

Date: 18/5/2012

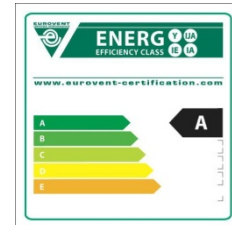
Technical Specification

Project name : Friends House London		Software version: E4.34 (25-01-2012)(R89)/A
Quotation no. : 8399-011-03 / 003		Eurovent identification number: 08.02.365

GENERAL DATA

Product Air handling unit
 Number off 2
 Location External (sloping roof)
 Delivery In sections
 AHU finish Outside in standard colour (RAL 7035)

Eurovent energy classification



Customer reference

AHU01+02 : Thermal Wheel

AHU configuration Double deck (opposite)
 Total weight (each) kg 4216
 Radiated casework SWL dB(A) 67

SFPe kJ/m3 2.46 SFPv kJ/m3 2.19 (L2A FIGURE)

ACCESS DATA

Handle type L-Handle

EXHAUST DATA

Type 39HQ 14.08 Air volume m3/s 6.00
 Casing construction RP080 Internal sheet Polyester coated steel 0.80mm
 60 mm
 Insulation Rockwool 70-90 kg/m3 External sheet Polyester coated steel 0.80mm
 Unit velocity m/s 2.20
 SFPe kJ/m3 1.01 SFPv kJ/m3 0.96

Mechanical performance according EN1886	Model box	D1	L2	F9	T2	TB2	(M)	
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Sound data exhaust SWL	Hz	125	250	500	1k	2k	4k	8k	dB(A)
Inlet Full face	dB	77	83	77	66	61	53	48	78
Unit outlet	dB	73	68	54	44	40	39	36	62

SUPPLY DATA

Type 39HQ 14.08 Air volume m3/s 6.30
 Casing construction RP080 Internal sheet Polyester coated steel 0.80mm
 60 mm
 Design outdoor temperature °C -4.0 External sheet Polyester coated steel 0.80mm
 Unit velocity m/s 2.31 Insulation Rockwool 70-90 kg/m3
 SFPe kJ/m3 1.50 SFPv kJ/m3 1.27

Mechanical performance according EN1886	Model box	D1	L2	F9	T2	TB2	(M)	
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Sound data supply SWL	Hz	125	250	500	1k	2k	4k	8k	dB(A)
Inlet Full face	dB	67	70	55	36	31	22	16	62
Unit outlet	dB	86	86	82	81	77	70	63	85

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In direction of airflow, the unit comprises:

DELIVERY SECTION(S)

Section	Width (mm)	Height (mm)	Length (mm)	Baseframe (mm)	Weight (kg)
1	2338	1378	2018	62	952
2	2338	1378	1218	62	503
3	2338	1378	1538	62	441
4	2658	2818	1538	62	1061
5	2338	1378	2449	62	597
6	2338	1378	1489	62	661

EXHAUST COMPONENTS

INLET

Opening, width x height	mm	2178 x 1218	Provided with:	
Pressure drop	Pa	0	Opening product	Duct spigot

FILTER

Filter type		Bag (Synthetic)	Withdrawal method	Side
Filter class		G4	Test method	Weight arrestance acc. EN779
Initial pressure drop	Pa	29		
Design pressure drop	Pa	58		
Final pressure drop	Pa	86		
Filter frame material		Galvanised	Filter length	mm 360

ACCESS

Access type	Door	Access side	Left
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EXTRAS

1 x Pressure gauge wall mounted, Minihelic 5000 (0-250 Pa)	2 x Measuring nipple, 6mm
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FAN

Fan type		TZAF 500 FF A							
Fan arrangement		Dual		Installed motor power	kW	2 x 4.00			
Air volume	m3/s	2 x 3.00		Motor		Run			
Fan outlet velocity	m/s	7.37		Motor efficiency class		IE2			
System effect	Pa	65		Motor speed	rpm	1500			
External static pressure	Pa	300		Voltage	V	400/690			
Total static pressure	Pa	576		Current	A	2 x 8.1			
Dynamic pressure	Pa	33		Abs. motor power incl. F.I.	kW	2 x 3.02			
Total pressure	Pa	609							
Fan speed	rpm	1257							
Efficiency	%	80							
Fan shaft power	kW	2 x 2.28							

Fan sound data SWL	Hz	63	125	250	500	1k	2k	4k	8k
Total	Inlet dB	83	79	85	80	73	69	63	58
	Outlet dB	83	81	82	78	76	70	64	57

FAN EXTRAS

Drive guard - closed	Flexible connection single skin
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ACCESS

Access type	Door	Viewport	Included
Access side	Left		

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EXTRAS

1 x Light armature, Bulleye PH-PL 9 Watt - 230V, excl. wiring 1 x Light switch, incl. wiring to armature
 2 x Isolator 3P max.15A, incl. Aux.cont and EMC wiring DOL to motor

SINGLE MIXING BOX

Recirc opening, w x h	mm	418 x 2018	Provided with:	
Pressure drop	Pa	33	Opening product	Duct spigot
			Damper	Internal, Parallel blades, Suitable for actuator, Aluminium
Fresh air opening, w x h	mm	2178 x 1218	Provided with:	
Pressure drop	Pa	0	Opening product	Duct spigot
Mixing ratio, winter (recirc air/supply air) in %	%	80		

ACCESS

Access type Door Access side Left

HEAT WHEEL

Rotor situation	Build-in with inspection				
Winter conditions					
Exhaust air on	°C/%RH	21.0 / 40	Exhaust pressure drop	Pa	104
Exhaust air off	°C/%RH	2.2 / 95			
Summer conditions					
Exhaust air on	°C/%RH	24.0 / 60	Exhaust pressure drop	Pa	104
Exhaust air off	°C/%RH	27.7 / 49			

INLET

Opening, width x height	mm	2178 x 1218	Provided with:	
Pressure drop	Pa	6	Opening product	Duct spigot
			Damper	Internal, Opposed blades, Suitable for actuator, Aluminium

ATTENUATOR

Length	mm	800							
Pressure drop	Pa	39	Sound data according						
Insertion loss	Hz	63	125	250	500	1k	2k	4k	8k
	dB	4	6	12	22	31	28	20	13

OUTLET

Opening, width x height	mm	2240 x 1280	Provided with:	
Pressure drop	Pa	4	Opening product	Louvre

SUPPLY COMPONENTS

INLET

Opening, width x height	mm	2240 x 1280	Provided with:	
Pressure drop	Pa	12	Opening product	Louvre
			Damper	Internal, Opposed blades, Suitable for actuator, Aluminium

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FILTER									
Filter type		Bag (Synthetic)			Withdrawal method				Side
Filter class		G4			Test method				Weight arrestance acc. EN779
Initial pressure drop	Pa	32							
Design pressure drop	Pa	62							
Final pressure drop	Pa	91							
Filter frame material		Galvanised			Filter length	mm		360	
ACCESS									
Access type		Door			Access side				Right
EXTRAS									
1 x Pressure gauge wall mounted, Minihelic 5000 (0-250 Pa)					2 x Measuring nipple, 6mm				

ATTENUATOR									
Length	mm	640							
Pressure drop	Pa	43			Sound data according			ISO 7235	
Insertion loss	Hz	63	125	250	500	1k	2k	4k	8k
	dB	4	5	10	18	26	23	17	13

HEAT WHEEL									
Rotor type		Enthalpy			Rotor frame material			Aluminium	
Rotor material		Aluminium			Rotor purging sector			Included	
Rotor situation		Build-in with inspection			Delivery requirement			Single section	
Component mountings		Galvanised							
Winter conditions									
Supply air on	°C/%RH	-5.0 / 90			Supply pressure drop	Pa		110	
Supply air off	°C/%RH	13.0 / 44			Supply latent efficiency	%		47	
Supply dry efficiency	%	69							
Total duty	kW	172.32							
Summer conditions									
Supply air on	°C/%RH	29.0 / 49			Supply pressure drop	Pa		110	
Supply air off	°C/%RH	25.5 / 59			Supply latent efficiency	%		21	
Supply dry efficiency	%	70			Dry efficiency at equal airflow	%		70	
Total duty	kW	31.16			Housing insulated			No	
Housing coated		No							
ACCESS									
Access type (x 4)		Door			Access side				Right
EXTRAS									
1 x Basic heat-wheel control, 370W, IP54									

SINGLE MIXING BOX									
Recirc opening, w x h	mm	578 x 2178			Provided with:				
Pressure drop	Pa	15			Opening product			Duct spigot	
Fresh air opening, w x h	mm	2178 x 1218			Provided with:				
Pressure drop	Pa	0			Opening product			Duct spigot	
Mixing ratio, winter (recirc air/supply air) in %	%	80							
ACCESS									
Access type		Door			Access side				Right

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FILTER					
Filter type		Bag (Synthetic)	Withdrawal method		Front
Filter class		F7	Test method		0.4 µm acc. EN779
Initial pressure drop	Pa	120			
Design pressure drop	Pa	160			
Final pressure drop	Pa	200			
Filter frame material		Galvanised	Filter length	mm	500
EXTRAS					
1 x Pressure gauge wall mounted, Minihelic 5000 (0-250 Pa)			2 x Measuring nipple, 6mm		

CHILLED WATER COIL					
Air volume	m3/s	6.30	Number of coils		1
Duty	kW	137.68	Fluid	20%	Ethylene
Air on db	°C	29.0	Fluid flow rate	l/s	5.86
Air on wb/RH	°C/%	20.9 / 48	Fluid on	°C	6.0
Air off db	°C	16.0	Fluid off	°C	12.0
Air off wb/RH	°C/%	15.0 / 91	Fluid pressure drop	kPa	28
Air pressure drop coil (Wet)	Pa	151	Air pressure drop elim.	Pa	24
Tubes/fins/connections		Cu / Al / Cu	Connection type		Threaded (Right)
Coil frame		Standard	Connection size		2 1/2"
Tube thickness	mm	Standard	Fin spacing	mm	3.0
Tube Diameter	mm	13.2	Fin thickness	mm	0.12
Face velocity	m/s	2.80	Eliminator		Plastic
Drainpan type		Sloping (cleanable)	Drainpan material		Stainless steel 304

COIL W/D SPACER

INSPECTION

ACCESS			
Access type	Door	Access side	Right

HOT WATER COIL					
Air volume	(lphw)		Number of coils		1
Duty	m3/s	6.30	Fluid	100%	Water
Air on	kW	56.60	Fluid flow rate	l/s	1.36
Air off	°C	12.0	Fluid on	°C	40.0
Air pressure drop	°C	19.4	Fluid off	°C	30.0
	Pa	25	Fluid pressure drop	kPa	19
Tubes/fins/connections		Cu / Al / Fe	Connection type		Threaded (Right)
Coil frame		Standard	Connection size		2 1/2"
Tube thickness	mm	Standard	Fin spacing	mm	2.0
Tube Diameter	mm	13.2	Fin thickness	mm	0.12
Face velocity	m/s	2.72			

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FAN									
Fan type		TZAF 500 FF A							
Fan arrangement		Dual					Installed motor power	kW	2 x 5.50
Air volume	m3/s	2 x 3.15					Motor		Run
Fan outlet velocity	m/s	7.74					Motor efficiency class		IE2
System effect	Pa	18					Motor speed	rpm	1500
External static pressure	Pa	300					Voltage	V	400/690
Total static pressure	Pa	905					Current	A	2 x 10.9
Dynamic pressure	Pa	36					Abs. motor power incl. F.I.	kW	2 x 4.74
Total pressure	Pa	941							
Fan speed	rpm	1505							
Efficiency	%	81							
Fan shaft power	kW	2 x 3.66							
Fan sound data SWL									
Total	Hz	63	125	250	500	1k	2k	4k	8k
	Inlet dB	84	80	88	84	78	76	69	64
	Outlet dB	92	86	86	82	81	77	70	63
Opening, width x height	mm	640 x 640				Provided with:			
Pressure drop	Pa	0				Opening product		Duct spigot	
FAN EXTRAS									
Drive guard - closed						Flexible connection single skin			
ACCESS									
Access type		Door				Viewport		Included	
Access side		Right							
EXTRAS									
1 x Light armature, Bulleye PH-PL 9 Watt - 230V, excl. wiring						1 x Light switch, incl. wiring to armature			
2 x Isolator 3P max.15A, incl. Aux.cont and EMC wiring DOL to motor									