0	74,0	87,0	dBA

*The fan system effect is taken into account in the fan performance
*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
15 kW
Main Controller (PLC)
Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC MED 300

Technical Specifications

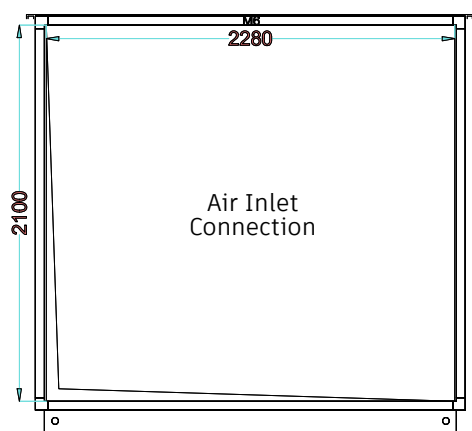
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	72,0	60,0	56,0	53,0	50,0	45,0	37,0	61,5	dBA
Air Outlet Induct Sound Power Level	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Air Inlet Induct Sound Power Level	67,0	62,0	62,0	57,0	60,0	58,0	55,0	65,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

30000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 2280 mm x H 2100 mm

Connection Type

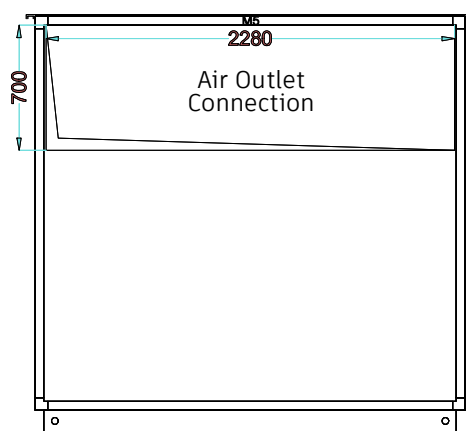
Flange

Pressure Drop

0 Pa

Control

No



Airflow

30000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 2280 mm x H 700 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

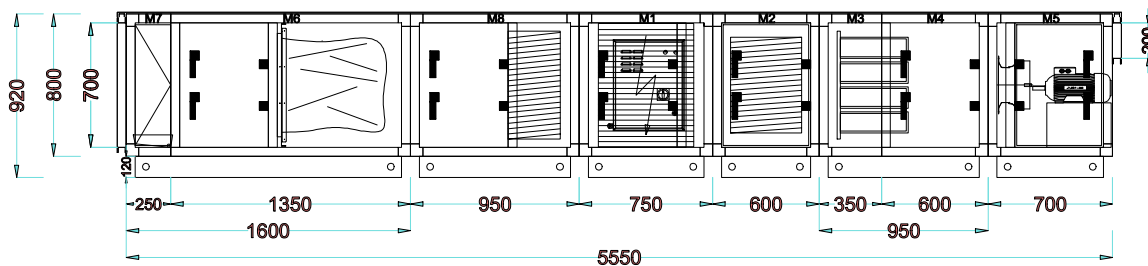
No

OPTIONS (non-standard)

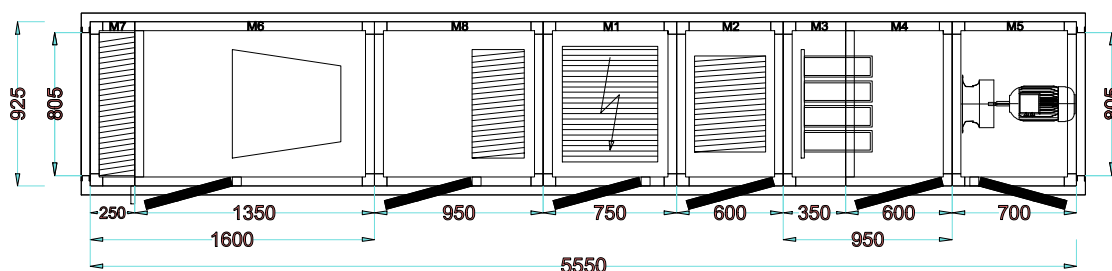
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 025 Technical Specifications

RIGHT VIEW



TOP VIEW



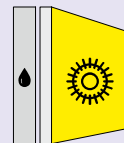
GENERAL SPECIFICATIONS

Airflow 3000 m ³ /h	Filter 1 Drop Eliminator + Bag Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 925 x H 920 x L 5550
Air Velocity 1,44 m/s	Filter 2 EPA Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 968 kg
Fan Model RLM E6-3135	Filter 3 Electrostatic Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 UVC Ozone Chamber	Inside Sheet Material 1 mm Galvanize	Motor Power 3 kW
	Filter 5 Activated Carbon Filter		Total Absorbed Power 2,79 kW

Specific Fan Power (SFP Total) 122,1 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,97	External Static Pressure 400 Pa
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FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	232 kg
Section length	1600 mm		
Max. Air flow rate	3400 m ³ /h	Bag Filter	
Design pressure drop	244 Pa	Efficiency class EN779	F7
		Filter frame	Galvanised steel
Eliminator material	Aluminium	Media type	Meltblown synthetic media
Eliminator model	ALT-55510	Max. Operating Temp.	80°C
Drain pan material	Stainless Steel	Air velocity	2,38 m/s
Drain	1 1/2"	Size / qty.	1 pcs. 592x592x600mm



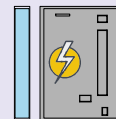
FILTER (M6)

Model	Epa Filter	Section weight	125 kg
Section length	950 mm		
Max. Air flow rate	3400 m ³ /h	Air velocity	2,38 m/s
Design pressure drop	416 Pa	Size / qty.	1 pcs. 610x610x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	165 kg
Section length	750 mm		
Max. Air flow rate	3300 m ³ /h	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test
Case x qty.	DE30		96% single pass ASHRAE 52.2-2012
Type	Plate - Cell		From 0.01 microns - 10 microns
Total cell qty.	1	Drain	1 1/2"
Pre-filter	Metalic Cassette Filter	Features	Short circuit, arc protection and auto restore PS.
Total power	77 W		BMS terminals provided
Voltage	1 ph / 220-240 V / 50Hz		Auto power cut-off when door is opened
Ionising voltages	High Voltage: 12KVdc,		Indicator LEDs for normal or wash indicator
	Low Voltage: 6KVdc		Set of Terminals for remote LED



FILTER (M2)

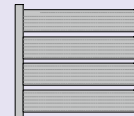
Model	UVC Ozone Chamber	Section weight	88 kg
Section length	600 mm		
Max. Air flow rate	3000 m ³ /h	Ballast type	D-PH1-800
Design pressure drop	80 Pa	Ballast qty.	4
Case x qty.	DOZ-30-4A	Total power	164 W
Lamp type	D-GPH843	Voltage	230V - 50Hz
Lamp qty.	4	Rated life	9000 hours
Tube diameter	15mm		
Arc length	762mm		



DEC PRO 025 Technical Specifications

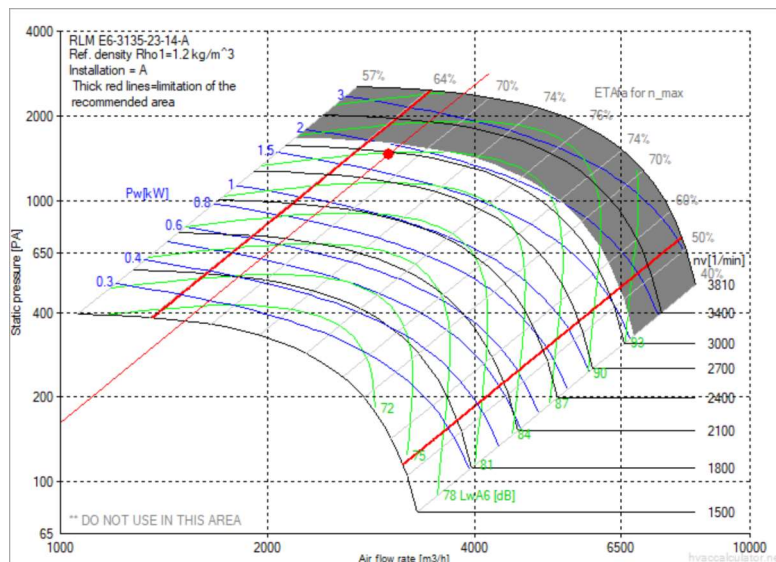
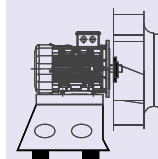
FILTER (M3)

Model	Activated Carbon	Section weight	197 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	5280 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	259 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	16 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	64 kg		



EXHAUST FAN (M5)

Air Flow 3000 m ³ /h	Motor Type AC-AGM 100 L-2	Fan Model Nicotra-Gebhardt-RLM E6-3135-23-14-A	Quantity 1
Internal Static Pressure 1059 Pa	Motor Po./Pha./Volt./Freq. 3 kW/3P/380V/50V-Hz	Power Margin 22,22%	Section Length 1250 mm
External Static Pressure 400 Pa	Motor Speed 3000 (2850) rpm		Section Weight 161 kg
Total Static Pressure 1459 Pa	Fan Bush Number 1610		
Total Pressure 1484 Pa	Motor Shaft Diameter Ø28 mm		
Total / Static Efficiency 69,00 / 68,00 %			
Motor / Inverter Efficiency 83,20 / 97,00 %			
Shaft Power / Absorbed Power 1,8 / 2,16 kW	Absorbed Power With VFD 2,23 kW		
Fan Speed 2966 rpm (Max. 3090 rpm)	Running Frequency 52,04 Hz (Max. 54,21 Hz)		
	Air Density 1,2 kg/m ³		
Specific Fan Power (SFPe int) 122,1 W/(m ³ /s)	Electrical Current 3,39 A (Max. 5,64 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	83,0	78,0	89,0	80,0	81,0	79,0	77,0	69,0	87,0	dBA
Inlet Side	72,0	73,0	87,0	81,0	74,0	73,0	70,0	63,0	83,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

3 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC PRO 025

Technical Specifications

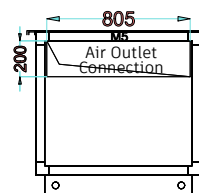
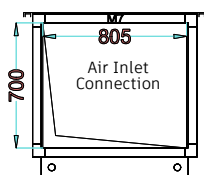
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	59,0	62,0	49,0	47,0	45,0	40,0	27,0	56,0	dBA
Air Outlet Induct Sound Power Level	78,0	89,0	80,0	81,0	79,0	77,0	69,0	87,5	dBA
Air Inlet Induct Sound Power Level	43,0	57,0	51,0	44,0	49,0	46,0	39,0	55,5	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

3000 m³/h

Air Velocity

1,48 m/s

Dimensions

W 805 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

3000 m³/h

Air Velocity

5,18 m/s

Dimensions

W 805 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

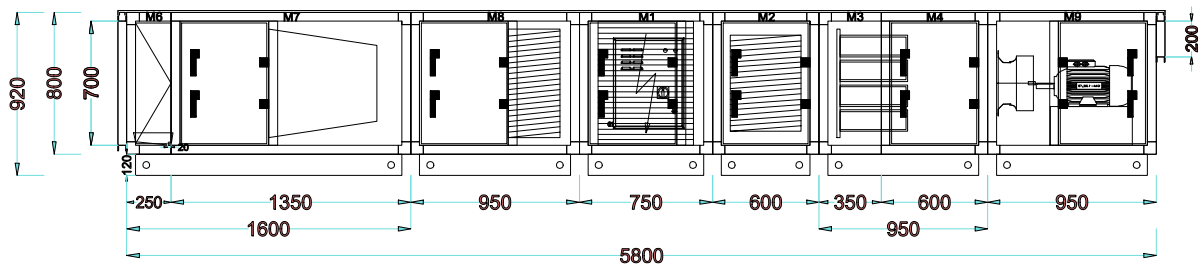
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OPTIONS (non-standard)

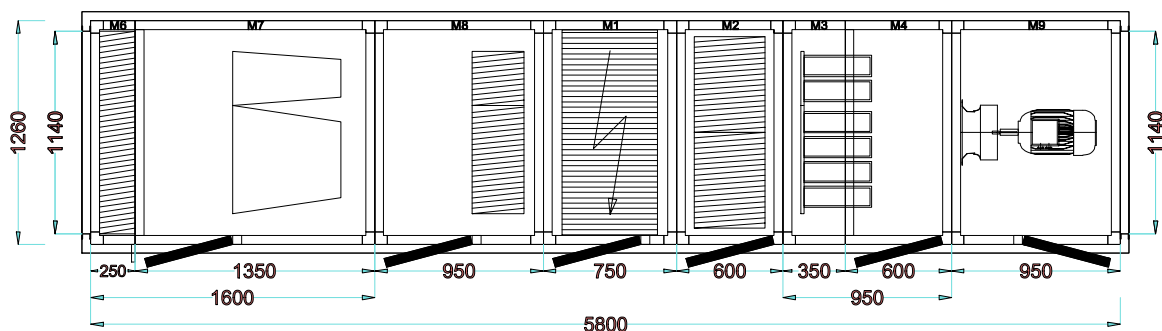
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 050 Technical Specifications

RIGHT VIEW



TOP VIEW



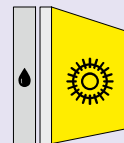
GENERAL SPECIFICATIONS

Airflow 5000 m ³ /h	Filter 1 Drop Eliminator + Bag Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 920 x L 5800
Air Velocity 1,71 m/s	Filter 2 EPA Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1157 kg
Fan Model RLM E6-3540	Filter 3 Electrostatic Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 UVC Ozone Chamber	Inside Sheet Material 1 mm Galvanize	Motor Power 5,5 kW
	Filter 5 Activated Carbon Filter		Total Absorbed Power 3,77 kW

Specific Fan Power (SFP Total) 124,8 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,92	External Static Pressure 500 Pa
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FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	284 kg
Section length	1600 mm		
Max. Air flow rate	5100 m ³ /h		
Design pressure drop	249 Pa		
		Bag Filter	
Eliminator material	Aluminium	Efficiency class EN779	F7
Eliminator model	ALT-55510	Filter frame	Galvanised steel
Drain pan material	Stainless Steel	Media type	Meltblown synthetic media
Drain	1 1/2"	Max. Operating Temp.	80 °C
		Air velocity	2,67 m/s
		Size / qty.	1 pcs. 592x592x600mm 1 pcs. 592x287x600mm



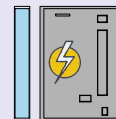
FILTER (M6)

Model	Epa Filter	Section weight	152 kg
Section length	950 mm		
Max. Air flow rate	5100 m ³ /h	Air velocity	2,67 m/s
Design pressure drop	438 Pa	Size / qty.	1 pcs. 610x610x292mm 1 pcs. 610x305x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	210 kg
Section length	750 mm		
Max. Air flow rate	6600 m ³ /h	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012 From 0.01 microns - 10 microns
Case x qty.	DE60		
Type	Plate - Cell	Drain	1 1/2"
Total cell qty.	2	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Pre-filter	Metalic Cassette Filter		
Total power	154 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M2)

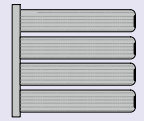
Model	UVC Ozone Chamber	Section weight	122 kg
Section length	600 mm		
Max. Air flow rate	6000 m ³ /h	Ballast type	D-PH1-800
Design pressure drop	80 Pa	Ballast qty.	8
Case x qty.	DOZ-60-8A	Total power	328 W
Lamp type	D-GPH843	Voltage	230V - 50Hz
Lamp qty.	8	Rated life	9000 hours
Tube diameter	15mm		
Arc length	762mm		



DEC PRO 050 Technical Specifications

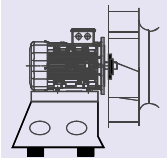
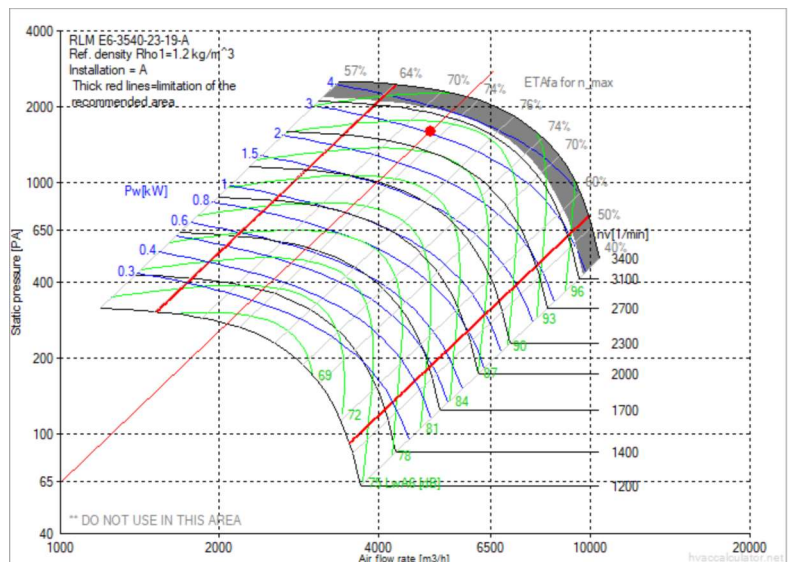
FILTER (M3)

Model	Activated Carbon	Section weight	148 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	7920 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	24 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	96 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
5000 m ³ /h	AC-GM 132 S-2A	Nicotra-Gebhardt-RLM E6-3540-23-19-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
1099 Pa	5,5 kW/3P/380V/50V-Hz	14,16%	1250 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	3000 (2870) rpm	241 kg	
Total Static Pressure	Fan Bush Number		
1599 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1642 Pa	Ø38 mm		
Total / Static Efficiency	Absorbed Power With VFD		
75,00 / 73,00 %	3,66 kW		
Motor / Inverter Efficiency	Running Frequency		
85,90 / 97,00 %	50,45 Hz (Max. 54,88 Hz)		
Shaft Power / Absorbed Power	Air Density		
3,05 / 3,55 kW	1,2 kg/m ³		
Fan Speed	Electrical Current		
2896 rpm (Max. 3150 rpm)	5,56 A (Max. 10,02 A)		
Specific Fan Power (SFP_{int})			
124,8 W/(m ³ /s)			



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	84,0	93,0	87,0	84,0	84,0	82,0	77,0	72,0	89,0	dBA
Inlet Side	81,0	91,0	86,0	82,0	79,0	76,0	74,0	68,0	85,0	dBA

*The fan system effect is taken into account in the fan performance
*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)
7" HMI Box
Variable Frequency Drive (VFD)
5,5 kW
Main Controller (PLC)
Yes

- Standard Specifications**
- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
 - Variable fan speed control
 - Electrostatic Filter/Bag/EPA dirtiness info
 - UVC/Activated carbon filter integrity monitor (Time Counter)
 - Door switch info
 - Adaptation to fire safety system / fire mode
 - Air volume set, monitoring and control from the room HMI Box
 - Detailed daily and weekly time scheduling

DEC PRO 050

Technical Specifications

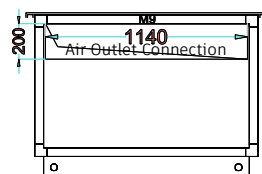
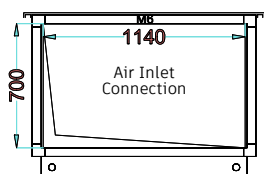
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	61,0	64,0	51,0	49,0	47,0	42,0	29,0	58,0	dBa
Air Outlet Induct Sound Power Level	80,0	91,0	82,0	83,0	81,0	79,0	71,0	89,5	dBa
Air Inlet Induct Sound Power Level	45,0	59,0	53,0	46,0	51,0	48,0	41,0	57,5	dBa

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBa

AIR CONNECTIONS



Airflow

5000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

5000 m³/h

Air Velocity

6,09 m/s

Dimensions

W 1140 mm x H 200 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

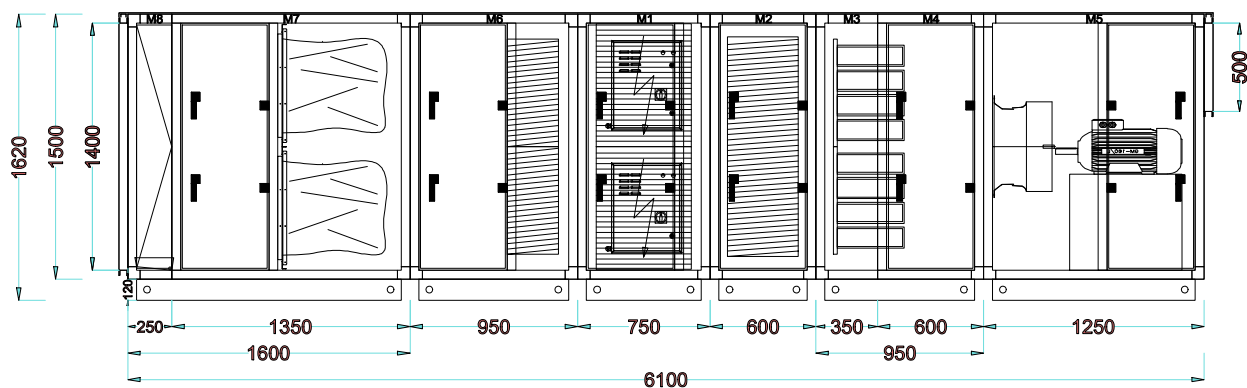
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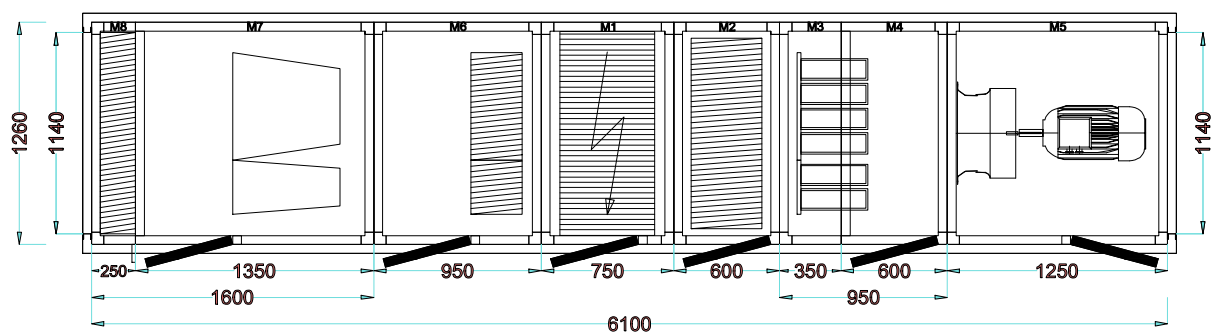
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 100 Technical Specifications

RIGHT VIEW



TOP VIEW



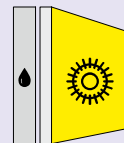
GENERAL SPECIFICATIONS

Airflow 10000 m ³ /h	Filter 1 Drop Eliminator + Bag Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 1620 x L 6100
Air Velocity 1,71 m/s	Filter 2 EPA Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 1664 kg
Fan Model RLM E6-5663	Filter 3 Electrostatic Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 UVC Ozone Chamber	Inside Sheet Material 1 mm Galvanize	Motor Power 11 kW
	Filter 5 Activated Carbon Filter		Total Absorbed Power 7,86 kW

Specific Fan Power (SFP Total) 131,5 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,82	External Static Pressure 500 Pa
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FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	275 kg
Section length	1600 mm		
Max. Air flow rate	10200 m ³ /h	Bag Filter	
Design pressure drop	249 Pa	Efficiency class EN779	F7
		Filter frame	Galvanised steel
Eliminator material	Aluminium	Media type	Meltblown synthetic media
Eliminator model	ALT-55510	Max. Operating Temp.	80 °C
Drain pan material	Stainless Steel	Air velocity	2,67 m/s
Drain	1 1/2"	Size / qty.	2 pcs. 592x592x600mm 2 pcs. 592x287x600mm



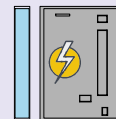
FILTER (M6)

Model	Epa Filter	Section weight	194 kg
Section length	950 mm		
Max. Air flow rate	10200 m ³ /h	Air velocity	2,67 m/s
Design pressure drop	438 Pa	Size / qty.	2 pcs. 610x610x292mm 2 pcs. 610x305x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	326 kg
Section length	750 mm		
Max. Air flow rate	13200 m ³ /h (6600 x 2)	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012 From 0.01 microns - 10 microns
Case x qty.	DE60 x 2	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	4		
Pre-filter	Metalic Cassette Filter		
Total power	308 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc,		
	Low Voltage: 6KVdc		



FILTER (M2)

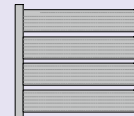
Model	UVC Ozone Chamber	Section weight	178 kg
Section length	600 mm		
Max. Air flow rate	12000 m ³ /h (6000 x 2)	Ballast type	D-PH1-800
Design pressure drop	80 Pa	Ballast qty.	16
Case x qty.	DOZ-60-8A x 2	Total power	656 W
Lamp type	D-GPH843	Voltage	230V - 50Hz
Lamp qty.	16	Rated life	9000 hours
Tube diameter	15mm		
Arc length	762mm		



DEC PRO 100 Technical Specifications

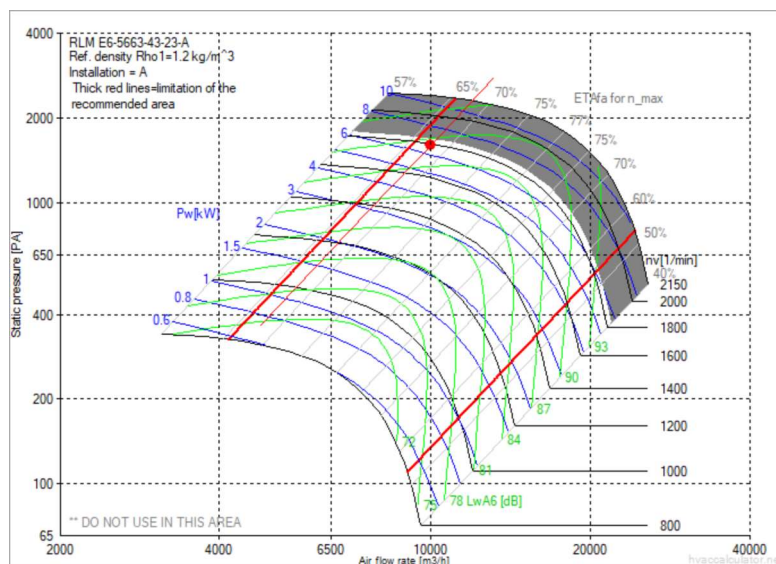
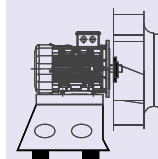
FILTER (M3)

Model	Activated Carbon	Section weight	256 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	15840 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	48 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	192 kg		



EXHAUST FAN (M5)

Air Flow	Motor Type	Fan Model	Quantity
10000 m ³ /h	AC-GM 160 M-4	Nicotra-Gebhardt-RLM E6-5663-43-23-A	1
Internal Static Pressure	Motor Po./Pha./Volt./Freq.	Power Margin	Section Length
1099 Pa	11 kW/3P/380V/50V-Hz	14,16%	1250 mm
External Static Pressure	Motor Speed	Section Weight	
500 Pa	1500 (1455) rpm	435 kg	
Total Static Pressure	Fan Bush Number		
1599 Pa	2012		
Total Pressure	Motor Shaft Diameter		
1627 Pa	Ø42 mm		
Total / Static Efficiency	Absorbed Power With VFD		
69,00 / 68,00 %	7,64 kW		
Motor / Inverter Efficiency	Running Frequency		
88,60 / 97,00 %	61,48 Hz (Max. 62,89 Hz)		
Shaft Power / Absorbed Power	Air Density		
6,57 / 7,42 kW	1,2 kg/m ³		
Fan Speed	Electrical Current		
1789 rpm (Max. 1830 rpm)	11,60 A (Max. 26,23 A)		
Specific Fan Power (SFPe int)			
131,5 W/(m ³ /s)			



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	84,0	93,0	87,0	84,0	84,0	82,0	77,0	72,0	89,0	dBA
Inlet Side	81,0	91,0	86,0	82,0	79,0	76,0	74,0	68,0	85,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

11 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC PRO 100

Technical Specifications

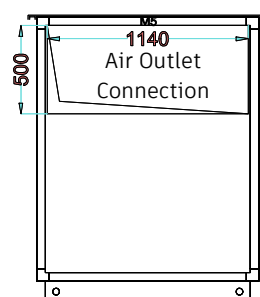
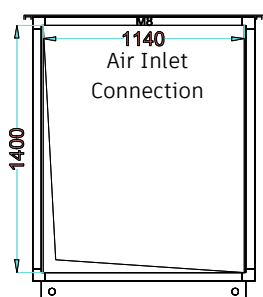
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	74,0	60,0	53,0	50,0	48,0	40,0	30,0	60,5	dBA
Air Outlet Induct Sound Power Level	93,0	87,0	84,0	84,0	82,0	77,0	72,0	89,0	dBA
Air Inlet Induct Sound Power Level	61,0	56,0	52,0	49,0	52,0	50,0	44,0	58,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

10000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 1400 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

10000 m³/h

Air Velocity

4,87 m/s

Dimensions

W 1140 mm x H 500 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

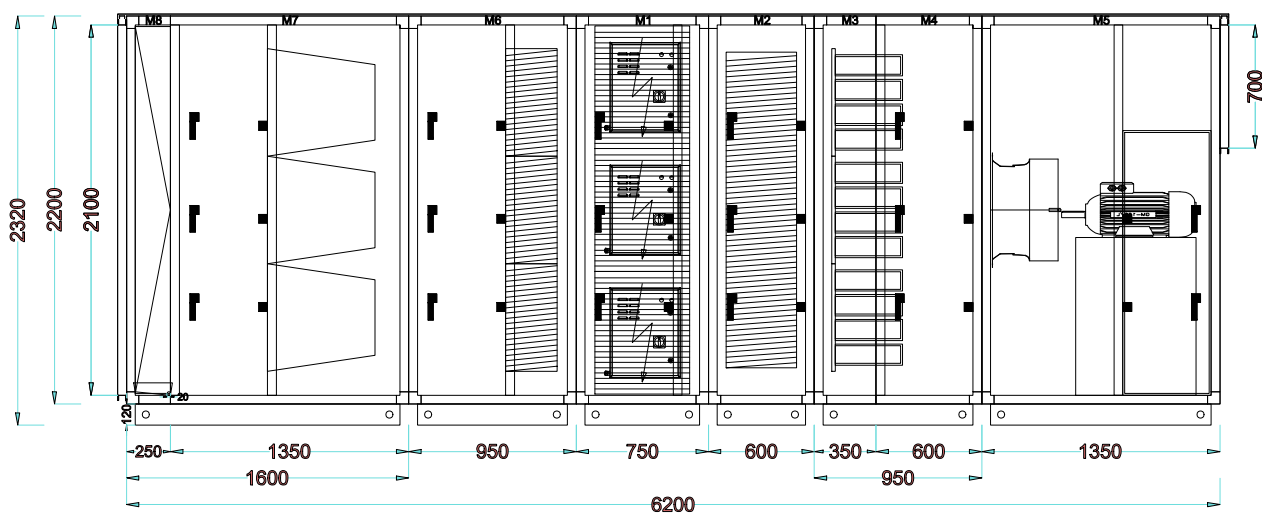
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OPTIONS (non-standard)

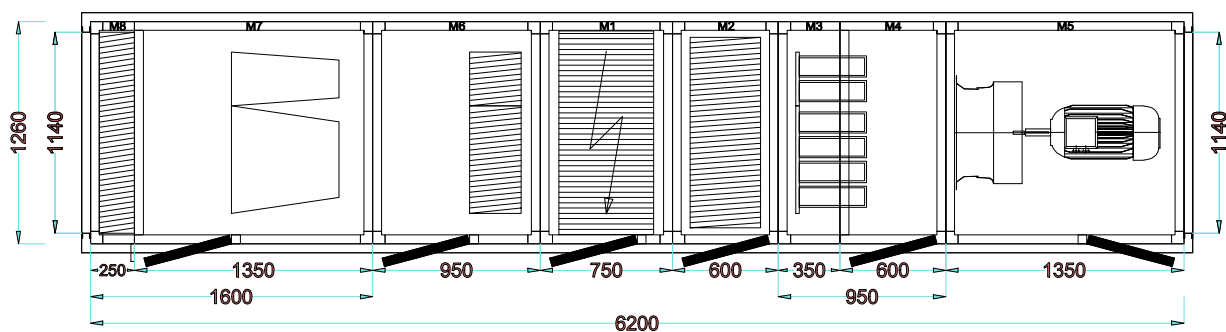
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 150 Technical Specifications

RIGHT VIEW



TOP VIEW



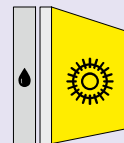
GENERAL SPECIFICATIONS

Airflow 15000 m ³ /h	Filter 1 Drop Eliminator + Bag Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1260 x H 2320 x L 6200
Air Velocity 1,71 m/s	Filter 2 EPA Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 2249 kg
Fan Model RLM E6-6371	Filter 3 Electrostatic Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 UVC Ozone Chamber	Inside Sheet Material 1 mm Galvanize	Motor Power 15 kW
	Filter 5 Activated Carbon Filter		Total Absorbed Power 10,97 kW

Specific Fan Power (SFP Total) 121,4 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,97	External Static Pressure 500 Pa
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FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	428 kg
Section length	1600 mm		
Max. Air flow rate	15300 m ³ /h	Bag Filter	
Design pressure drop	249 Pa	Efficiency class EN779	F7
		Filter frame	Galvanised steel
Eliminator material	Aluminium	Media type	Meltblown synthetic media
Eliminator model	ALT-55510	Max. Operating Temp.	80 °C
Drain pan material	Stainless Steel	Air velocity	2,67 m/s
Drain	1 1/2"	Size / qty.	3 pcs. 592x592x600mm 3 pcs. 592x287x600mm



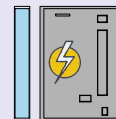
FILTER (M6)

Model	Epa Filter	Section weight	237 kg
Section length	950 mm		
Max. Air flow rate	15300 m ³ /h	Air velocity	2,67 m/s
Design pressure drop	438 Pa	Size / qty.	3 pcs. 610x610x292mm 3 pcs. 610x305x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	441 kg
Section length	750 mm		
Max. Air flow rate	18000 m ³ /h (6000 x 3)	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012 From 0.01 microns - 10 microns
Case x qty.	DE60 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	462 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M2)

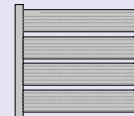
Model	UVC Ozone Chamber	Section weight	198 kg
Section length	600 mm		
Max. Air flow rate	15000 m ³ /h (3000 x 5)	Ballast type	D-PH1-800
Design pressure drop	80 Pa	Ballast qty.	20
Case x qty.	DOZ-30-4A x 5	Total power	820 W
Lamp type	D-GPH843	Voltage	230V - 50Hz
Lamp qty.	20	Rated life	9000 hours
Tube diameter	15mm		
Arc length	762mm		



DEC PRO 150 Technical Specifications

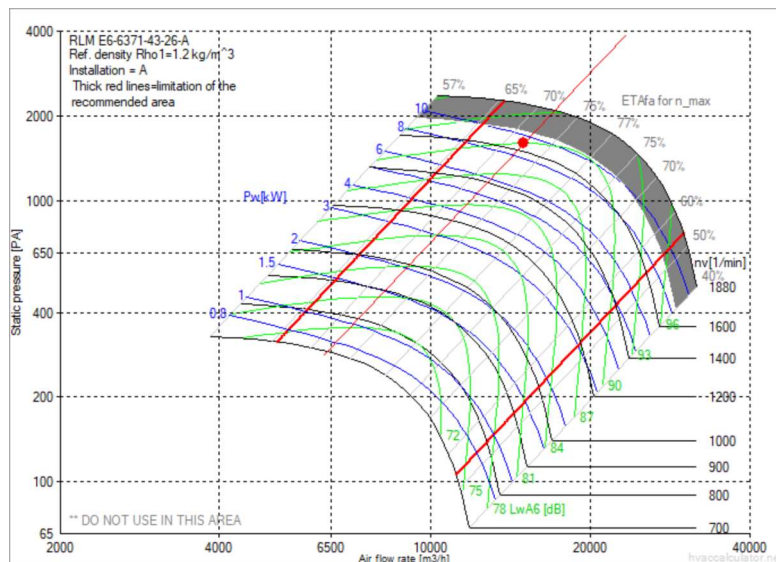
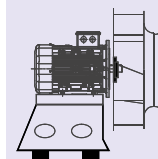
FILTER (M3)

Model	Activated Carbon	Section weight	384 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	23760 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	272 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	72 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	288 kg		



EXHAUST FAN (M5)

Air Flow 15000 m ³ /h	Motor Type AC-GM 160 L-4	Fan Model Nicotra-Gebhardt-RLM E6-6371-43-26-A	Quantity 1
Internal Static Pressure 1099 Pa	Motor Po./Pha./Volt./Freq. 15 kW/3P/380V/50V-Hz	Power Margin 19,05%	Section Length 1350 mm
External Static Pressure 500 Pa	Motor Speed 1500 (1460) rpm	Section Weight 561 kg	
Total Static Pressure 1599 Pa	Fan Bush Number 2012		
Total Pressure 1639 Pa	Motor Shaft Diameter Ø42 mm		
Total / Static Efficiency 74,00 / 72,00 %			
Motor / Inverter Efficiency 89,50 / 97,00 %			
Shaft Power / Absorbed Power 9,24 / 10,32 kW	Absorbed Power With VFD 10,63 kW		
Fan Speed 1641 rpm (Max. 1710 rpm)	Running Frequency 56,20 Hz (Max. 58,56 Hz)		
	Air Density 1,2 kg/m ³		
Specific Fan Power (SFPe int) 121,4 W/(m ³ /s)	Electrical Current 16,16 A (Max. 26,23 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	85,0	94,0	88,0	85,0	85,0	83,0	78,0	73,0	90,0	dBA
Inlet Side	82,0	92,0	87,0	83,0	80,0	77,0	75,0	69,0	86,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

15 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

DEC PRO 150

Technical Specifications

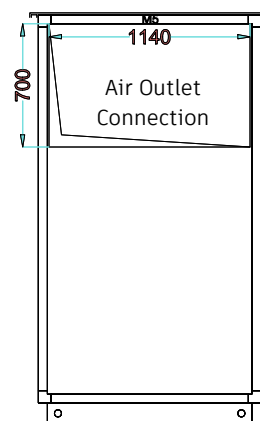
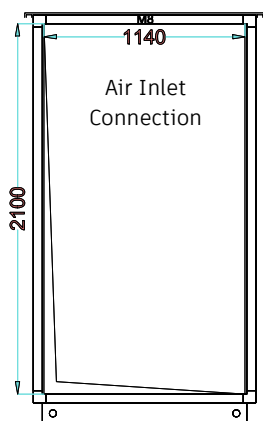
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	75,0	61,0	54,0	51,0	49,0	41,0	31,0	61,5	dBA
Air Outlet Induct Sound Power Level	94,0	88,0	85,0	85,0	83,0	78,0	73,0	90,0	dBA
Air Inlet Induct Sound Power Level	62,0	57,0	53,0	50,0	53,0	51,0	45,0	59,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

15000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 1140 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

15000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 1140 mm x H 700 mm

Connection Type

Flange

Pressure Drop

10 Pa

Control

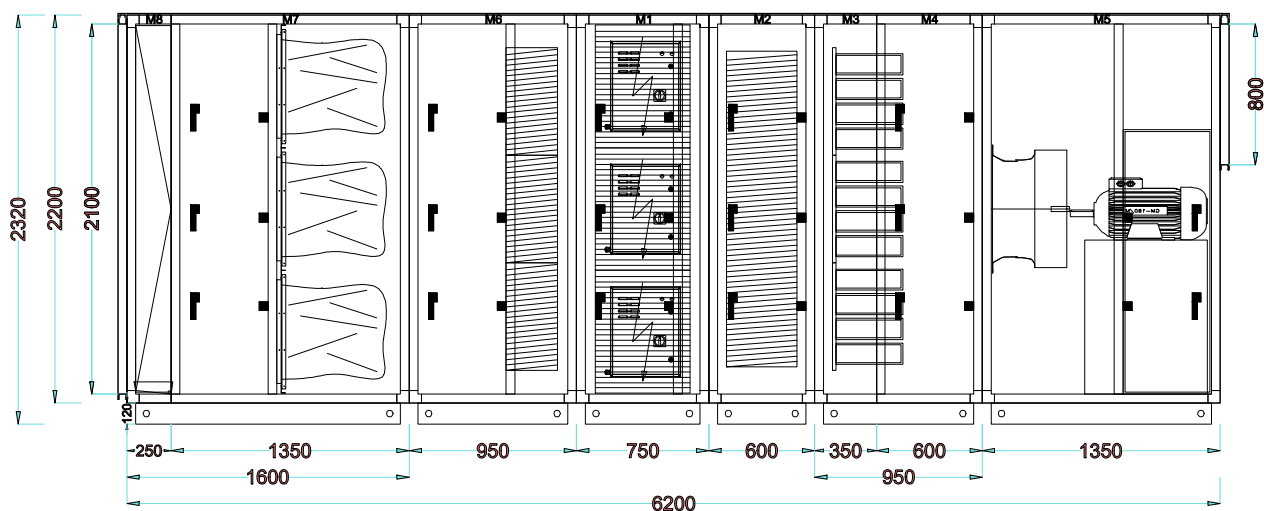
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OPTIONS (non-standard)

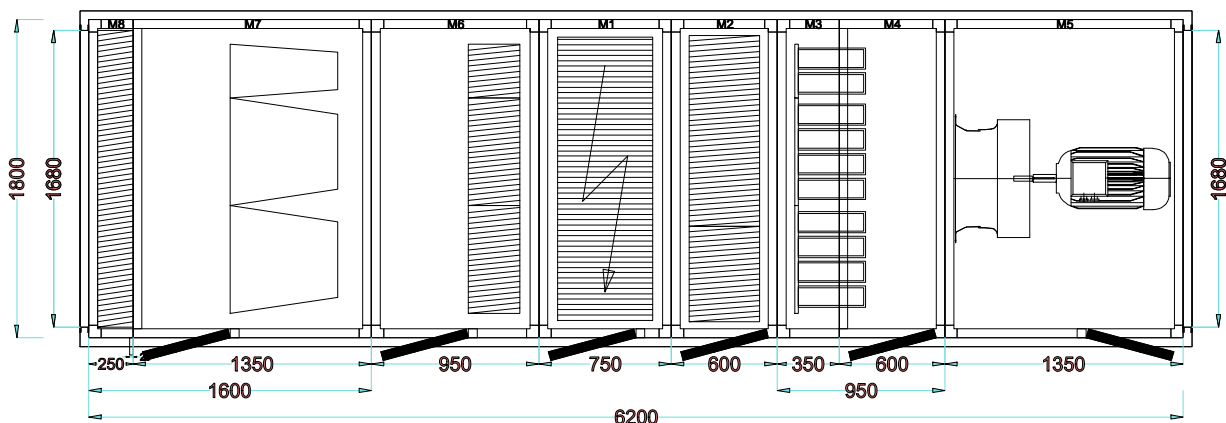
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 225 Technical Specifications

RIGHT VIEW



TOP VIEW



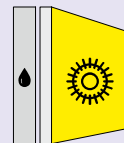
GENERAL SPECIFICATIONS

Airflow 24000 m ³ /h	Filter 1 Drop Eliminator + Bag Filter	Model / Frame 50x50 mm	Dimensions (mm) (Size+Pedestal) W 1800 x H 2320 x L 6200
Air Velocity 1,87 m/s	Filter 2 EPA Filter	Insulation Material 50 mm Rockwool 70 kg/m ³	Total Weight 2940 kg
Fan Model RLM E6-7180	Filter 3 Electrostatic Filter	Outside Sheet Material 0,8 mm Painted Galvanize	Base Height 120 mm
	Filter 4 UVC Ozone Chamber	Inside Sheet Material 1 mm Galvanize	Motor Power 18,5 kW
	Filter 5 Activated Carbon Filter		Total Absorbed Power 17,35 kW

Specific Fan Power (SFP Total) 107,2 W/(m ³ /s)	ErP Code NRVU-UVU	fs-Pref (W-S) 0,82	External Static Pressure 600 Pa
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FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	547 kg
Section length	1600 mm		
Max. Air flow rate	25500 m ³ /h	Bag Filter	
Design pressure drop	247 Pa	Efficiency class EN779	F7
		Filter frame	Galvanised steel
Eliminator material	Aluminium	Media type	Meltblown synthetic media
Eliminator model	ALT-55510	Max. Operating Temp.	80 °C
Drain pan material	Stainless Steel	Air velocity	2,55 m/s
Drain	1 1/2"	Size / qty.	6 pcs. 592x592x600mm 3 pcs. 592x287x600mm



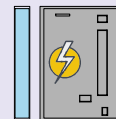
FILTER (M6)

Model	Epa Filter	Section weight	290 kg
Section length	950 mm		
Max. Air flow rate	25500 m ³ /h	Air velocity	2,55 m/s
Design pressure drop	429 Pa	Size / qty.	6 pcs. 610x610x292mm 3 pcs. 610x305x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	582 kg
Section length	750 mm		
Max. Air flow rate	24900 m ³ /h (8300 x 3)	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012 From 0.01 microns - 10 microns
Case x qty.	DE80 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	6		
Pre-filter	Metalic Cassette Filter		
Total power	546 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc,		
	Low Voltage: 6KVdc		



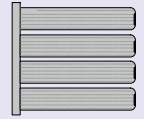
FILTER (M2)

Model	UVC Ozone Chamber	Section weight	276 kg
Section length	600 mm		
Max. Air flow rate	24000 m ³ /h (8000 x 3)	Ballast type	D-PH2-2/75
Design pressure drop	25 Pa	Ballast qty.	24
Case x qty.	DOZ-80-8B x 3	Total power	1320 W
Lamp type	D-GPH1148	Voltage	230V - 50Hz
Lamp qty.	24	Rated life	9000 hours
Tube diameter	15mm		
Arc length	1068mm		



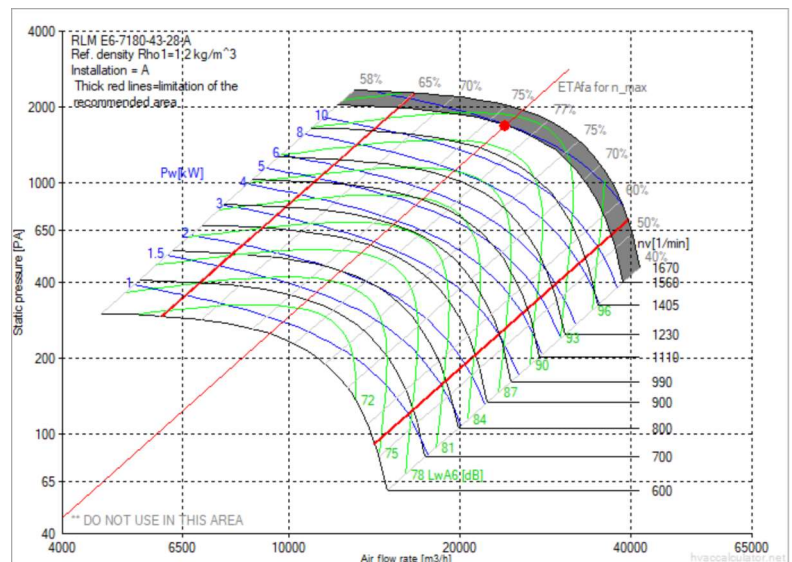
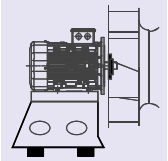
FILTER (M3/M4)

Model	Activated Carbon	Section weight	578 kg
Section length	950 mm	Carbon type	Granule AC - 4 mm pellet
Max. Air flow rate	39600 m ³ /h	Carbon weight	~4 kg per cartridge
Design pressure drop	266 Pa	Max. Relative humidity	< 70% RH
Case type	Cylindrical Cartridge	Eff. Work. Max. Temp.	50°C
Case material	Painted Galvanized Steel	Iodine	900 mg/g (ASTM D4607)
Gasket	Epdm	Specific surface area	950m ² /g (BET N2)
Cartridge dimensions	Ø145 x 600 mm	Bulk density	0,49 g/cm ³ (ASTM D2854)
Total cartridge qty.	120 pcs	CTC	min 50% (ASTM D3467)
Total carbon weight	480 kg		



EXHAUST FAN (M5)

Air Flow 24000 m ³ /h	Motor Type AC-GM 180 M-4	Fan Model Nicotra-Gebhardt-RLM E6-7180-43-28-A	Quantity 1
Internal Static Pressure 1082 Pa	Motor Po./Pha./Volt./Freq. 18,5 kW/3P/380V/50V-Hz	Power Margin 2,04%	Section Length 1350 mm
External Static Pressure 600 Pa	Motor Speed 1500 (1460) rpm		Section Weight 667 kg
Total Static Pressure 1682 Pa	Fan Bush Number 2517		
Total Pressure 1746 Pa	Motor Shaft Diameter Ø48 mm		
Total / Static Efficiency 79,00 / 76,00 %			
Motor / Inverter Efficiency 90,10 / 97,00 %			
Shaft Power / Absorbed Power 14,7 / 16,32 kW	Absorbed Power With VFD 16,8 kW		
Fan Speed 1553 rpm (Max. 1560 rpm)	Running Frequency 53,18 Hz (Max. 53,42 Hz)		
	Air Density 1,2 kg/m ³		
Specific Fan Power (SFPe int) 107,2 W/(m ³ /s)	Electrical Current 25,53 A (Max. 32,13 A)		



Exhaust Fan Sound Power Level (dB)

Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot	
Outlet Side	86,0	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Inlet Side	86,0	91,0	86,0	83,0	81,0	79,0	77,0	74,0	87,0	dBA

*The fan system effect is taken into account in the fan performance

*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)

7" HMI Box

Variable Frequency Drive (VFD)

18,5 kW

Main Controller (PLC)

Yes

Standard Specifications

- BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP)
- Variable fan speed control
- Electrostatic Filter/Bag/EPA dirtiness info
- UVC/Activated carbon filter integrity monitor (Time Counter)
- Door switch info
- Adaptation to fire safety system / fire mode
- Air volume set, monitoring and control from the room HMI Box
- Detailed daily and weekly time scheduling

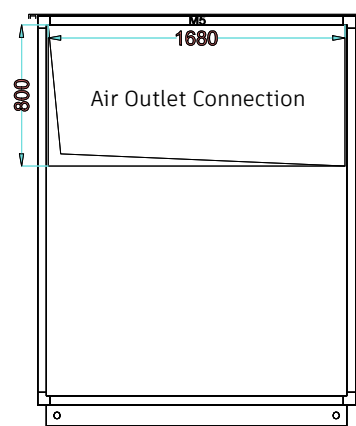
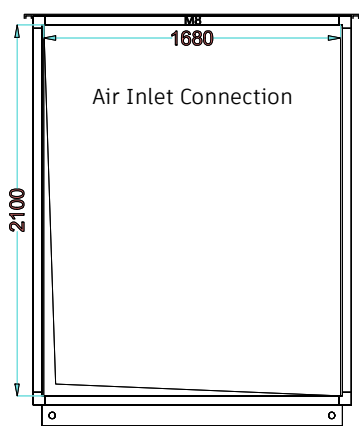
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	72,0	60,0	56,0	53,0	50,0	45,0	37,0	61,5	dBA
Air Outlet Induct Sound Power Level	91,0	87,0	87,0	87,0	84,0	82,0	79,0	92,0	dBA
Air Inlet Induct Sound Power Level	61,0	56,0	53,0	51,0	55,0	53,0	50,0	60,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

24000 m³/h

Air Velocity

1,89 m/s

Dimensions

W 1680 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

24000 m³/h

Air Velocity

4,96 m/s

Dimensions

W 1680 mm x H 800 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

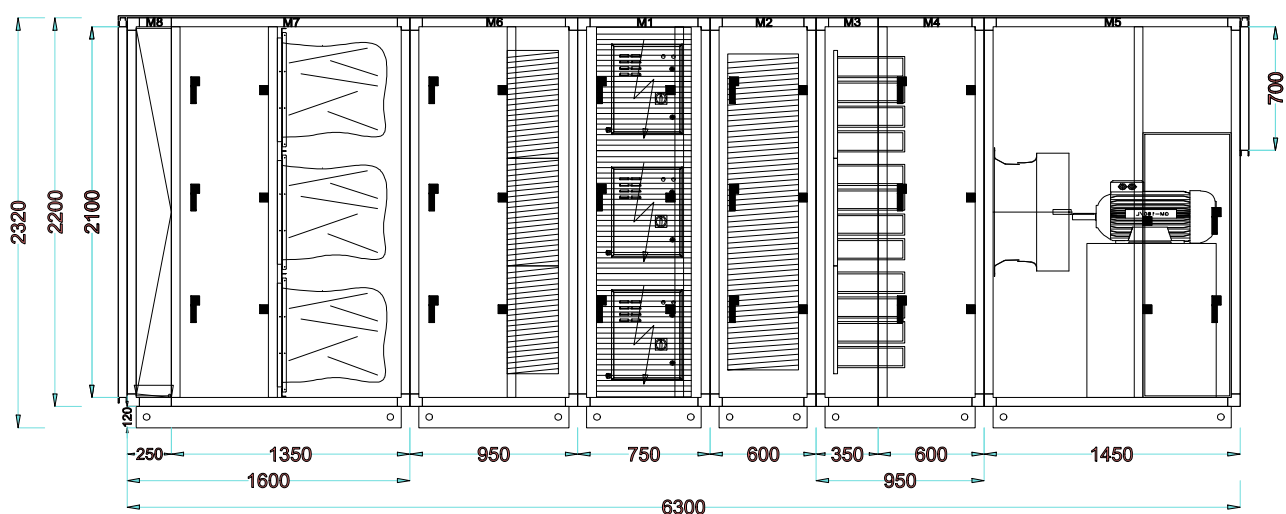
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OPTIONS (non-standard)

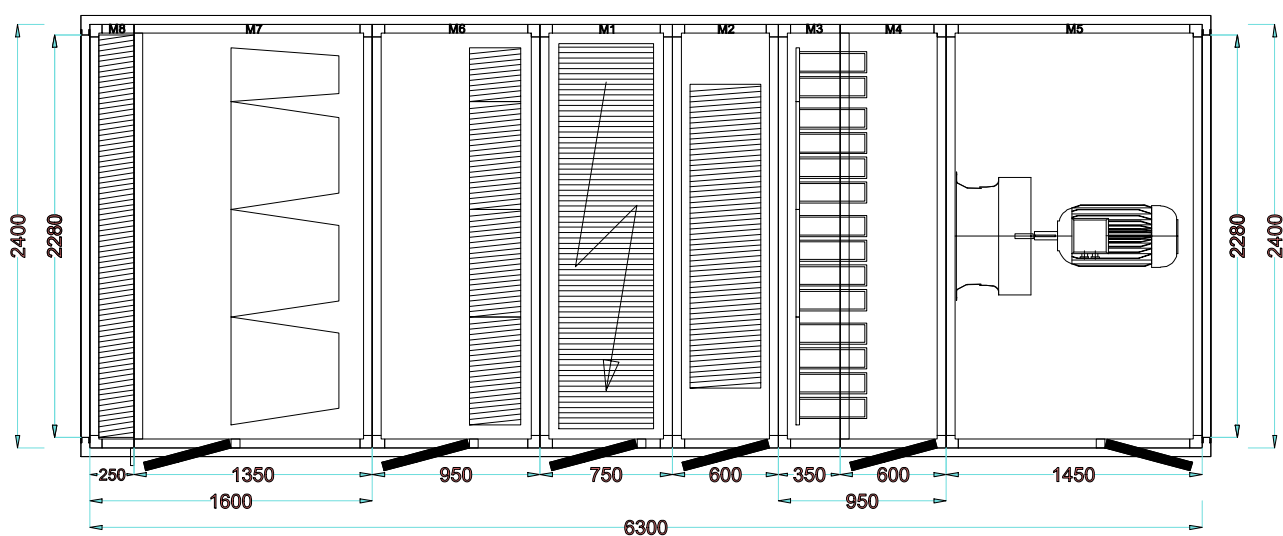
- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

DEC PRO 300 Technical Specifications

RIGHT VIEW



TOP VIEW



GENERAL SPECIFICATIONS

Airflow

30000 m³/h

Air Velocity

1,73 m/s

Fan Model

RLM E6-7180

Filter 1

Drop Eliminator + Bag Filter

Filter 2

EPA Filter

Filter 3

Electrostatic Filter

Filter 4

UVC Ozone Chamber

Filter 5

Activated Carbon Filter

Model / Frame

50x50 mm

Insulation Material

50 mm Rockwool 70 kg/m³

Outside Sheet Material

0,8 mm Painted Galvanize

Inside Sheet Material

1 mm Galvanize

Dimensions (mm) (Size+Pedestal)

W 2400 x H 2320 x L 6300

Total Weight

3557 kg

Base Height

120 mm

Motor Power

22 kW

Total Absorbed Power

21,02 kW

Specific Fan Power (SFP Total)

91,21 W/(m³/s)

ErP Code

NRVU-UVU

fs-Pref (W-S)

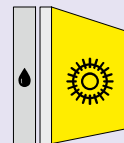
0,93

External Static Pressure

600 Pa

FILTER (M8/M7)

Model	Droplet Eliminator / Bag Filter	Section weight	686,7 kg
Section length	1600 mm		
Max. Air flow rate	35700 m ³ /h	Bag Filter	
Design pressure drop	242 Pa	Efficiency class EN779	F7
		Filter frame	Galvanised steel
Eliminator material	Aluminium	Media type	Meltblown synthetic media
Eliminator model	ALT-55510	Max. Operating Temp.	80 °C
Drain pan material	Stainless Steel	Air velocity	2,27 m/s
Drain	1 1/2"	Size / qty.	9 pcs. 592x592x600mm 3 pcs. 592x287x600mm



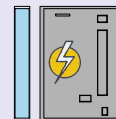
FILTER (M6)

Model	Epa Filter	Section weight	345 kg
Section length	950 mm		
Max. Air flow rate	35700 m ³ /h	Air velocity	2,27 m/s
Design pressure drop	410 Pa	Size / qty.	9 pcs. 610x610x292mm 3 pcs. 610x305x292mm
Efficiency class EN 1822	E11		
Filter frame	Galvanised steel		
Media type	Fibreglass		
Max. Operating Temp.	93 °C		



FILTER (M1)

Model	Electrostatic Filter	Section weight	721 kg
Section length	750 mm		
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Pass type	Single Pass
Design pressure drop	50 Pa	Efficiency	95% single pass DOP Test 96% single pass ASHRAE 52.2-2012 From 0.01 microns - 10 microns
Case x qty.	DE100 x 3	Drain	1 1/2"
Type	Plate - Cell	Features	Short circuit, arc protection and auto restore PS. BMS terminals provided Auto power cut-off when door is opened Indicator LEDs for normal or wash indicator Set of Terminals for remote LED
Total cell qty.	9		
Pre-filter	Metalic Cassette Filter		
Total power	693 W		
Voltage	1 ph / 220-240 V / 50Hz		
Ionising voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc		



FILTER (M2)

Model	UVC Ozone Chamber	Section weight	247 kg
Section length	600 mm		
Max. Air flow rate	30000 m ³ /h (10000 x 3)	Ballast type	D-PH2-2/75
Design pressure drop	25 Pa	Ballast qty.	30
Case x qty.	DOZ-100-10B x 3	Total power	1650 W
Lamp type	D-GPH1148	Voltage	230V - 50Hz
Lamp qty.	30	Rated life	9000 hours
Tube diameter	15mm		
Arc length	1068mm		

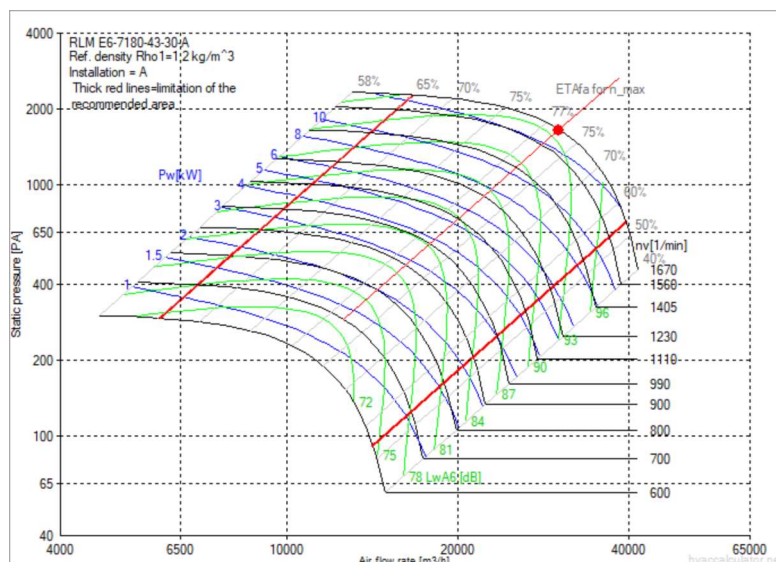


DEC PRO 300

FILTER (M3/M4)

EXHAUST FAN (M5)

A schematic diagram of a motor-driven pump assembly. It features a three-phase electric motor with a cooling fan on its left side, mounted on a rectangular base. The motor is connected to a pump head on its right side. The pump head has a large circular inlet on the left and a smaller outlet on the right. The entire assembly is supported by a base with two circular cutouts.



		Exhaust Fan Sound Power Level (dB)							
Hz	63	125	250	500	1000	2000	4000	8000	LwA-tot
Outlet Side	88,0	93,0	89,0	89,0	89,0	86,0	84,0	81,0	94,0
Inlet Side	88,0	93,0	88,0	85,0	83,0	81,0	79,0	76,0	89,0

*The fan system effect is taken into account in the fan performance
*The fan calculated for wet conditions

CONTROL BOARD

HMI Touch Screen (Room)	Standard Specifications <ul style="list-style-type: none"> • BMS integration (Modbus RTU, Modbus TCP/IP, BACnet IP) • Variable fan speed control • Electrostatic Filter/Bag/EPA dirtiness info • UVC/Activated carbon filter integrity monitor (Time Counter) • Door switch info • Adaptation to fire safety system / fire mode • Air volume set, monitoring and control from the room HMI Box • Detailed daily and weekly time scheduling
7" HMI Box	
Variable Frequency Drive (VFD)	
22 kW	
Main Controller (PLC)	
Yes	

DEC PRO 300

Technical Specifications

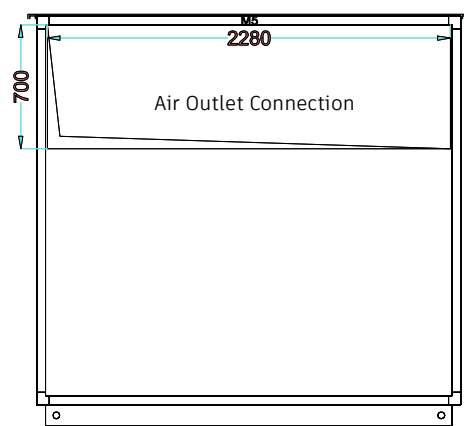
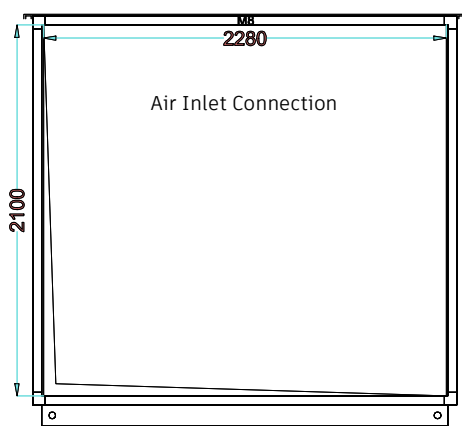
SOUND POWER LEVEL (dB)

Frequency Hz	125	250	500	1000	2000	4000	8000	LwA-tot	
Airborne Sound Power Level	74,0	62,0	58,0	55,0	52,0	47,0	39,0	63,5	dBA
Air Outlet Induct Sound Power Level	93,0	89,0	89,0	89,0	86,0	84,0	81,0	94,0	dBA
Air Inlet Induct Sound Power Level	63,0	58,0	55,0	53,0	57,0	55,0	52,0	62,0	dBA

CASING ACOUSTICAL INSULATION [dB]

Frequency Hz	125	250	500	1000	2000	4000	8000	
	19,0	27,0	31,0	34,0	34,0	37,0	42,0	dBA

AIR CONNECTIONS



Airflow

30000 m³/h

Air Velocity

1,74 m/s

Dimensions

W 2280 mm x H 2100 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

Airflow

30000 m³/h

Air Velocity

5,22 m/s

Dimensions

W 2280 mm x H 700 mm

Connection Type

Flange

Pressure Drop

0 Pa

Control

No

OPTIONS (non-standard)

- Electric motor out of air stream
- Special control scenarios on request
- Temperature or VOC control
- Motorized damper for inlet/outlet connections
- Damper modulation of ecology unit
- Fire damper
- Rain louver
- Bulkhead light
- IOT Module (4G or Ethernet)
- Silencer unit

SAFETY

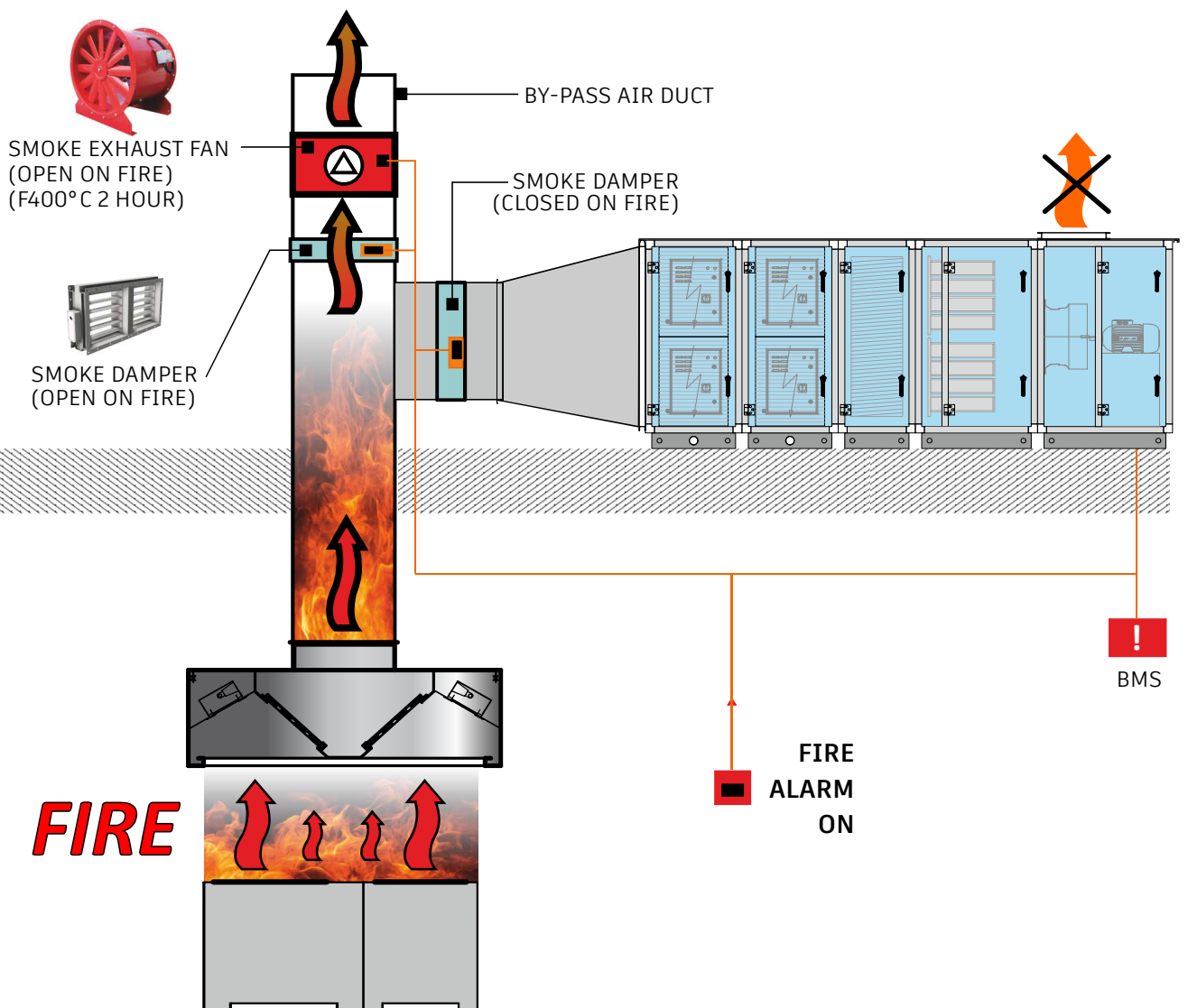
FIRE PROTECTION

In today's commercial kitchens, higher temperature cooking oils and high efficiency appliances (with a slow cooling down) such as deep-fat fryers have combined to make fire suppression more challenging than in the past.

All the more challenging because :

- Although the main identifiable risk is deep fat fryers, it is a little known fact that more kitchen fires start from stoves that are not equipped with heat safety switches.

- The cooking fires natural behaviour is to spread throughout the building via the kitchen exhaust ductwork. We recommend using by-pass lines to reduce these risks and protect ecology units. In this way, smoke is removed from the environment with a higher flow rate. Spreading is prevented. Ecology units can increase the amount of fire with the carbon filters they contain. We recommend that the fire is not exhausted on these devices.



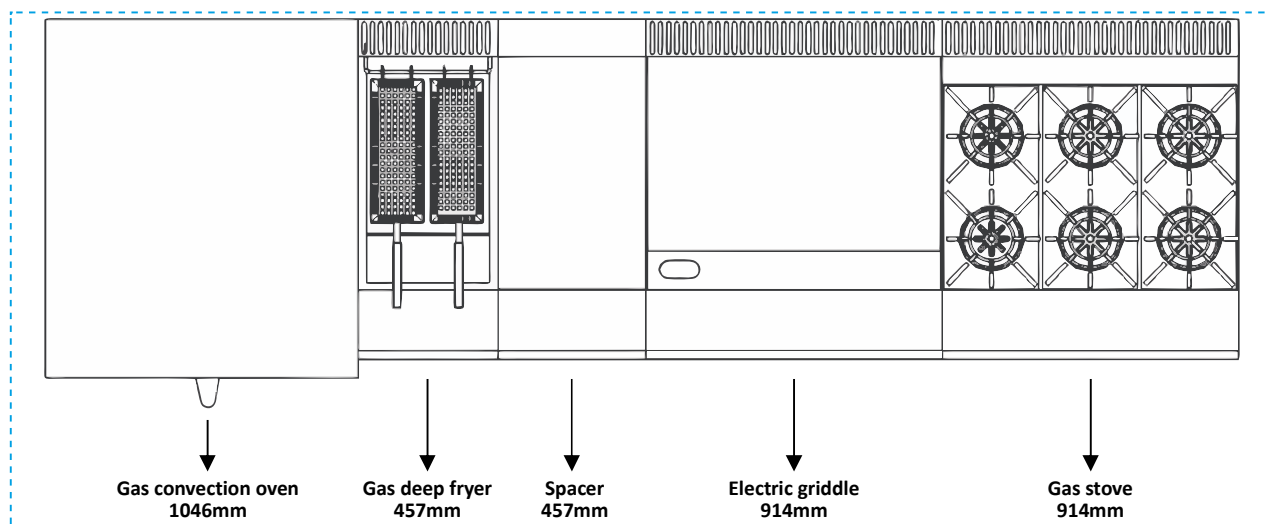
CALCULATION of air volume for cooking appliances

Cooking Appliances	Electrical cooking (m ³ /h)	Gas cooking (m ³ /h)
LIGHT (ECO)		
Convection oven, regular oven	870	970
Combination oven	1000	1150
Pizza oven	970	1080
Food warmer, vegetable steamer, pasta cooker	810	900
Rotisserie, smoker	1020	1200
Tilting skillets	1000	1200
Salamander broiler	800	970
Spacer or non-cooking appliance	560	560
MEDIUM (MED)		
Countertop cooking surface	1080	1200
Stove	1370	1530
Deep fryer	1310	1480
Griddle	1420	1640
Boiling plate	1530	1820
Induction plate	1350	-
Braising pan	1150	1300
HEAVY (PRO)		
Radiant broiler	1820	2090
Charbroiler	2030	2380
Upright broiler	2090	2430
Wok	2090	2500
Infrared broiler	2500	2750
Chain broiler, Lava rock charbroiler	2550	2800
Wok	2100	2500

Correction factors according to the type of installationK factor

Single island hood	1,2
Double island hood	1,15
Heavy duty range at under a singel island hood	1,2
Suspension height more than 2 meter	1,1

CALCULATION SAMPLE



Details

- Hood: 4112mm long x 1371mm wide
- Wall-mounted hood (**K Factor is 1**)
- Hood installation height 1980mm from floor
- Clearance (overhang): 152mm on each side and 304mm at the front between the cooking appliances and the hood

	Equipments L lenght [mm]	L lenght [m]		Airflow per meter [m ³ /h]		Airflow result [m ³ /h]
Clearance, left side	152	/1000	x	560	=	85
Gas convection oven	1046	/1000	x	970	=	1015
Gas deep fryer	457	/1000	x	1480	=	676
Spacer	457	/1000	x	560	=	256
Electric griddle	914	/1000	x	1420	=	1298
Gas stove	914	/1000	x	1530	=	1398
Clearance, right side	152	/1000	x	560	=	85
					+	4813

Total Result : 4813 x 1 (K Factor) = 4813 m³/h

SELECTION CRITERIAS

Odour and **grease** characteristics arising from a range of commercial kitchens

ECO	MED & PRO		MED & PRO	ECO
ODOUR CONCENTRATION			GREASE CONTENT	
✓	✓	Pizza Restaurant	✓	✓
✓	✓	Pita / Lahmacun	✓	✓
✓	✓	French	✓	✓
✓	✓	Italian	✓	✓
✓	✓	Most Pubs	✓	✓
✓	✓	Chinese	✓	
✓	✓	Japanese	✓	
	✓	Kebab Houses	✓	
	✓	Steakhouses	✓	
	✓	Fried Chicken	✓	
	✓	Fish	✓	
	✓	Fast Food Burger	✓	



List of Kitchens Generally Needed



Commercial
cafeterias



Hotel
kitchens



Food factory
kitchens



Restaurants



Dining areas in
shopping centers



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