Jeven

Top ventilation for top chefs

Supply air hood JSI-UV-Turbo

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We want to help you in design of ventilation by offering Jeven designer service to your disposal.
Design Service helps in design and makes unique proposal solution with Jeven products.

Contact us: jeven@jeven.fi
010 231 2030

Supply Air Hood JSI-UV-Turbo

PRODUCT DESCRIPTION

The Jeven JSI-UV-Turbo hood has been designed for kitchens where exhaust hoods with high efficiency grease extraction and supply air are needed.
The JSI-UV-Turbo canopy is equipped with TurboSwing filter unit including ozone-free UV-light, supply and direction air, with damper plates and measurement taps.
In island models, the supply air units can be located on all sides of the hood.
The UV-TurboSwing filtering solution was developed for high efficient grease separation and odor removal in professional kitchens.

LIGHTS AND FILTERS

JSI-UV-Turbo is equipped with lights and UV-TurboSwings.

MATERIAL

The canopy's base material is stainless steel, AISI 304. The side panels can be made of stainless steel (JSI-R-UV-Turbo) or laminated glass (JSI-S-UV-Turbo).

ACCESSORIES

Covering boards to enclose the area between the top of the hood and the ceiling.

PRODUCT CODE

JSI - R - UV-Turbo - 3000 x 1500 x 540 - 4 x 250 - 3 x 315 + 480 l/s - 550 l/s - CB - UV-SC

Material
R=Stainless steel
S=Glass
Filter
UV-Turbo=UV-TurboSwing
Length
Width
Height

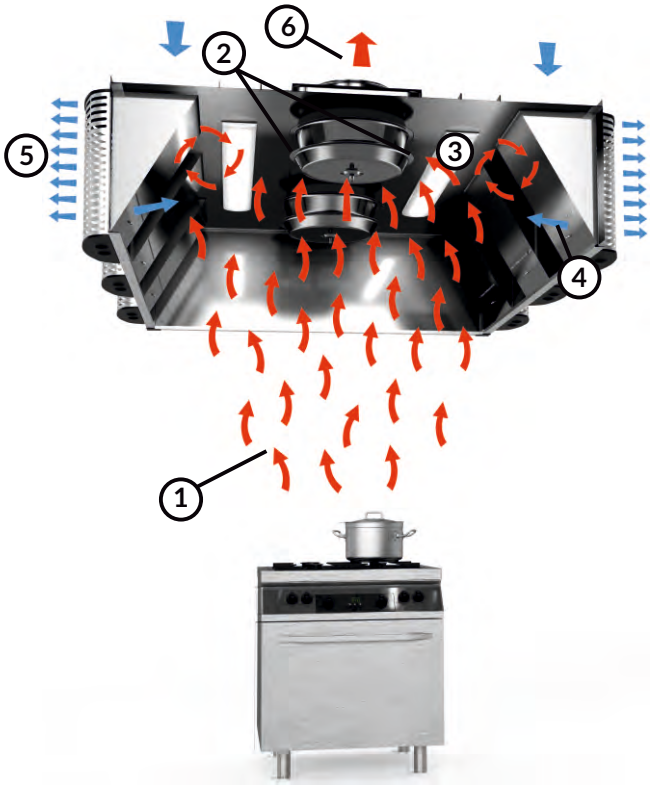
Number and size of the supply air connections
Number and size of the exhaust air connections
Supply air flow, l/s
Exhaust air flow, l/s

Accessories
CB=Covering boards
UV-SC=UV-SwingControl

Supply Air Hood JSI-UV-Turbo

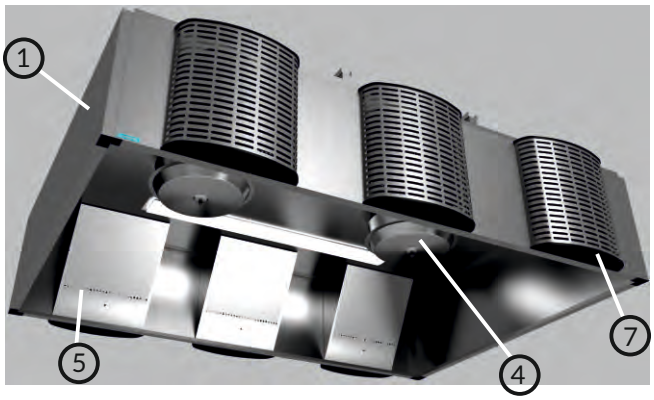
FUNCTIONING PRINCIPLE

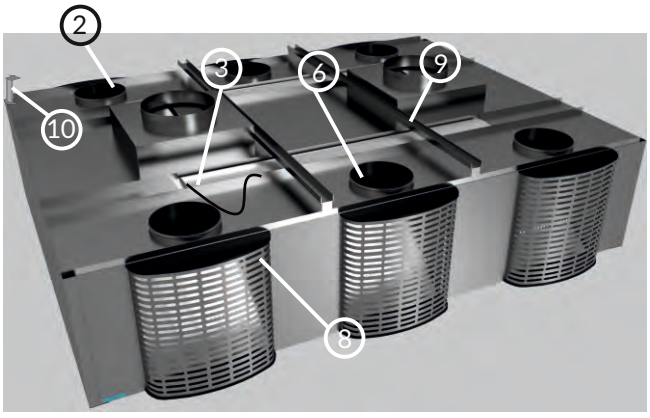
1. Dirty air rises due to temperature differences against the ceiling of the hood.
2. Dirty air is exhausted immediately through the TurboSwing unit.
3. Since TurboSwing's air intake is placed close to the ceiling, the warmest dirty air is always exhausted through it. Ventilation efficiency is of the highest rate because of the correct position of TurboSwing with respect to the kitchen equipment.
4. Direction air prevents leakage and directs steam and impurities towards TurboSwing.
5. Fresh and draught-free supply air is brought into the kitchen through the supply air columns placed on the outside walls of the supply air hood. This results in very effective ventilation in the kitchen.
6. The purified air flows in the catalyst-coated chamber where UV-light transforms remaining grease to carbon dioxide and water. Clean air is exhausted into the ducts.



PARTS

1. Outer casing
2. Supply air connection and damper unit
3. Light fixture with cable
4. UV-TurboSwing filter unit
5. Direction air unit with measurement tap for the supply air
6. Exhaust air connection and damper plate
7. Personal supply air nozzle
8. Supply air unit
9. Ceiling console
10. Hanging bracket

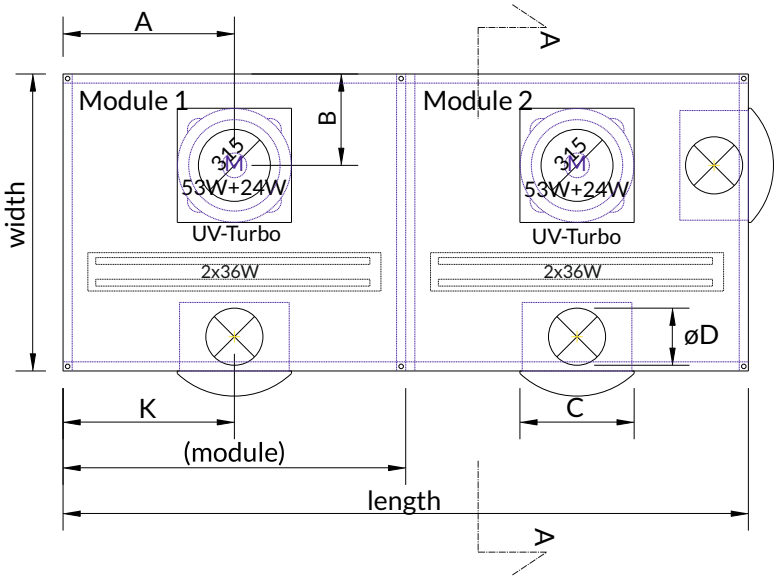


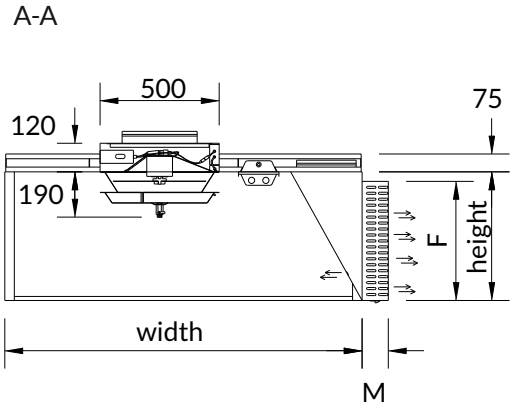


Supply Air Hood JSI-UV-Turbo

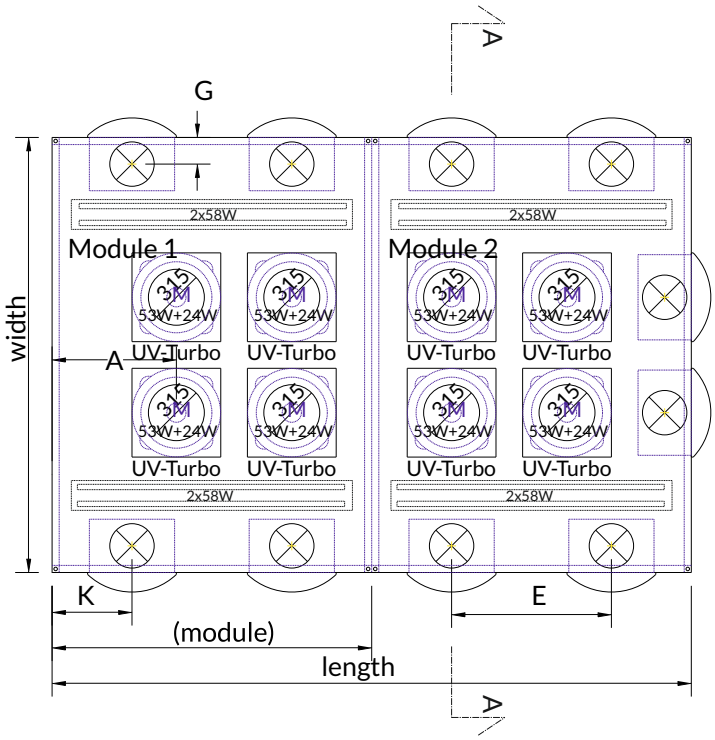
DIMENSIONS

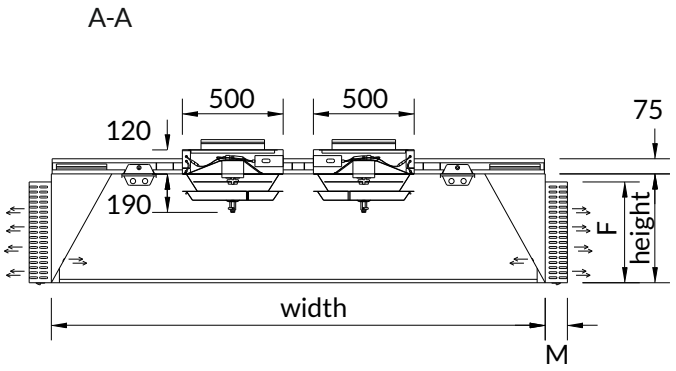
Wall hood





Island type hood

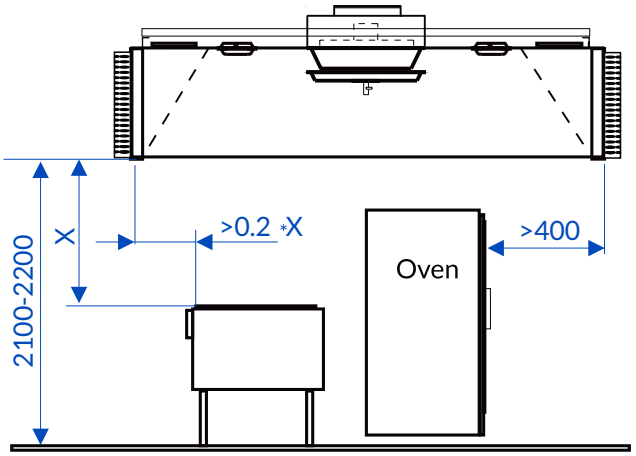




Supply Air Hood JSI-UV-Turbo

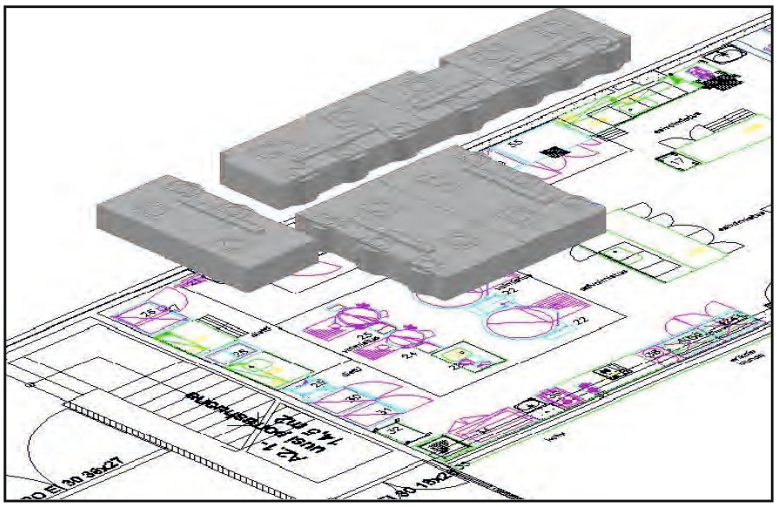
POSITIONING

The size of the canopy is determined by the size of the kitchen equipment. The overhang depends on the type of equipment and the distance between the hood and the equipment.
For this type of equipment, the overhang should be at least 300 mm.
The typical distance between the hood side and the floor is 2100-2200 mm.
If the equipment has any doors that open upwards, make sure there is enough distance to the canopy.



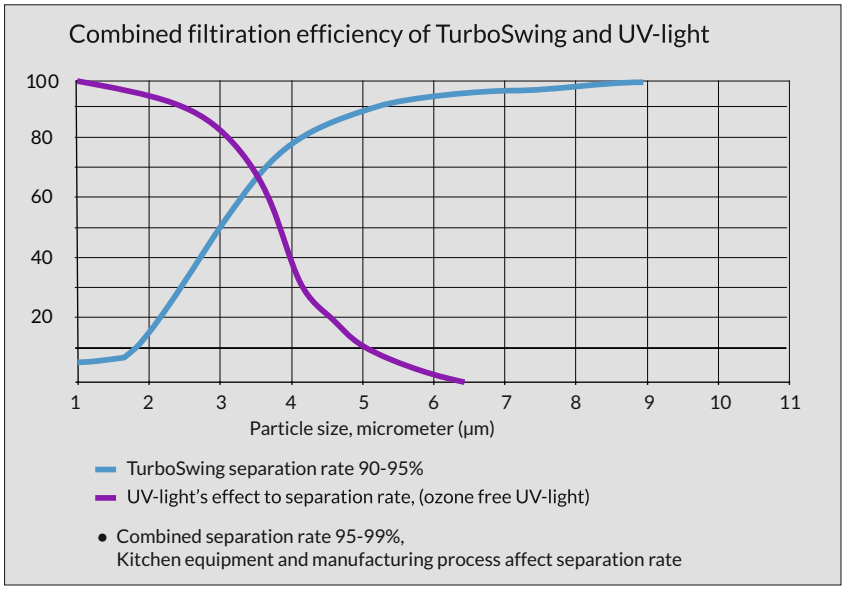
DESIGN SERVICE

Jeven Design Service helps you choose the best solution for your professional kitchen project.
Simply email us a drawing of the kitchen lay-out and a list of the cooking equipment to jeven@jeven.fi
We will do all the calculations and prepare all the necessary drawings of the canopies.
This service is always free of charge to you.



Supply Air Hood JSI-UV-Turbo

EXHAUST AIR

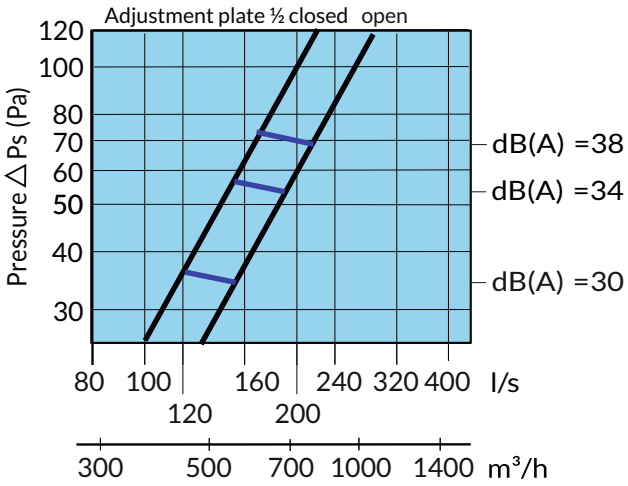


Recommended exhaust flow / spigot

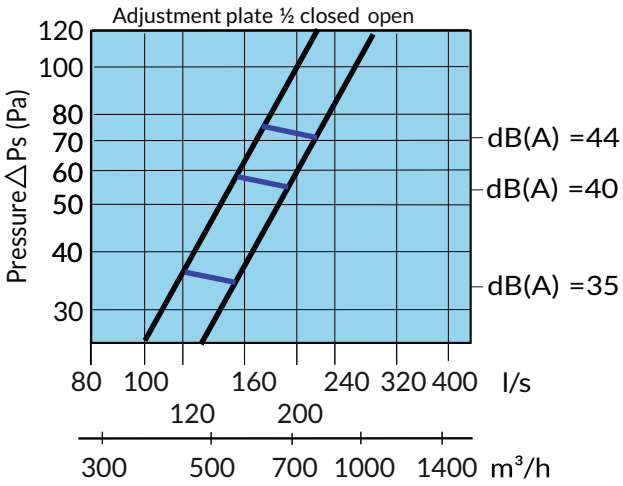
Spigot size ø	Exhaust flow		Pressure loss
mm	l/s	m^3/h	Pa
315	100-200	360 - 720	20 - 60

PRESSURE LOSS AND SOUND DATA

TurboSwing 750 rpm



TurboSwing 1100 rpm



Sound power level Lw in each octave band is computed by adding the corresponding factor, Kok to the sound power level LpA. Lw= LpA+Kok.

Factor, Kok

Hz	125	250	500	1000	2000	4000
Kok	7	-1	-5	-5	-7	-6
tol.	±3	±3	±2	±2	±3	±4

Supply Air Hood JSI-UV-Turbo

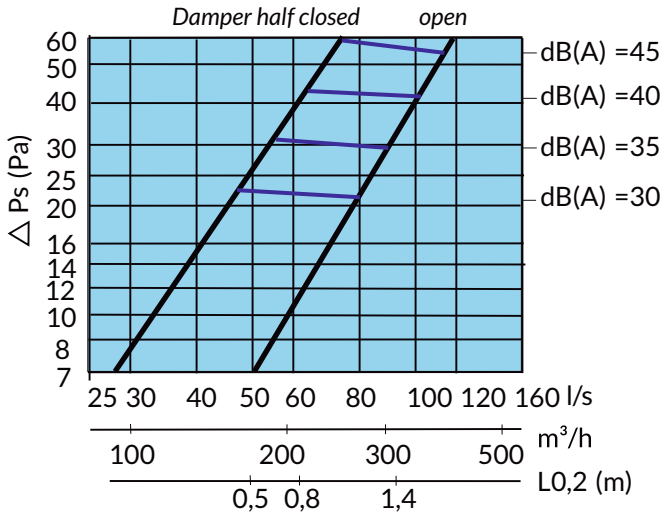
SUPPLY AIR

The canopies are supplied from the factory with suitable air flow rates for a pressure level of 25-35 Pa.

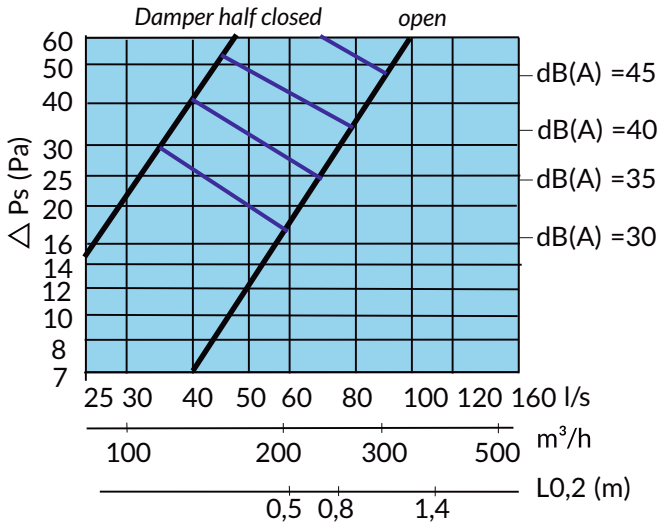
Hood height	Supply air unit width	
mm	200 mm	500 mm
330	-	50-90 l/s
540	40-70 l/s	100-150 l/s

PRESSURE LOSS, SOUND DATA & THROW LENGHT / SUPPLY AIR UNIT

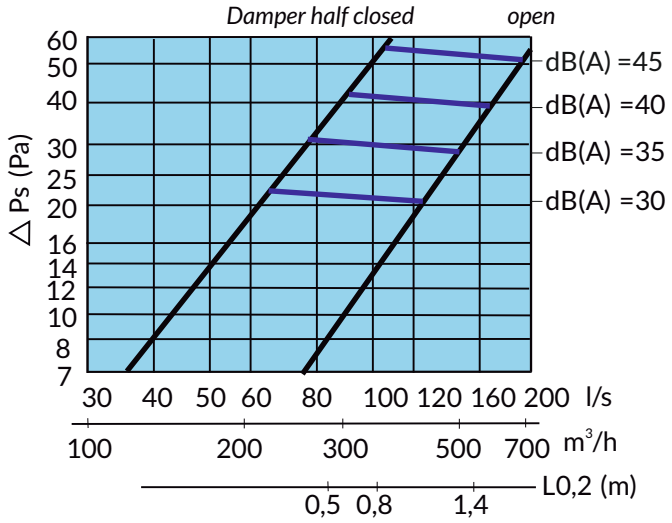
Spigot ø200 mm. Unit width 500 mm. Hood height 330 mm.



Spigot ø160 mm. Unit width 200 mm. Hood height 540 mm.



Spigot ø250 mm. Unit width 500 mm. Hood height 540 mm.



Spigot ø200

Hz	125	250	500	1000	2000	4000
Kok	-2	7	4	-5	-19	-26
tol.	±6	±4	±2	±2	±3	±5

Spigot ø160

Hz	125	250	500	1000	2000	4000
Kok	-2	1	2	1	-7	-16
tol.	±3	±3	±2	±2	±3	±4

Spigot ø250

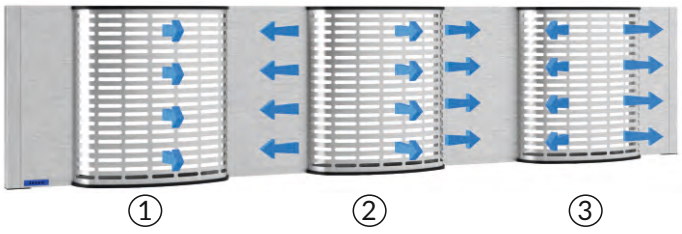
Hz	125	250	500	1000	2000	4000
Kok	6	8	4	-5	-10	-18
tol.	±3	±3	±2	±2	±3	±4

The sound power level (Lw) in each octave band is computed by adding the corresponding factor Kok to the sound pressure level (LpA), as in Lw= LpA+Kok

Supply Air Hood JSI-UV-Turbo

DISTRIBUTION OF SUPPLY AIR

Jeven supply air columns deliver a controlled and flexible distribution of the supply air.
It is possible to wash the supply air columns in a dishwasher and the inside of the supply air chambers is easy to clean.
These columns allow individual adjustment of air patterns and airflows, which means better indoor climate for the kitchen staff.



① Unidirectional thrown pattern

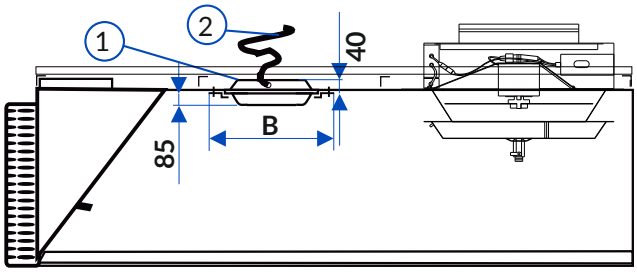
② Displacement thrown pattern

③ Bidirectional throw pattern

Supply air unit,
Damper open

Sound attenuation, dB		Hz					
Hood height	Spigot	125	250	500	1000	2000	4000
330 mm	ø 200	17	10	10	11	18	24
540 mm	ø 160	24	8	5	12	17	24
	ø 250	16	9	7	11	16	23

LIGHTS



① Light fixture as standard, IP 54-67

T8:
B=111mm,(1x18W, 1x36W, 1x58W)
B=168mm, (2x18W, 2x36W, 2x58W)

Colour temperature 840(Cool White)

② About 2m cable, type EKK 3x1,5

By default, every hood module comes with a light fixture. The light fixture has a cable which should be connected to a junction box with a cable lock.
The junction box is not included.

Supply Air Hood JSI-UV-Turbo

ELECTRICAL AND AUTOMATION DESIGN GUIDELINES

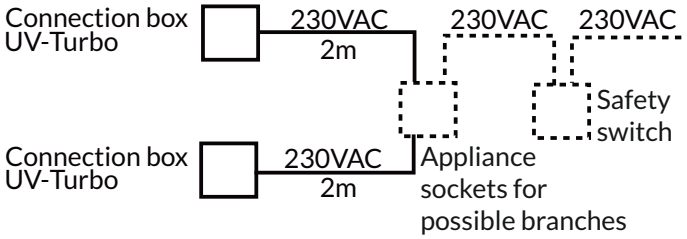
HPAC designer defines to the plans the types and locations of the products to be wired.

Electrical designer defines to the plans the location of the safety switch, switchgear and wiring from the panelboard or kitchen switch to the safety switch.

Automation designer defines to the plans the running time of the UV-TurboSwing and it shall match to the running time of kitchen.

Safety switch is compulsory and it should be situated close to the hood and on the visible place in the kitchen.

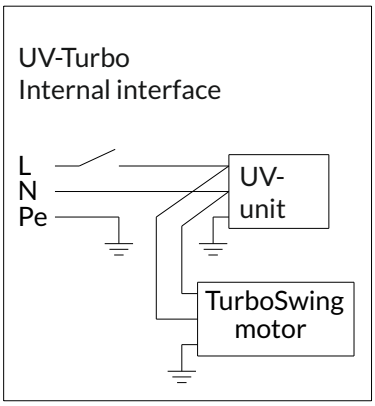
The safety switch, appliance sockets and the cables marked with the broken line are not included in the Jeven delivery.



Wiring diagram

Products which need to be wired are placed to to HPAC plan.
Safety switch, switchgear and wiring from panelboard or kitchen switch to safety switch are placed to electrical plan.

Automation designer defines to the plans the running time of the TurboSwing shall match to the running time of kitchen.



6.8.2015

MUB/T 042 450EC

Item no. 37203

Document type: **Product card**
Document date: **2016-11-07**
Generated by: **Systemair Online Catalogue**

Description

- EC-motors, high level of efficiency
- 100% speed controllable
- Up to 120°C medium temperature, continuous operation
- Multi-functional use, e.g. for kitchen exhaust air
- Pre-assembled isolator is standard
- Low sound level
- Easy to maintain and reliable
- Motor outside the air stream
- Integrated motor protection
- Potentiometer included for ease of commissioning

EC technology is intelligent technology; using integral electronic control which eliminates the slip losses in the motor and ensures that the motor always runs at optimal load and guarantees that the proportion of energy utilized effectively is many times higher and the energy usage considerably lower compared with AC motors. EC fans are notable for their economical use of energy and excellent ease of control. They can be varied in speed to match the airflow demand, and operate at high efficiency levels. For the same air volume, they consume distinctly less energy than AC fan drives. Another special feature of EC fans is their energy-saving potential not only at full load, but especially at part-load. When operating at part load, the energy used is much lower than with an asynchronous motor of equivalent output. Reduced energy usage guarantees a drop in operating costs. The power electronics are integrated in the motor housing. All MUB/T-EC models have one potential-free terminal for error message. All motors are suitable to be used for 50/60Hz. The input voltage for single phase units can vary between 200 and 277V. Speed control by a 0-10V signal. The fans are delivered with a pre-wired potentiometer (0-10 V) that allowes you to easily find the required working point. All MUB/T-EC fans have impellers with backward curved blades, manufactured from aluminium. The MUB/T-EC fans are suitable for medium temperatures up to 120°C continuously. The casing consists of an aluminium frame with fibreglass reinforced plastic corners and double skin, galvanised steel panels with a 20 mm mineral wool insulation. Panels are removable, allowing flexible ventilation solutions - the air direction can easily be changed. With quick lock access door. The MUB/T-EC bottom panel is shaped as a grease tray and incorporates a pre-mounted 1" drain plug. An isolator switch is mounted on the casing.
Several filter modules like f.e. activated carbon- or aluminum filters are available, calculated individually on the working point.

Technical parameters

Nominal data		
Voltage	400	V
Frequency	50/60	Hz
Phase	3	~
Input power (P1)	827	W
Current	1,39	A
Max. airflow	1,74	m³/s
R.p.m.	1442	r.p.m.
Weight	60,1	kg

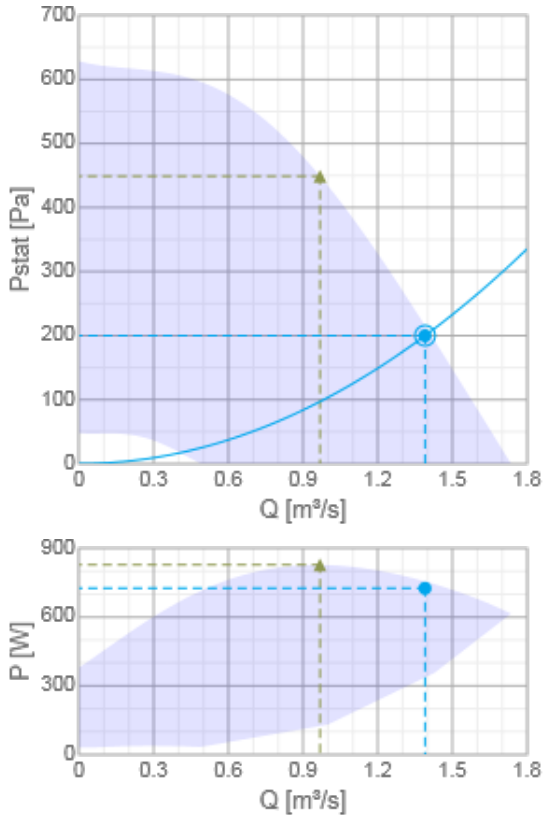
Temperature data		
Max. temperature of transported air	120	°C

Sound data		
Sound pressure level at 3 m	47	dB(A)

Protection / Classification		
Insulation class	B	
Enclosure class, motor	IP55	IP

Diagrams

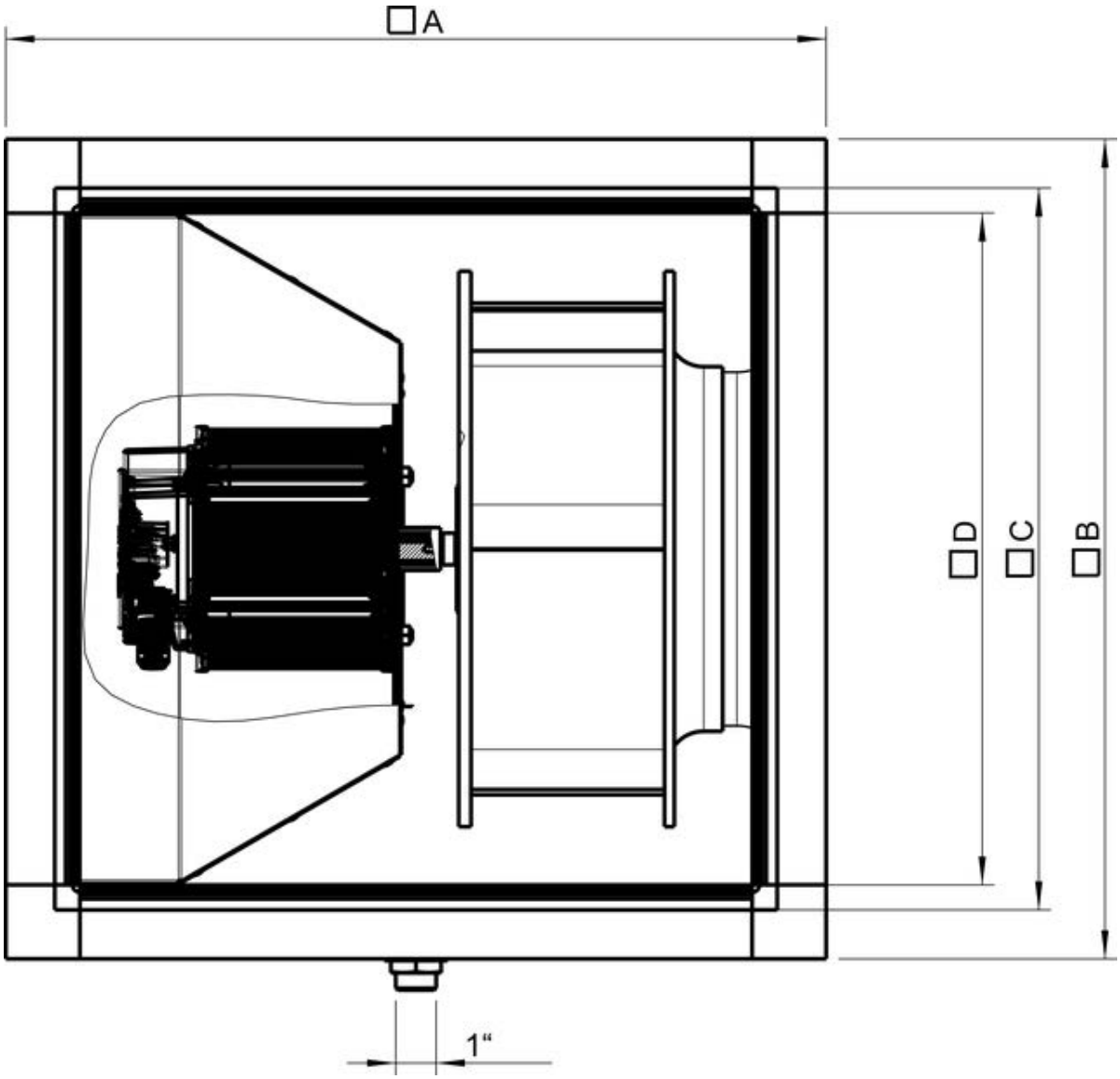
Diagrams



Hydraulic data

	Required point		Working point						
	Q [m³/s]	Ps [Pa]	Q [m³/s]	Ps [Pa]	P [W]	n [r.p.m.]	I [A]	SFP [W/(l/s)]	U [V]
Max efficiency			0,968	449	828	1439	1,39	0,855	400
User	1,39	200	1,39	200	726	1439	1,25	0,522	400

Dimensions



	□A	□B	□C	□D	øE	øF
MUB/T 042 450EC	670	670	590	548	454	286

Wiring

MUB-T 042 450 EC-Poti_37203_DE-EN.pdf (883,44kB)

Accessories

Electric accessories

CO2RT-R-D Transmitter (6993)
Presence detector/IR24-P (6995)
RT 0-30 Room Thermostat (5151)
HR1 Room Humidistat IP21 (5150)
MTP 10, 10K, Speed control (32731)
EC-Vent Room Unit (3018)
EC-Vent control board (3115)
MTP 20, on/off, 3-step (310220)
MTV-1/010 Controller 0..10V+ (30650)
CXE/AV Digital regulator (30674)
EC-Basic-T temperature (24805)
EC-Basic-U universal 0-10V (24806)
EC-Basic-H humidity (24807)
EC-Basic-CO2 and temperature (24808)
CXE/AVC Modbus (37256)
S-5EC/FRQ (76738)

Accessories

CCM outlet MUB042 d400 (311682)
CCM outlet MUB042 d500 (311683)
UGS 042/500 adapter flex. (4357)
FGV 042/586-586 flex. conn. (4605)
SDM Service Door MUB 042 comp. (32572)
WSD 042 (730x730x70) complete (31481)
M-SG 042/588x588 (301345)
CCM inlet MUB042 d400 (311780)
CCM inlet MUB042 d500 (311781)
WSG 042 MUB/T complete (36071)
SD-MUB Vibration pad set (37324)
CCMI outlet 042 d400 insul KIT (313845)
CCMI outlet 042 d500 insul KIT (313846)
TUNE-AHU-DE007-042-588x588-M0 (79881)

Documentation

IMO_MUB-EC_151126_DE,EN_003_314464_web.pdf (2,20MB)

EC-declaration of conformity AxZent-KBT-KBR-MUB-K-MUB-T-DVV_DE-EN.pdf (103,14kB)

EC-DEC_MUB_151021_DE,GB_001.pdf (580,98kB)

Acoustics

Mid-frequency band, Hz

	Hz	Tot	63	125	250	500	1k	2k	4k	8k
LwA Inlet	dB(A)	69	56	58	62	64	63	60	45	48
LwA Outlet	dB(A)	71	58	60	64	66	65	62	57	50
LwA Surrounding	dB(A)	54	41	43	47	49	48	45	40	33

Measuring point: qv = 0,95 m3/s, Ps = 455 Pa

AIR DESIGN
AIR HANDLING | HEAT RECOVERY

TECHNICAL SPECIFICATION SHEET

Project:	Marble Hill
Quotation Reference:	Q04879
Date:	12 Oct 2016

Customer Unit Reference	**AHU-1**	**Serving**	**Supply AHU - Option 1**	
Unit Reference	Q04879-01-0			
Model Reference	AD31260			
AHU Details				
Design Supply Air Volume	1.18	m^3/s		
External Static Pressure	150	Pa		
Unit Velocity	1.53	m/s		
Energy Use				
	Supply on Clean Filters		Overall	
Specific Fan Power	0.56		0.56	$kW/(m^3/s)$
AHU Construction			**Construction**	
Framework	30 mm		Unit Location	External
Framework Coating	Anodised		Weather Roof	Flat Roof
Panel Depth	25 mm		Baseframe	100 x 50 PFC
External Panel Finish	GWG Plastisol with film 0.9mm		Leakage Class	No specification
Internal Panel Finsh	Galv Sheet 0.9mm			
Panel Insulation	Mineral Wool 25mm			
Overall Unit Dimensions				
	Length	Width	Height	Weight (Per Unit)
	2310 mm	1240 mm	710 mm	441 kg
Section Weights and Dimensions				
Section No.	Length	Width	Height	Weight Approx +/-5%
A	2310 mm	1240 mm	710 mm	441 kg
Inlet Section			**Construction**	
Component	Damper - Louvre		Casing	Aluminium
Air Pressure Drop	8.00	Pa	Control	Extended Spindle

Accessories

Damper actuators to be provided and fitted by others.
Traffolyte Component label

Panel and Bag Filter			**Construction**	
Panel Clean PD	43	Pa	Panel Grade	G4 (EN779:2012)
Panel Mean	97	Pa	Panel Media	Card Frame-Cotton/Synthetic Media
Panel Recommended Dirty	150	Pa	Panel Size 1 / Qty	2 x 595 x 595 x 47 mm
Bag Clean PD	53	Pa	Bag Grade	F7 (EN779:2012)
Bag Mean	126	Pa	Bag Media	25mm Galv Frame/Glass Fibre
Bag Recommended dirty	200	Pa	Bag Size 1 / Qty	2 x 595 x 595 x 635mm

Accessories

Factory fitted Pressure Differential Tappings either side of the filter.
Traffolyte Component label

AIR DESIGN
AIR HANDLING | HEAT RECOVERY

TECHNICAL SPECIFICATION SHEET

Project:	Marble Hill
Quotation Reference:	Q04879
Date:	12 Oct 2016

Customer Unit Reference	**AHU-1**	**Serving**	**Supply AHU - Option 1**	
Unit Reference	Q04879-01-0			
Model Reference	AD31260			

Supply Fan - Single Fan			**Construction**	
Design Air Volume	1.18	m^3/s	Impeller	Backward Curve
Total Fan Resistance	432	Pa	Internal Isolation	Rubber
Fan Speed	1826	r/min		
Frequency @ Design Speed	43.50	Hz		
Max Frequency	50.0	Hz		
Maximum Fan Speed	2100	r/min		
Efficiency	59.16	%		

Motor Data			**Construction**	
FLC	1.90	Amps	Type	EC
Total Input Power	0.86	kW		
Motor Power	1.35	kW		
Motor Speed	2100	r/min		
Electrical Supply	400/3/50			

Accessories

Fan Healthy Contacts (For integration in to the controls system)
Traffolyte Component label
Traffolyte Warning label - Fan run down
Traffolyte Danger label - Safety
Traffolyte Warning label - Electrical Isolation
The fan motor will be wired with screened cable to an externally mounted IP66 rated isolator.

Access Section		
Length	400	mm
Access Side	Right	

Accessories

Traffolyte label - Access

Heating Coil			**Construction**	
Air On / Off	-5.0/20.0	°C/°C	Casing Material	Galvanised
Duty	35.74	kW	Tube Material	Copper
Water(Inlet)/(Outlet)	80.0/60.0	°C/°C	Fin Material	Aluminium
Water PD	14	kPa	Connection Size	1 x 1"(F) / 1 x 1"(R)
Water Flow Rate	0.44	L/s		
Air Pressure Drop	10.00	Pa		

Accessories

Valve and actuator to be supplied and fitted by others
Traffolyte Component label

Outlet Section			**Construction**	
Component	Spigot		Casing	Not Applicable
Air Pressure Drop	0.00	Pa	Control	Not Applicable

AIR DESIGN
AIR HANDLING | HEAT RECOVERY

TECHNICAL SPECIFICATION SHEET

Project:	Marble Hill
Quotation Reference:	Q04879
Date:	12 Oct 2016

Customer Unit Reference	**AHU-1**		**Serving**		**Supply AHU - Option 1**			
Unit Reference	Q04879-01-0							
Model Reference	AD31260							

AHU Acoustic Data:

Acoustic Data (Supply Fan Sound Power Level):								
Frequency(Hz)	63	125	250	500	1K	2K	4K	8K
Supply Fan Inlet Lw (dB):	71	72	76	74	67	62	60	58
Supply Fan Outlet Lw (dB):	71	73	78	78	77	70	66	60

Acoustic Data (Supply AHU Sound Resultant Level):								
Frequency(Hz)	63	125	250	500	1K	2K	4K	8K
Supply AHU Inlet Lw (dB)	68	68	72	69	61	54	49	46
Supply AHU Outlet Lw (dB)	69	71	76	76	74	65	56	50

Resultant AHU Breakout								
Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Supply Lw (dB)	63	64	64	51	49	42	39	34
Resultant AHU Level @ 3m	45	46	46	33	31	24	21	16
Overall AHU "A" weighted Breakout @ 3m	39							

The In-duct Sound Power Level Spectra are in dB re-1pW.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20 µPa and is presented for comparative purposes only.

Resultant sound pressure includes all selected AHU component losses within the above calculation.

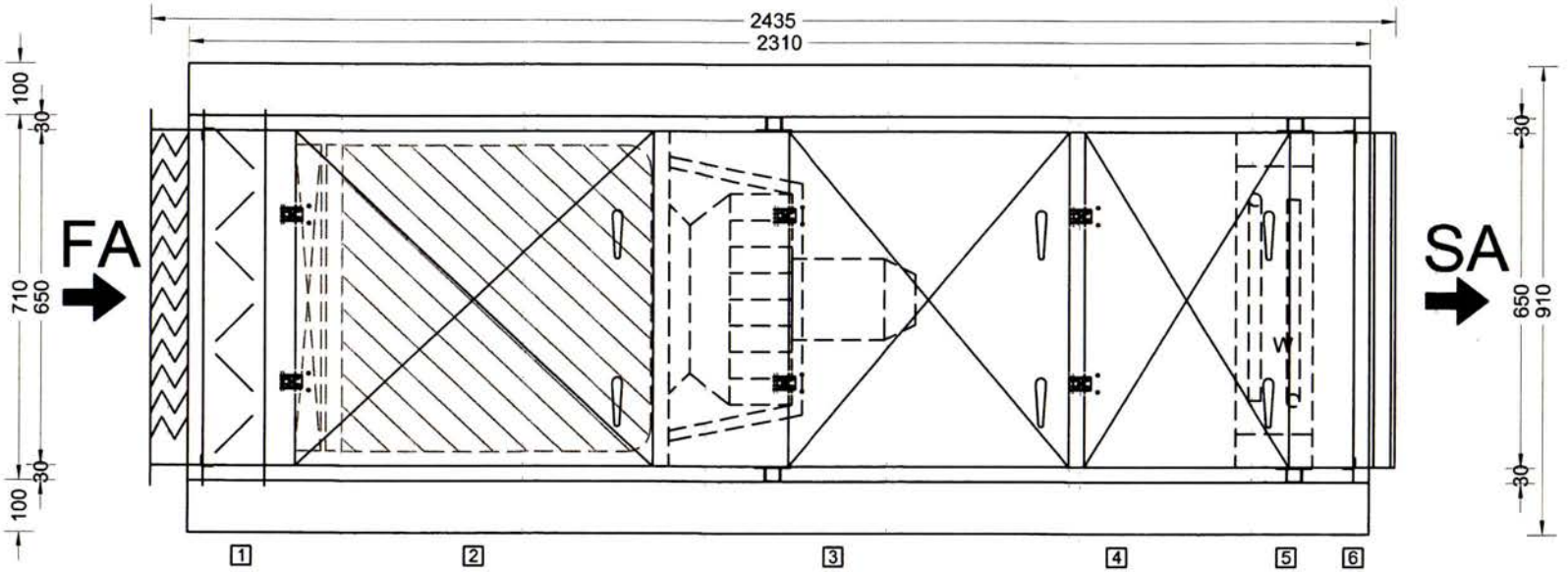
Unit Height including base 810mm

Unit Width 1240mm

Section A: Weight = 441Kgs

Components

1	Inlet
2	Panel & Bag Filter
3	Plug Fan
4	Access
5	Water Heating Coil
6	Outlet



Sect A

ELEVATION

AIRDESIGN (UK) LTD UNIT 46, PENSNETT TRADING ESTATE, KINGSWINFORD, WEST MIDLANDS, DY6 7US	T: +44 (0) 1384 275760 F: +44 (0) 1384 275810 E: SALES@AIR-DESIGN.COM	Project	: Marble Hill	Project ref	: 04879-1-0	Date	: 12 Oct 2016
		Unit reference	: Supply AHU - Option 1	Unit number	: 04879	Title	:
		Number off	: 1	Revision	: 0	Not to scale	

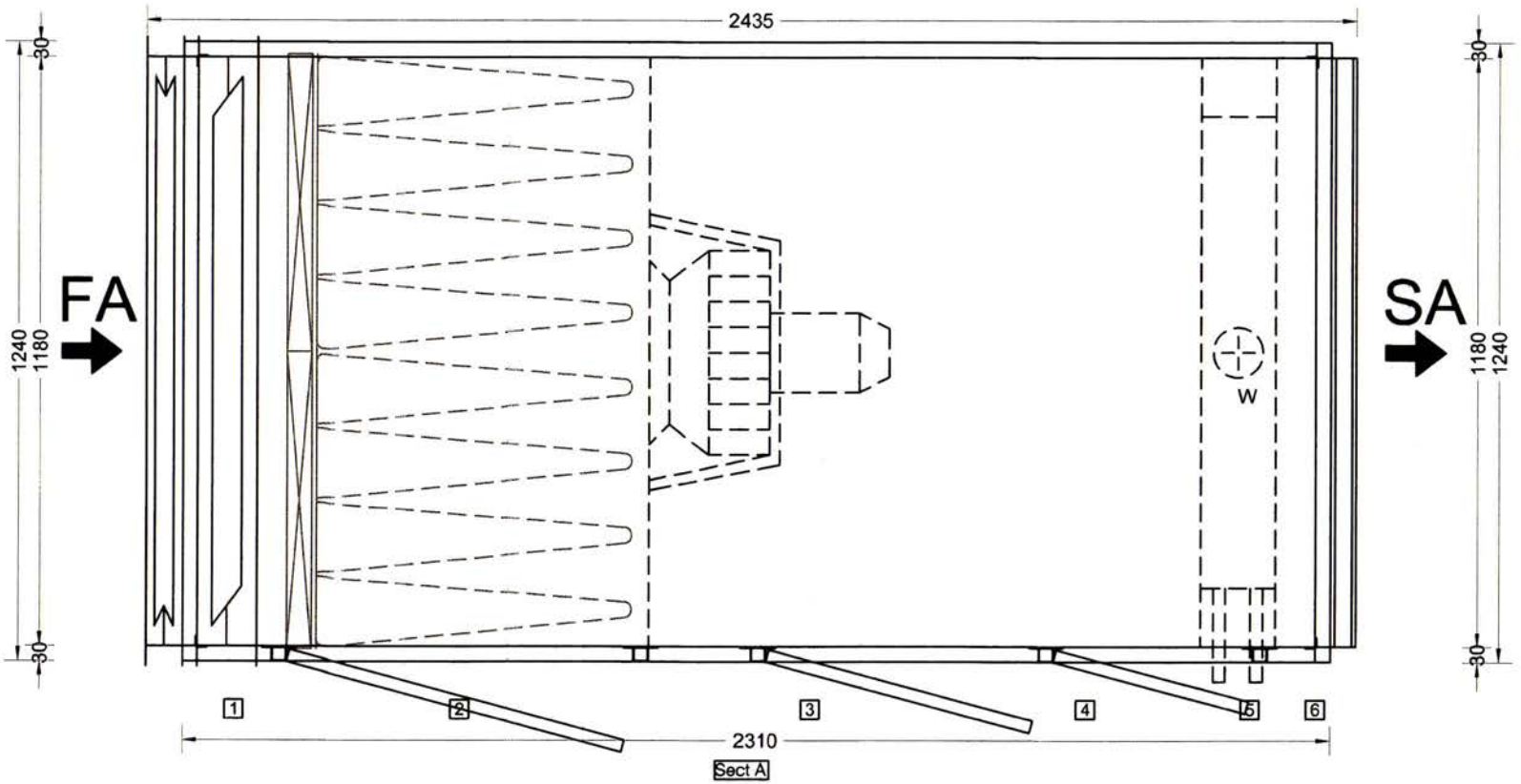
Unit Height including base 810mm

Unit Width 1240mm

Section A: Weight = 441Kgs

Components

1	Inlet
2	Panel & Bag Filter
3	Plug Fan
4	Access
5	Water Heating Coil
6	Outlet



PLAN DECK

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Project	:	Marble Hill	Project ref	:	04879-1-0	Date	: 12 Oct 2016
Unit reference	:	Supply AHU - Option 1	Unit number	:	04879	Title	:
Number off	:	1	Revision	:	0	Not to scale	

AIR DESIGN
AIR HANDLING | HEAT RECOVERY

ECO DESIGN READY

Unit No.: Q04879-01-0

Version:AIR DESIGN Select V 2.00
Issue Date: 1 December 2015

PROJECT DETAILS			
Project No.	04879	**Date:**	12 Oct 2016
Unit No.	Q04879-01-0	**Project Reference:**	Marble Hill

ECO design directive data			
Unit typology	UVU (Uni directional Ventilation Unit)		
Unit typology (operation)	NRVU (Non Residential Ventilation Unit), Airflow >1000m3/h		
Nominal flow rate (q_{nom})	1.18 m^3/s		
Supply		**Extract**	
Nominal flow rate (q_{nom_SUP})	1.18 m^3/s	Nominal flow rate(q_{nom_EXT})	Not applicable
Velocity	1.54 m/s	Velocity	Not applicable
Drive type	?	Drive type	Not applicable
Fan selection pressure	305 Pa	Fan selection pressure	Not applicable
Fan selection abs power	0.66 kW	Fan selection abs power	Not applicable
Fan static efficiency	53.55%	Fan static efficiency	Not applicable
Motor efficiency	100.00%	Motor efficiency	Not applicable
Drive efficiency	100.00%	Drive efficiency	Not applicable
Inverter efficiency	100.00%	Inverter efficiency	Not applicable
System power	0.66 kW	System power	Not applicable
System efficiency	54.84%	System efficiency	Not applicable
Internal pressure drop of ventilation components	61 Pa	Internal pressure drop of ventilation components ($\Delta p_{int\ stat\_EHA}$)	Not applicable
Internal power ventilation components	0.13 kW	Internal power ventilation components	Not applicable
Internal specific fan power of ventilation components	110.83 $W/m^3/s$	Internal specific fan power of ventilation components	Not applicable
Internal specific fan power of ventilation components (SFP_{int})		Not applicable	
Heat Recovery System			
Type		Not applicable	
Thermal efficiency (η_{t_nrvu}) EN308		Not applicable	
Filter correction			
Filter correction		Not applicable	

Requirement	**Calculated**	**ERP 2016**	**ERP 2018**
Internal specific fan power of ventilation components (SFP_{int_SUP})	110.83 $W/m^3/s$	250.00 $W/m^3/s$	230.00 $W/m^3/s$
SFPInt conform	2018		
SFPInt message			