

TECHNICAL DATA

Note : The following information is provided as a guide only and must be checked at time of order

BASIC AHU INFORMATION

Model reference : MA50/10/S	Overall Width : 4700 mm
Location : Internal	Overall Height* : 1800 mm
Quantity : 1	Overall Length : 5600 mm
Weight : 3786 kg	Base : 150 mm

*Note : The overall height shown includes the base and roof, if fitted.
However the overall unit dimensions, shown above, may exclude any externally fitted components such as inverters, isolators, coil stubs, spigots, dampers, louvres or cowls.
Please refer to the separate AHU sketch.

Supply volume : 5.69 m ³ /s	Extract volume : 5.69 m ³ /s
External static : 500 Pa	External static : 500 Pa
Supply components : (in direction of airflow)	Extract components : (in direction of airflow)

001 Inlet	011 Fan
002 LPHW Frost Heater	012 Panel Filters
003 Access	013 Access
004 Panel & Rigid Filters	014 Heat Recovery Coil
005 Heat Recovery Coil	015 Access
006 Access	016 Outlet
007 Fan	
008 CW Cooling Coil	
009 Access	
010 LPHW Main Heater	

001 Inlet

Damper : External	Air volume : 5.69 m ³ /s
Damper material : Galvanised MS	Additional component : None
Damper blade type : Flat, tip & side seals	
Operation : Motorised	

002 LPHW Frost Heater

Air volume : 5.69 m ³ /s	Air On Dry Bulb : -10.00 °C
Face Velocity : 2.15 m/s	Air Off Dry Bulb : 5.0 °C
Tube material : Copper	Duty : 103.40 kW
Fin material : Aluminium	Medium : LPHW
Casing material : Galvanised	Flow temperature : 70.00 °C
No of sections : 1	Return temperature : 50.00 °C
Rows : 2	Flow rate : 1.26 l/s
Fin spacing : 6.35mm (4/inch)	Water p.d. : 15 KPa
Included extras : Test point	

003 Access

Included extras :
Bulkhead light - internally maintainable
View port

004 Panel & Rigid Filters

Type : Pleated panel	Withdrawal : Front
Grade : G4	Arrangement : 3.5W x 2.5H
Type : Rigid compact	
Grade : F9	
Included extras : Magnahelic gauges (standard x2)	
Test point	

005 Heat Recovery Coil

Air volume : 5.69 m ³ /s	Air On Dry Bulb : 5.00 °C
Face Velocity : 2.00 m/s	Air Off Dry Bulb : 17.2 °C
Tube material : Copper	Duty : 84.10 kW
Fin material : Aluminium	Medium : LPHW
Casing material : Galvanised	Flow temperature : 20.10 °C
No of sections : 1	Return temperature : 8.40 °C
Rows : 9	Flow rate : 1.72 l/s
Fin spacing : 2.12mm (12/inch)	Water p.d. : 63 KPa
Included extras : Test point	
Non-Std extras : 68% Efficiency - ERP 2018 Compliant	

006 Access

007 Fan

Type : Plenum	Drive : Direct driven
Fan arrangement : Single Fan	Motors : Single motor
Duty % per fan : 100 %	Motor arrangement : Motor at Back (Single)
Air volume per fan : 5.69 m ³ /s	Motor Type : IE2
Outlet velocity : m/s	Poles : 6
Ext. static pressure : 500 Pa	Motor Speed : 970 rpm
Fan total pressure : 859 Pa	Motor power rating : 11.00 kW
Impeller : Backward Curve	FLC : 22.68 Amps
Impeller dia. : 800 mm	Operating frequency : 56.88 Hz
Fan Speed : 1103 rpm	Supply voltage : 400V/3Ph/50Hz
Total efficiency : 77.57 %	Shaft Power : 6.3 kW

Frequency (Hz) :	63	125	250	500	1k	2k	4k	8k
Fan discharge SWL levels (dB) :	80	87	88	93	91	89	81	78

Note: Fan conforms to ErP-directive 2015

SWL levels include +4 dB fan in casework adjustment

Fan extras :

Motor extras :

Inlet guard
Door guard
Inlet flex

Thermistors included
Isolator fitted & wired

Included extras :

Bulkhead light - internally maintainable
View port
Test point

008 CW Cooling Coil

Air volume : 5.69 m ³ /s	Air On Dry Bulb : 32.00 °C
Face Velocity : 2.19 m/s	Air On Wet Bulb : 23.7 °C
Tube material : Copper	Air On RH : 48.1 %
Fin material : Aluminium	Air Off Dry Bulb : 23.0 °C
Casing material : Galvanised	Air Off Wet Bulb : 20.1 °C
No of sections : 1	Air Off RH : 76.7 %
Rows : 2	Duty : 88.53 kW
Fin spacing : 2.54mm (10/inch)	Medium : Chilled water
Flow Rate : 2.35 l/s	Glycol : 0 %
Water p.d. : 20 KPa	Flow temperature : 7.00 °C
Eliminators : Fitted	Return temperature : 16.00 °C
Drain tray type : Fixed	
Drain tray material : Stainless Steel 304	
Included extras : Test point	

009 Access

010 LPHW Main Heater

Air volume : 5.69 m ³ /s	Air On Dry Bulb : 5.00 °C
Face Velocity : 2.15 m/s	Air Off Dry Bulb : 21.0 °C
Tube material : Copper	Duty : 110.30 kW
Fin material : Aluminium	Medium : LPHW
Casing material : Galvanised	Flow temperature : 70.00 °C
No of sections : 1	Return temperature : 50.00 °C
Rows : 2	Flow rate : 1.34 l/s
Fin spacing : 5.08mm (5/inch)	Water p.d. : 8 KPa
Included extras : Test point	

011 Fan

Type : Plenum	Drive : Direct driven						
Fan arrangement : Single Fan	Motors : Single motor						
Duty % per fan : 100 %	Motor arrangement : Motor at Back (Single)						
Air volume per fan : 5.69 m ³ /s	Motor Type : IE2						
Outlet velocity : m/s	Poles : 6						
Ext. static pressure : 500 Pa	Motor Speed : 970 rpm						
Fan total pressure : 798 Pa	Motor power rating : 11.00 kW						
Impeller : Backward Curve	FLC : 22.68 Amps						
Impeller dia. : 800 mm	Operating frequency : 55.54 Hz						
Fan Speed : 1077 rpm	Supply voltage : 400V/3Ph/50Hz						
Total efficiency : 77.77 %	Shaft Power : 5.84 kW						
Frequency (Hz) : 63	125	250	500	1k	2k	4k	8k
Fan discharge SWL levels (dB) : 79	86	88	92	90	89	81	78

Note: Fan conforms to ErP-directive 2015
 Fan extras :
 Inlet guard
 Door guard
 Inlet flex
 Included extras :
 Bulkhead light - internally maintainable
 View port
 Test point

Motor extras :
 Thermistors included
 Isolator fitted & wired

SWL levels include +4 dB fan in casework adjustment

012 Panel Filters

Type : Pleated panel	Withdrawal : Side
Grade : G4	Arrangement : 3.5W x 2.5H
Included extras : Magnahelic gauge (standard x1)	

013 Access

Included extras : Bulkhead light - internally maintainable View port

014 Heat Recovery Coil

Air volume : 5.69 m ³ /s	Air On Dry Bulb : 23.00 °C
Face Velocity : 2.33 m/s	Air On Wet Bulb : 16.20 °C
Tube material : Copper	Air On RH : 49.8 %
Fin material : Aluminium	Air Off Dry Bulb : 11.8 °C
Casing material : Galvanised	Air Off Wet Bulb : 11.6 °C
No of sections : 1	Air Off RH : 97.6 %
Rows : 10	Duty : 84.10 kW
Fin spacing : 2.12mm (12/inch)	Medium : Chilled water
Flow Rate : 1.72 l/s	Glycol : 0 %
Water p.d. : 60 KPa	Flow temperature : 8.40 °C
Eliminators : Fitted	Return temperature : 20.10 °C
Drain tray type : Fixed	
Drain tray material : Stainless Steel 304	
Included extras : Test point	
Non-Std extras : 68% Efficiency - ERP 2018 Compliant	

015 Access

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016 Outlet

Damper : External	Air volume : 5.69 m ³ /s
Damper material : Galvanised MS	Additional component : None
Damper blade type : Flat, tip & side seals	
Operation : Motorised	

SPECIFIC FAN POWER

Supply fan	Extract fan
Filter conditions : Clean	Filter conditions : Clean
Fan efficiency : 78 %	Fan efficiency : 78 %
Drive efficiency : 100 %	Drive efficiency : 100 %
Inverter efficiency : 98 %	Inverter efficiency : 98 %
Motor efficiency : 89 %	Motor efficiency : 89 %
Air volume : 5.69 m ³ /s	Air volume : 5.69 m ³ /s
AHU SFP : 2.18 W/l/s	

Project Reference : **Hoxton Holborn**

Unit Reference : **AHU 1**

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ECODESIGN DIRECTIVE DATA

Unit typology : **BVU (Bi-directional Ventilation Unit)**

Operation : **NRVU (Non Residential Ventilation Unit), Airflow >1000m³/h**

Heat recovery type : **None** Thermal efficiency of heat recovery system EN308 : **0.00** %

Requirements for internal specific fan power of ventilation components

ERP 2016 : **740.00** W/m³/s

ERP 2018 : **650.00** W/m³/s

SFPInt message :

Calculated SFPInt : **-38.33** W/m³/s

SFPInt conforms to : **2018**