

Technical Specification

Project name :

Airovision Builder version: E1.13 (12-4-2022)(R086)/A

Quotation no. : 6.1 AHU Technical Guide / 012

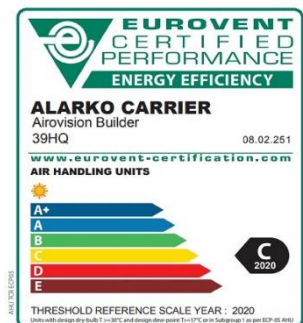
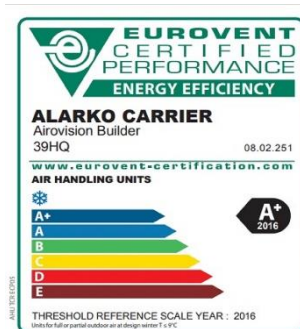
Eurovent identification number: 08.02.251

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GENERAL DATA

Customer reference	6.1.1 10000 08.08
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 850
(Radiated casework SWL)	dB(A) 62
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))	102.7
n fan_limit (%)	49.2

Supply air unit data

Airflow (m³/s)	2.78
Static pressure (Pa)	746
p fan (kW)	3.20
n fan (%)	64.8
Fine Filter	Yes
dp Fine filter (Pa)	67

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 08.08	Air volume	m ³ /s	2.78
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 1.81			
SFPe	kJ/m ³ 1.15	SFPv	kJ/m ³	1.02

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	57	60	62	60	55	46	37	63
	dB	58	61	62	60	55	46	37	64
	dB	62	65	73	80	76	75	67	83

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	1378	1378	3298	62	615	19
2	1378	1378	98	62	31	
3	1378	1378	898	62	202	

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	1280 x 480	Damper		External, Opposed blades, Aluminium
Pressure drop	Pa	25			
Actuator type		External	Number of Dampers		1
Actuator Side		Left	Damper Code		DMP1178x0378-200-162-2-D1Y1-0
Access side		None	Number of Drive shafts (Total) x Torque for one shaft	Nm	1 x 3
Opening Position		Full face	Provided with:		
Number of openings		1	Opening product		None
Fresh air opening, w x h	mm	1280 x 1280	Damper		External, Opposed blades, Aluminium
Pressure drop	Pa	3			
Actuator type		External	Number of Dampers		1
Actuator Side		Left	Damper Code		DMP1178x1178-200-162-7-D1Y1-0
Access side		None	Number of Drive shafts (Total) x Torque for one shaft	Nm	1 x 6
Mixing ratio, winter (recirculation air/supply air) in %	%	0			

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	54	Initial pressure drop	Pa	69
Mean pressure drop	Pa	79	Mean pressure drop	Pa	119
Final pressure drop	Pa	104	Final pressure drop	Pa	169
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
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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-46T-1070A-2.0PA-26NC-Cu 0.36/Al 0.10-2"		Fluid	100% Water
Air volume	m³/s	2.78	Fluid flow rate	l/s 2.99
Duty	kW	62.77	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 24.07
Air off db	°C	13.0	Fluid pressure drop	kPa 46
Air off wb/RH	°C/%	12.4/94		
Sensible duty	kW	46.67	Air pressure drop elim.	Pa 12
Air pressure drop coil (Dry)	Pa	86		
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	2.2		
Eliminator	Plastic – side withdrawal		Eliminator frame	Galvanised
Drainpan type	Recessed (sloped)		Drainpan material	Stainless steel 304
Drain pipes on drainpan	1		Intermediate drainpan	No
Condensed Water	l/min	0.4	Syphon Type	Negative
Coil Weight	kg	73.08	Xin/Yin/Xout/Yout	mm/mm/mm/mm 190/63/81/81

EXTRAS

1 x Syphone

HOT WATER COIL			Number of coils	1
Coil Code	P25-10AR-2R-46T-1070A-2.0PA-24NC-Cu 0.36/Al 0.10-2"		Fluid	100% Water
Air volume	m³/s	2.78	Fluid flow rate	l/s 2.74
Duty	kW	56.67	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 13.46
Air pressure drop	Pa	27	Fluid pressure drop	kPa 15
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	2.2	Xin/Yin/Xout/Yout	mm/mm/mm/mm 166/63/81/81
Coil Weight	kg	42.71		

EXTRAS

1 x Syphone

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STEAM HUMIDIFIER					
Air volume	m³/s	2.78	Humidifier supplier		Condair
Moisture addition	kg/h	47	Number of steam lances		2
Air on db	°C	25.0	Steam lance length	mm	1000
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		K3G400PI9205			Installed motor power	kW	2.50		
Fan arrangement		Fan Wall - 2x1			Motor		Run		
Air volume	m³/s	2 x 1.39			Motor efficiency class		IE4		
External static pressure	Pa	392			Motor nominal speed	rpm	2450		
Internal static pressure	Pa	350			Voltage	V	380-480		
Static pressure ISP+ESP	Pa	742			Current	A	3.8		
System effect	Pa	4			Abs. motor power incl. F.I.	kW	1.60		
Extra static pressure	Pa	0			Control Signal (0-10V)	V	7.13		
Total static pressure	Pa	746			Fan bulkhead material		Galvanised		
Dynamic pressure	Pa	38							
Total pressure	Pa	784							
Fan speed	rpm	2113							
Max fan speed	rpm	2450							
Efficiency (total)	%	67							
Fan shaft power	kW	1.60							
(Fan sound data SWL)	Hz	63	125	250	500	1k	2k	4k	8k
Total	Inlet dB	40	62	65	68	72	70	71	62
	Outlet dB	43	62	65	73	80	76	75	67

FAN EXTRAS
Inlet cone measuring points

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

OUTLET			
Opening Position		Full face	
Number of openings		1	Provided with:
Opening, width x height	mm	1280 x 1280	Opening product
Pressure drop	Pa	2	Duct spigot