

Technical Specification

Project name :	Airovision Builder version: E1.13 (12-4-2022)(R086)/A
Quotation no. : 6.1 AHU Technical Guide / 016	Eurovent identification number: 08.02.251
Eurovent identification number: 08.02.251	

GENERAL DATA

Customer reference	6.1.1 15000 10.10
Number off	1
Location	External (flat roof)
Delivery	In sections
AHU finish	Outside in standard colour (RAL 7035)
Product	Air handling unit
AHU configuration	Inline
Pallet option	Excluded
Lifting Beam	Included
Total weight (each)	kg 1214
(Radiated casework SWL)	dB(A) 60
ErP identification code	NRVU / UVU

Eurovent energy classification



Calculations conform to the Regulation for unidirectional ventilation unit (UVU) for delivery after 01.01.2018

Ecodesign 1253/2014 2018 UVU after 01.01.2018

Intermediate calculations

SFP int_limit (W/(m³/s))	230.0
SFP int (W/(m³/s))	77.7
n fan_limit (%)	49.9

Supply air unit data

Airflow (m³/s)	3.47
Static pressure (Pa)	665
p fan (kW)	3.58
n fan (%)	64.4
Fine Filter	Yes
dp Fine filter (Pa)	50

Check

Fan is selected with VSD	Passed
n fan_limit	Passed
SFP int	Passed
Filters equipped with pressure gauge	Passed
Total check	Passed

ACCESS DATA

Handle type	L-Handle	Pressure guard at positive pressure doors	Included
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SUPPLY DATA

Glasswool 23 kg/m ³ Type	39HQ 10.10	Air volume	m ³ /s	3.47
Casing construction	GP080 60 mm	Internal sheet		Galvanised 0.80mm
Design outdoor temperature	°C 9.0	External sheet		PUR-PA painted galvanized steel 0.80mm
Design outdoor temperature (summer)	°C 37.5	Insulation		Glasswool 23 kg/m ³
Design outdoor dew point (summer)	°C 16.8	Profile		Steel
Unit velocity	m/s 1.43	SFPv		
SFPe	kJ/m ³ 1.03		kJ/m ³	0.90

Mechanical performance according EN1886	Model box	D1	L1 (-400Pa)	L1 (+400Pa)	L1 (+700Pa)	F9	T2	TB2
	Real Unit		L2 (-400Pa)	L2 (+400Pa)	L2 (+700Pa)			

(Sound data supply SWL)	Hz	125	250	500	1k	2k	4k	8k	dB(A)
	dB	54	59	59	59	56	44	36	62
	dB	56	60	60	60	56	45	36	63
	dB	61	64	72	77	76	73	66	81

In direction of airflow, the unit comprises:

DELIVERY SECTION(S)

Section	Width (mm)	Height (mm)	Length (mm)	Baseframe (mm)	Weight (kg)	Weight (Lifting Beam) (kg)
1	1698	1698	3298	62	844	23
2	1698	1698	-382	62	39	
3	1698	1698	1378	62	330	

EXHAUST COMPONENTS

SUPPLY COMPONENTS

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SINGLE MIXING BOX

Opening Position		Top	Provided with:	
Number of Recirc openings		1	Opening product	None
Recirc opening, w x h	mm	1600 x 480	Damper	External, Opposed blades, Aluminium
Pressure drop	Pa	24	Number of Dampers	1
Actuator type		External	Damper Code	DMP1498x0378-200-162-2-D1Y2-0
Actuator Side		Left	Number of Drive shafts (Total) x Torque for one shaft	Nm 1 x 5
Access side		None	Provided with:	
Opening Position		Full face	Opening product	None
Number of openings		1	Damper	External, Opposed blades, Aluminium
Fresh air opening, w x h	mm	1600 x 1600	Number of Dampers	1
Pressure drop	Pa	2	Damper Code	DMP1498x1498-200-162-9-D1Y2-0
Actuator type		External	Number of Drive shafts (Total) x Torque for one shaft	Nm 1 x 15
Actuator Side		Left	Mixing ratio, winter (recirculation air/supply air) in %	0
Access side		None		

EXTRAS

1 x Coupling rod for dampers

COMBINED FILTER

Primary filter type		Panel (Synthetic)	Secondary filter type		Bag (Synthetic)
Test method		EN 779 / ISO 16890	Test method		EN 779 / ISO 16890
EN 779 Class		G4	EN 779 Class		F7
Eurovent Efficiency Class		NA	Eurovent Efficiency Class		E
ISO 16890 Class		ISO Coarse 60	ISO 16890 Class		ISO ePM1 50
Design pressure drop		Mean pd	Design pressure drop		Mean pd
Initial pressure drop	Pa	40	Initial pressure drop	Pa	50
Mean pressure drop	Pa	65	Mean pressure drop	Pa	100
Final pressure drop	Pa	90	Final pressure drop	Pa	150
Filter casing material		Galvanised	Filter casing material		Galvanised
Filter frame material		Galvanised	Withdrawal method		Side
Filter length	mm	48	Filter length	mm	500

Filters

592x592	Qty	4	592x592	Qty	4
592x287	Qty	4	287x592	Qty	2
287x287	Qty	1	592x287	Qty	2
			287x287	Qty	1

ACCESS

Access type	Door	Access side	Right
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EXTRAS

2 x Pressure gauge wall mounted, Magnehelic 2000

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CHILLED WATER COIL			Number of coils		1
Coil Code	P25-10AR-5R-58T-1373A-2.0PA-37NC-Cu 0.36/Al 0.10-2 1/2"		Fluid	100%	Water
Air volume	m ³ /s	3.47	Fluid flow rate	l/s	4.15
Duty	kW	87.20	Fluid on	°C	7.0
Air on db	°C	27.0	Fluid off	°C	12.0
Air on wb/RH	°C/%	19.0/47	Fluid content	l	41.19
Air off db	°C	12.0	Fluid pressure drop	kPa	47
Air off wb/RH	°C/%	11.6/95	Air pressure drop elim.	Pa	7
Sensible duty	kW	62.50	Connection type		Threaded (Right)
Air pressure drop coil (Dry)	Pa	58	Connection size		2 1/2"
Tubes/fins/connections	Cu / Al / Fe		Fin spacing	mm	2.0
Coil frame	Galvanised		Fin thickness	mm	0.10
Tube thickness	mm	0.36	Eliminator frame		Galvanised
Tube Diameter	mm	9.2388	Drainpan material		Stainless steel 304
Face velocity	m/s	1.7	Intermediate drainpan		No
Eliminator	Plastic – side withdrawal		Syphon Type		Negative
Drainpan type	Recessed (sloped)		Xin/Yin/Xout/Yout	mm/mm/ mm/mm	177/91/89/89
Drain pipes on drainpan	1				
Condensed Water	l/min	0.5			
Coil Weight	kg	117.30			

EXTRAS
1 x Syphone

HOT WATER COIL			Number of coils		1
Coil Code	P25-10AR-2R-58T-1390A-2.0PA-32NC-Cu 0.36/Al 0.10-2"		Fluid	100%	Water
Air volume	m ³ /s	3.47	Fluid flow rate	l/s	3.42
Duty	kW	70.83	Fluid on	°C	45.0
Air on db	°C	8.0	Fluid off	°C	40.0
Air off db	°C	25.0	Fluid content	l	19.54
Air pressure drop	Pa	17	Fluid pressure drop	kPa	16
Tubes/fins/connections	Cu / Al / Fe		Connection type		Threaded (Right)
Coil frame	Galvanised		Connection size		2"
Tube thickness	mm	0.36	Fin spacing	mm	2.0
Tube Diameter	mm	9.2388	Fin thickness	mm	0.10
Face velocity	m/s	1.6	Xin/Yin/Xout/Yout	mm/mm/ mm/mm	166/83/81/81
Coil Weight	kg	64.65			

EXTRAS
1 x Syphone

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STEAM HUMIDIFIER					
Air volume	m ³ /s	3.47	Humidifier supplier		Condair
Moisture addition	kg/h	58	Number of steam lances		2
Air on db	°C	25.0	Steam lance length	mm	1200
Air on moisture content	g/kg	2.8			
Air on rh	%	32			
Air off db	°C	25.7			
Air off moisture content	g/kg	6.6			
Air off rh	%	32			
Steam boiler type 1		EL60	Power each	kW	2 x 22.5
Max steam capacity, each	kg/h	60	Current each	A	2 x 32.5
Number off		1	Voltage	V	3x400V, 50/60Hz
Boiler weight, each	kg	80			
Section length	mm	960	Drainpan material		Stainless steel 304
Drainpan		Included			

Note: Electric boilers will be delivered separately (not mounted on the unit). Boiler weights not included in unit weights.

ACCESS			
Access type	Door	Access side	Right

EXTRAS
1 x Syphone

ANY COMPONENT		
Pressure drop	Pa	0

INLET PLENUM		
Air pressure drop	Pa	0

ACCESS			
Access type	Door	Access side	Right

FAN									
Fan type		K3G500PA2375							
Fan arrangement		Fan Wall - 2x1							
Air volume	m ³ /s	2 x 1.74		Installed motor power	kW	3.45			
External static pressure	Pa	392		Motor		Run			
Internal static pressure	Pa	270		Motor efficiency class		IE4			
Static pressure ISP+ESP	Pa	662		Motor nominal speed	rpm	1910			
System effect	Pa	2		Voltage	V	380-480			
Extra static pressure	Pa	0		Current	A	5.3			
Total static pressure	Pa	665		Abs. motor power incl. F.I.	kW	1.79			
Dynamic pressure	Pa	25		Control Signal (0-10V)	V	6.71			
Total pressure	Pa	689		Fan bulkhead material		Galvanised			
Fan speed	rpm	1508							
Max fan speed	rpm	1910							
Efficiency (total)	%	66							
Fan shaft power	kW	1.79							
(Fan sound data SWL)	Hz	63	125	250	500	1k	2k	4k	8k
Total	Inlet dB	40	59	64	65	71	71	69	61
	Outlet dB	43	61	64	72	77	76	73	66

FAN EXTRAS
Inlet cone measuring points



Date: 17/6/2022



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ACCESS			
Access type	Door	Access side	Right

EXTRAS	
2 x Measuring nipple, 6mm	1 x Fanwall terminal box

OUTLET			
Opening Position		Full face	
Number of openings		1	Provided with:
Opening, width x height	mm	1600 x 1600	Opening product
Pressure drop	Pa	2	Duct spigot