

## TECHNICAL SPECIFICATION

### PROJECT DETAILS

<b>Project Name</b>	Royal Free - Imaging	<b>Quote No.</b>	AHS 23108
<b>Unit Reference</b>	AHU/5 01	<b>Revision</b>	0
<b>Unit Model</b>	AIR FLEX 85 F	<b>Date</b>	16 Feb 2022

### MECHANICAL STANDARD ( BS EN 1886 )

#### CASING

Strength	D1
Air Leakage	L2

#### THERMAL

Transmittance	T3
Bridging	TB3

### PERFORMANCE DATA

#### SUPPLY

Air Volume	5.688	m <sup>3</sup> /s
Ext. Stat. Pressure	400	Pa

#### EXTRACT

Air Volume	5.688	m <sup>3</sup> /s
Ext. Stat. Pressure	400	Pa

#### ERP Compliance

Internal SFP	656.60	W/m <sup>3</sup> /s
ERP Compliance	2018	

### UNIT CONSTRUCTION

#### PANEL

Nom. Thickness	50	mm
Outer Material	Goosewing Grey Coated Steel	
Inner Material	Coated Steel	
Insulation Type	Polyurethane Foam	

#### GENERAL

Location	External
Roof Type	Pitched Roof
Base Type	Full
Base Material	150x75

### UNIT DIMENSIONS

#### BOTTOM DECK

Width	1,950	mm
Height	2,200	mm
Length	7,050	mm
Base	150	mm

#### TOP DECK

Width	1,950	mm
Height	2,200	mm
Length	6,500	mm
Base		mm

#### O/ALL

Width	3,750	mm
Height	2,450	mm
Length	7,050	mm
Weight +/- 10%	4,982	kg

### SPECIFIC FAN POWER

#### SUPPLY FAN

Filter Condition	Clean	
Absorbed Power	5.97	kW
Drive Efficiency	100	%
Inverter Efficiency	100	%
Motor Efficiency	100	%

#### EXTRACT FAN

Filter Condition	Clean	
Absorbed Power	4.78	kW
Drive Efficiency	100	%
Inverter Efficiency	100	%
Motor Efficiency	100	%

#### SFP<sub>v</sub>

1.90 w/l/s

### NOTES

AHU will be delivered to site in 5 sections. Should further splits be required additional costs and length will be incurred.

**SUPPLY PATH**

**INLET SECTION** Component 001

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.790	m/s
Conn. Size	1850 x 2100 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1620 x 1960 mm			
		Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

- LED Bulkhead Light c/w Switch
- Test Point
- Lifting Points Fitted to AHU Base
- Large Damper Operated by 2no. Actuators

**FROST COIL SECTION** Component 002

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	5.688	m <sup>3</sup> /s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	-2.00	°C	Inlet Temp.	80.00	°C	Fin Material	None	
Air off (db)	2.00	°C	Outlet Temp.	60.00	°C	Casing Material	Galv Steel	
Total Duty	42	kW	Flow Rate	0.50	l/s	Header Material	Copper	
Air Press. Drop	4	Pa	Fluid Press. Drop	19	kPa	Inlet Conn. Size	1 1/4"	BSPM
Face Velocity	1.74	m/s	Internal Volume	51.17	l	Outlet Conn. Size	1 1/4"	BSPM
						Dims (WxH)	1810x 2090 mm	
						Dims (D)	190 mm	

**FILTER SECTION** Component 003

AIR SIDE			SPECIFICATION		DETAILS	
Air Volume	5.688	m <sup>3</sup> /s	Type	Panel	Qty	12
Face Velocity	1.60	m/s	Grade	M5 (Metal Case)	Nom. Size (WxHxD)	610x508x50 mm
Air Pd ( Clean )	33	Pa	Withdrawal	Front		
Air Pd ( Average )	67	Pa				
Air Pd ( Dirty )	100	Pa				

**INCLUDED OPTIONS / NOTES**

- Minihelic Gauge (0-250Pa)
- LED Bulkhead Light c/w Switch
- Test Point
- Section Split

**PLATE HEAT EXCHANGER SECTION** Component 004

WINTER ( F/A )			WINTER ( EXHAUST )			CONSTRUCTION	
Air Volume	5.688	m <sup>3</sup> /s	Air Volume	5.688	m <sup>3</sup> /s	Material	Standard
Air on (db)	2.00	°C	Air on (db)	21.00	°C	Bypass Damper	Yes
RH	50	%	RH	50	%		
Air off (db)	17.20	°C	Air off (db)	8.20	°C		
RH	18	%	RH	100	%		
Total Duty	104.5	kW	Total Duty	104.5	kW		
Air Press. Drop	86	Pa	Air Press. Drop	89	Pa		
Tot. Efficiency	79.8	%	Tot. Efficiency	79.8	%		
Dry Efficiency	73.22	%	Dry Efficiency	73.22	%		

**AHU DRAIN TRAY**

Material	St/St (304)	Model Type	Fixed
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**INCLUDED OPTIONS / NOTES**

Lifting Points Fitted to AHU Base  
 Test Point  
 Section Split  
 Section Split

**SUPPLY FAN SECTION** Component 005

DETAILS			FAN			MOTOR		
Air Volume	5.688	m3/s	Type	Plenum-EC		Qty	SINGLE	
Ext. Static Pressure	400	Pa	Impellor	Backward Curved		Power	2.50	kW
Tot. Static Pressure	906	Pa	Qty	Dual		Speed	2284	RPM
Starting Method	Speed Controller		Operation	25	%	Full Load Current	11.51	Amp
A. V. Type	N/A		Model	GR40		Electrical Supply	400/3/50	
			Speed	2284	RPM	Efficiency Class	IE5	
			Max. Speed	2500	RPM	Control	Modbus Module	
			Absorbed Power	7.40	kW			
			Total Efficiency	81.50	%			

Sound Power Lw	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Fan Inlet (dB)	81	83	82	80	75	73	69	67
Fan Outlet (dB)	84	88	90	87	85	81	75	72

Note : Fan manufacturer data used in accordance with DIN 463 Part 38 & 39, BS 848 Part 2 & ISO 5136. A correction of +6dB should be applied across all octave bands for unit casing adjustment

**INCLUDED OPTIONS / NOTES**

Inlet Guard  
 Door Guard  
 0-10V Speed Control Required  
 LED Bulkhead Light c/w Switch  
 Test Point  
 Galvanised Back Draught Dampers  
 Galvanised Back Draught Dampers  
 Lifting Points Fitted to AHU Base  
 Pre-wired isolator  
 Pre-wired isolator  
 Pre-wired isolator  
 Pre-wired isolator  
 EC Fan Commando Plug (Power)  
 EC Fan Commando Plug (Power)  
 EC Fan Commando Plug (Power)  
 EC Fan Commando Plug (Power)  
 25% / 25% / 25% / 25% EC Fans Selected, However Each Fan Capable Of 33% Flow

**OUTLET SECTION** Component 006

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.790	m/s
Conn. Size	1850 x 2100 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1620 x 1960 mm			
		Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

Test Point  
 Large Damper Operated by 2no. Actuators

**EXTRACT PATH**

**INLET SECTION** Component 007

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.970	m/s
Conn. Size	1700 x 2100 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1470 x 1960 mm			
		Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

Test Point  
 Large Damper Operated by 2no. Actuators  
 Lifting Points Fitted to AHU Base

**FILTER SECTION** Component 008

AIR SIDE			SPECIFICATION		DETAILS		
Air Volume	5.688	m <sup>3</sup> /s	Type	Panel	Qty	9	
Face Velocity	2.13	m/s	Grade	M5 (Metal Case)	Nom. Size (WxHxD)	508x610x50	mm
Air Pd ( Clean )	45	Pa	Withdrawal	Front			
Air Pd ( Average )	72	Pa					
Air Pd ( Dirty )	100	Pa					

**INCLUDED OPTIONS / NOTES**

Minihelic Gauge (0-250Pa)  
 LED Bulkhead Light c/w Switch  
 Test Point  
 Section Split

**EXHAUST FAN SECTION** Component 009

DETAILS			FAN		MOTOR		
Air Volume	5.688	m <sup>3</sup> /s	Type	Plenum-EC	Qty	SINGLE	
Ext. Static Pressure	400	Pa	Impellor	Backward Curved	Power	6.00	kW
Tot. Static Pressure	593	Pa	Qty	Dual	Speed	1860	RPM
Starting Method	Speed Controller		Operation	50 %	Full Load Current	9.40	Amp
A. V. Type	N/A		Model	GR56C-ZID.GQ.CR	Electrical Supply	380/3/50	
			Speed	1456 RPM	Efficiency Class	IE5	
			Max. Speed	1860 RPM	Control	Modbus Module	
			Absorbed Power	2.77 kW			
			Total Efficiency	71 %			

Sound Power Lw	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Fan Inlet (dB)	77	84	81	77	72	69	65	65
Fan Outlet (dB)	81	91	85	84	80	75	72	69

Note : Fan manufacturer data used in accordance with DIN 463 Part 38 & 39, BS 848 Part 2 & ISO 5136. A correction of +6dB should be applied across all octave bands for unit casing adjustment

**INCLUDED OPTIONS / NOTES**

Inlet Guard  
 Door Guard  
 0-10V Speed Control Required  
 Pre-wired isolator  
 Pre-wired isolator  
 LED Bulkhead Light c/w Switch  
 Test Point  
 Galvanised Back Draught Dampers  
 EC Fan Commando Plug (Power)  
 EC Fan Commando Plug (Power)  
 Section Split  
 Lifting Points Fitted to AHU Base

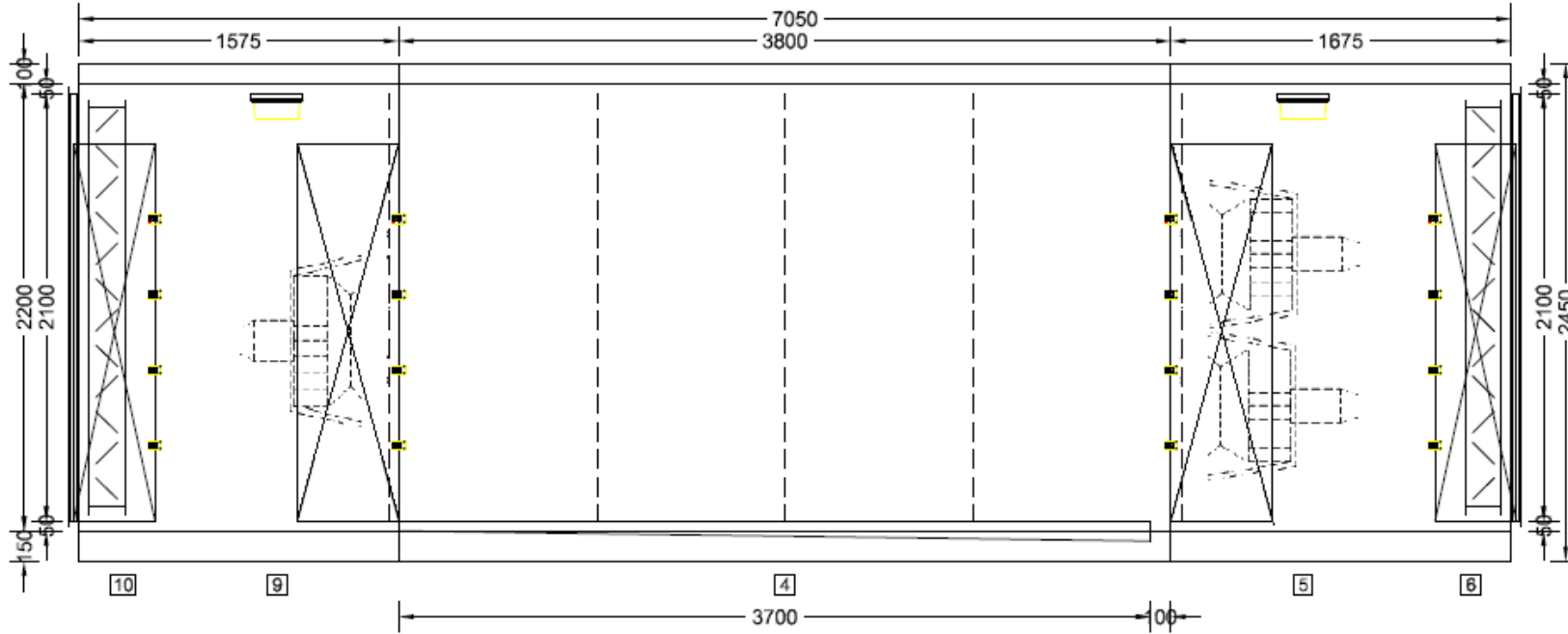
**INCLUDED OPTIONS / NOTES**

50% / 50% EC Fans Selected, However Each Fan Capable Of 80% Flow

OUTLET SECTION				Component	010		
Conn. Type	30mm Galv Flange		Damper	Yes	Face Velocity	1.970	m/s
Conn. Size	1700 x 2100	mm	Location	Internal	Actuator	By Others	
			Type	Low Loss			
			Size (WxH)	1470 x 1960 mm			
			Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

Test Point  
 Large Damper Operated by 2no. Actuators  
 Lifting Points Fitted to AHU Base



Section A: Weight +/- 10% = 656Kgs

Components

- 1 Inlet Section
- 2 Frost Coll
- 3 Panel Filter

Section B: Weight +/- 10% = 2512Kgs

Components

- 4 Plate Heat Exchanger

Section C: Weight +/- 10% = 718Kgs

Components

- 5 Plenum Fan
- 6 Outlet Section

Section D: Weight +/- 10% = 440Kgs

Components

- 7 Inlet Section
- 8 Panel Filter

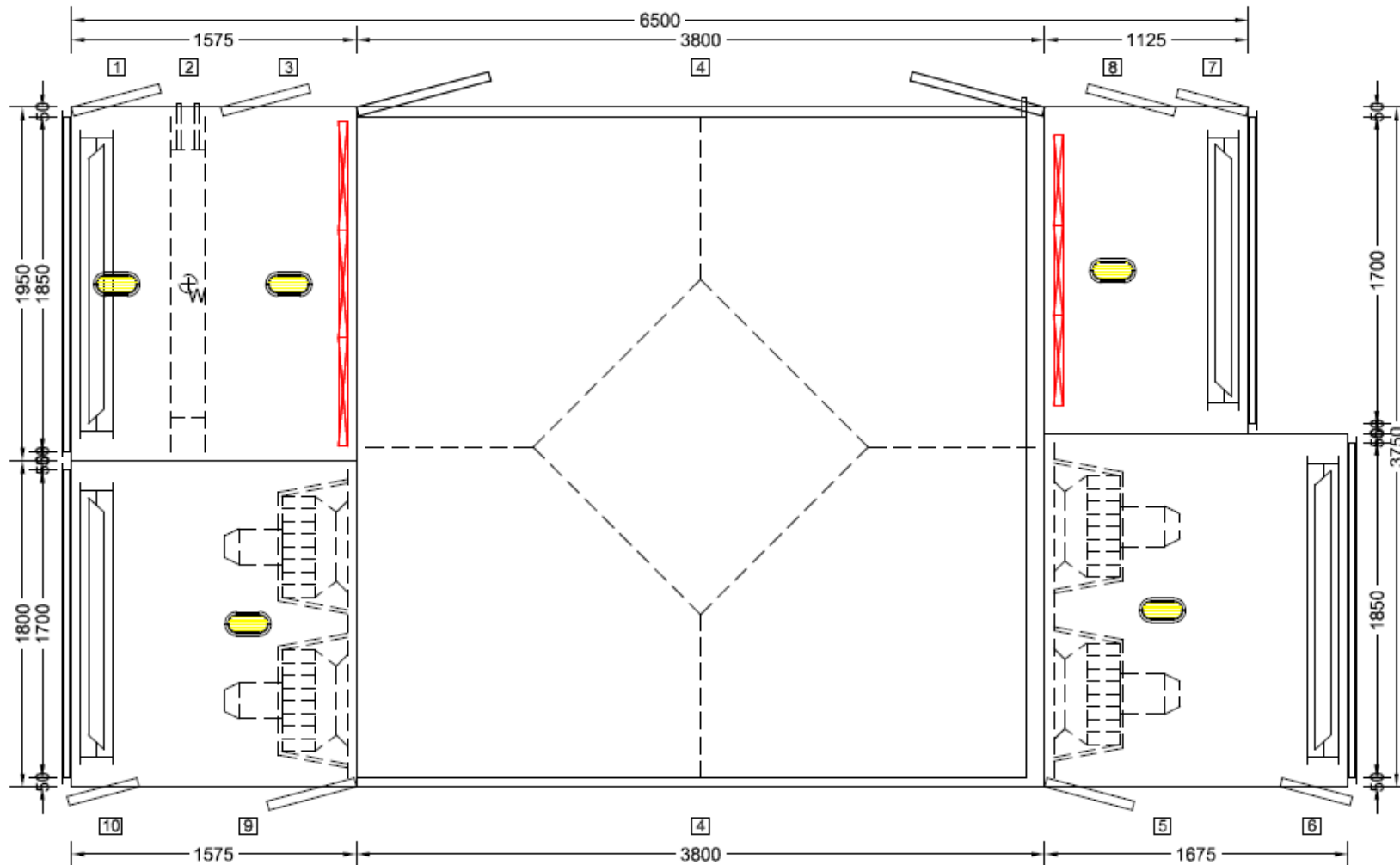
Section E: Weight +/- 10% = 656Kgs

Components

- 9 Plenum Fan
- 10 Outlet Section

### ELEVATION FRONT

Customer	RSP	Air flow	5.69/5.69	m3/s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	4982	Kg	AHU No.	1						
Location	AHU/5 01	E.S.P	400 / 400	Pa	Dwg No.	23108-1-0						
Model	AIR FLEX 85 F / AIR FLEX 75 F	Quantity	1	Nos.								



- Section A: Weight +/- 10% = 656Kgs**  
 Components  
 1 Inlet Section  
 2 Frost Coll  
 3 Panel Filter
- Section B: Weight +/- 10% = 2512Kgs**  
 Components  
 4 Plate Heat Exchanger
- Section C: Weight +/- 10% = 718Kgs**  
 Components  
 5 Plenum Fan  
 6 Outlet Section
- Section D: Weight +/- 10% = 440Kgs**  
 Components  
 7 Inlet Section  
 8 Panel Filter
- Section E: Weight +/- 10% = 656Kgs**  
 Components  
 9 Plenum Fan  
 10 Outlet Section

### PLAN DECK

Customer	RSP	Air flow	5.69/5.69	m3/s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 10B	No.	Revision	Date
Project	Royal Free - Imaging	Weight	4982	Kg	AHU No.	1						
Location	AHU/5 01	E.S.P	400 / 400	Pa	Dwg No.	23108-1-0						
Model	AIR FLEX 85 F / AIR FLEX 75 F	Quantity	1	Nos.								

## TECHNICAL SPECIFICATION

### PROJECT DETAILS

<b>Project Name</b>	Royal Free - Imaging	<b>Quote No.</b>	AHS 23108
<b>Unit Reference</b>	MRI 3	<b>Revision</b>	0
<b>Unit Model</b>	AIR FLEX 6 F	<b>Date</b>	16 Feb 2022

### MECHANICAL STANDARD ( BS EN 1886 )

#### CASING

Strength	D1
Air Leakage	L2

#### THERMAL

Transmittance	T3
Bridging	TB3

### PERFORMANCE DATA

#### SUPPLY

Air Volume	0.719	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### EXTRACT

Air Volume	0.000	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### ERP Compliance

Internal SFP	NaN	W/m <sup>3</sup> /s
ERP Compliance		

### UNIT CONSTRUCTION

#### PANEL

Nom. Thickness	50	mm
Outer Material	Goosewing Grey Coated Steel	
Inner Material	Coated Steel	
Insulation Type	Polyurethane Foam	

#### GENERAL

Location	External
Roof Type	Pitched Roof
Base Type	Full
Base Material	150x75

### UNIT DIMENSIONS

#### BOTTOM DECK

Width	720	mm
Height	1,120	mm
Length	3,750	mm
Base	150	mm

#### TOP DECK

Width		mm
Height		mm
Length		mm
Base		mm

#### O/ALL

Width	720	mm
Height	1,370	mm
Length	3,750	mm
Weight +/- 10%	572	kg

### SPECIFIC FAN POWER

#### SUPPLY FAN

Filter Condition		
Absorbed Power	NaN	kW
Drive Efficiency	NaN	%
Inverter Efficiency	NaN	%
Motor Efficiency	NaN	%

#### EXTRACT FAN

Filter Condition		
Absorbed Power		kW
Drive Efficiency		%
Inverter Efficiency		%
Motor Efficiency		%

#### SFP<sub>E</sub>

NaN w/l/s

### NOTES

AHU will be delivered to site in 1 sections. Should further splits be required additional costs and length will be incurred.



**SUPPLY PATH**

**INLET SECTION**

Component 001

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	2.090	m/s
Conn. Size	620 x 1020 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	390 x 880 mm			
		Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

LED Bulkhead Light c/w Switch  
Test Point

Component 002

**COOLING COIL SECTION**

Component 003

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	0.719	m3/s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	26.00	°C	Glycol Type	None		Fin Material	Aluver - Standard	
Air on (wb)	20.00	°C	Percentage	0	%	Casing Material	Stainless steel 304	
Relative Humid.	57.9	%	Inlet Temp.	6.00	°C	Header Material	Copper	
Air off (db)	12.00	°C	Outlet Temp.	12.00	°C	Inlet Conn. Size	1 1/4"	BSPM
Air off (wb)	11.90	°C	Flow Rate	0.82	l/s	Outlet Conn. Size	1 1/4"	BSPM
Relative Humid.	99	%	Fluid Press. Drop	23	kPa	Coil Drain Tray	Yes	
Total Duty	20.61	kW	Internal Volume	18.56	l	Material	St/St (304)	
Sens. Duty	12.63	kW				Coil Int. Drain Tray	No	
Air Press. Drop	118	Pa				Material	None	
Face Velocity	1.93	m/s				Eliminator	No	
Sens. Heat Ratio	61	%				Loose Flange	No	

**AHU DRAIN TRAY**

Material	St/St (304)	Model Type	Fixed
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**INCLUDED OPTIONS / NOTES**

St/St HTM Compliant Cleanable Drain Tray

Component 004

**ELIMINATOR SECTION**

AIR SIDE			CONSTRUCTION		
Air Volume	0.719	m3/s	Casing Material	Plastic	
Air Press. Drop	6	Pa	Dims (WxH)	580x1000	mm

**INCLUDED OPTIONS / NOTES**

LED Bulkhead Light c/w Switch  
Test Point

Component 005

**HEATING COIL SECTION**

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	0.719	m3/s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	16.00	°C	Inlet Temp.	80.00	°C	Fin Material	Cu - Standard	
Air off (db)	28.00	°C	Outlet Temp.	60.00	°C	Casing Material	Galv Steel	
Total Duty	10.62	kW	Flow Rate	0.13	l/s	Header Material	Copper	
Air Press. Drop	12	Pa	Fluid Press. Drop	7	kPa	Inlet Conn. Size	1/2"	BSPM
Face Velocity	1.74	m/s	Internal Volume	3.15	l	Outlet Conn. Size	1/2"	BSPM
						Dims (WxH)	580x1010	mm
						Dims (D)	130	mm

**FILTER SECTION**

Component 006

AIR SIDE			SPECIFICATION		DETAILS		
Air Volume	0.719	m <sup>3</sup> /s	Type	Bag	Qty	1	
Face Velocity	1.38	m/s	Grade	F7	Nom. Size (WxHxD)	610x610x520	mm
Air Pd ( Clean )	39	Pa	Withdrawal	Front	Qty	1	
Air Pd ( Average )	94	Pa			Nom. Size (WxHxD)	610x305x520	mm
Air Pd ( Dirty )	150	Pa					

**INCLUDED OPTIONS / NOTES**

Minihelic Gauge (0-250Pa)  
LED Bulkhead Light c/w Switch  
Test Point

**OUTLET SECTION**

Component 007

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	2.090	m/s
Conn. Size	620 x 1020 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	390 x 880 mm			
		Material	Galvanised Steel			

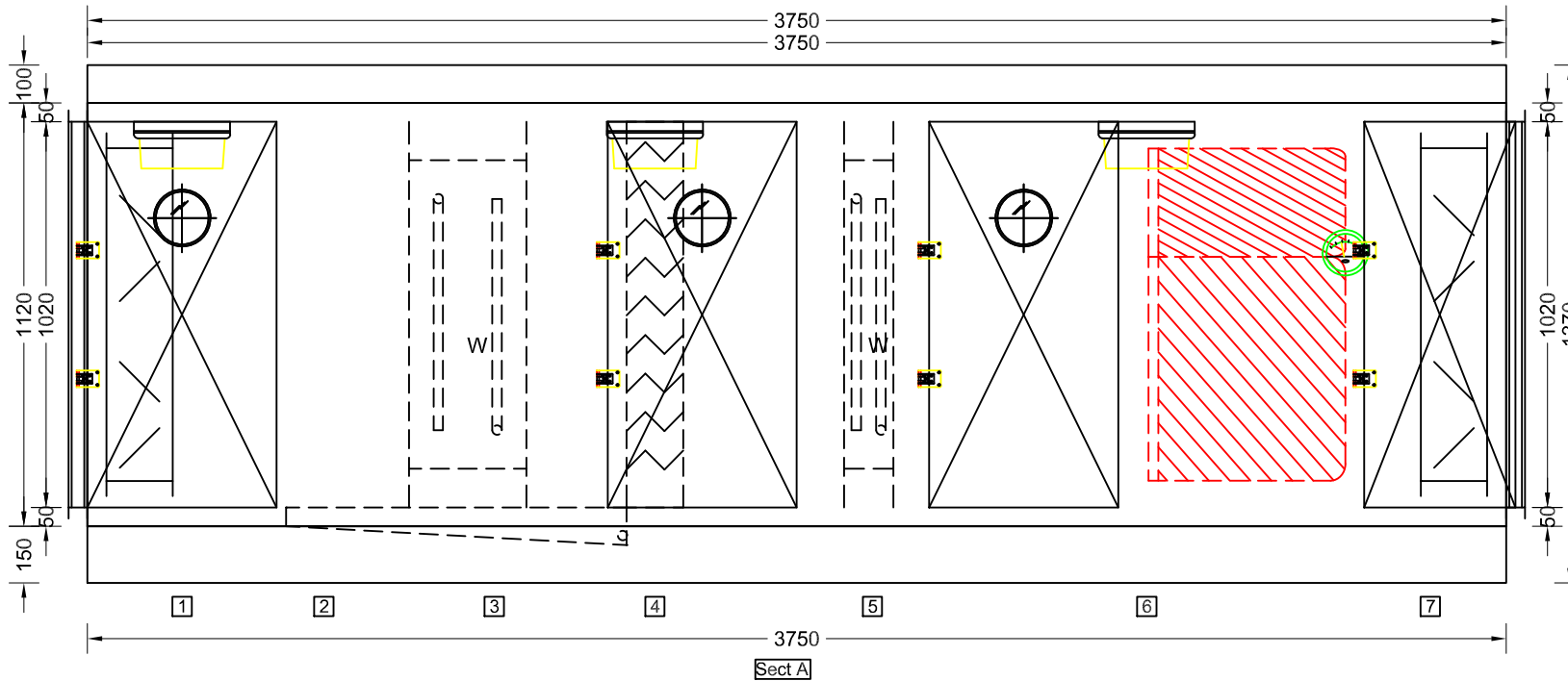
**INCLUDED OPTIONS / NOTES**

Test Point

Section A: Weight +/- 10% = 572Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



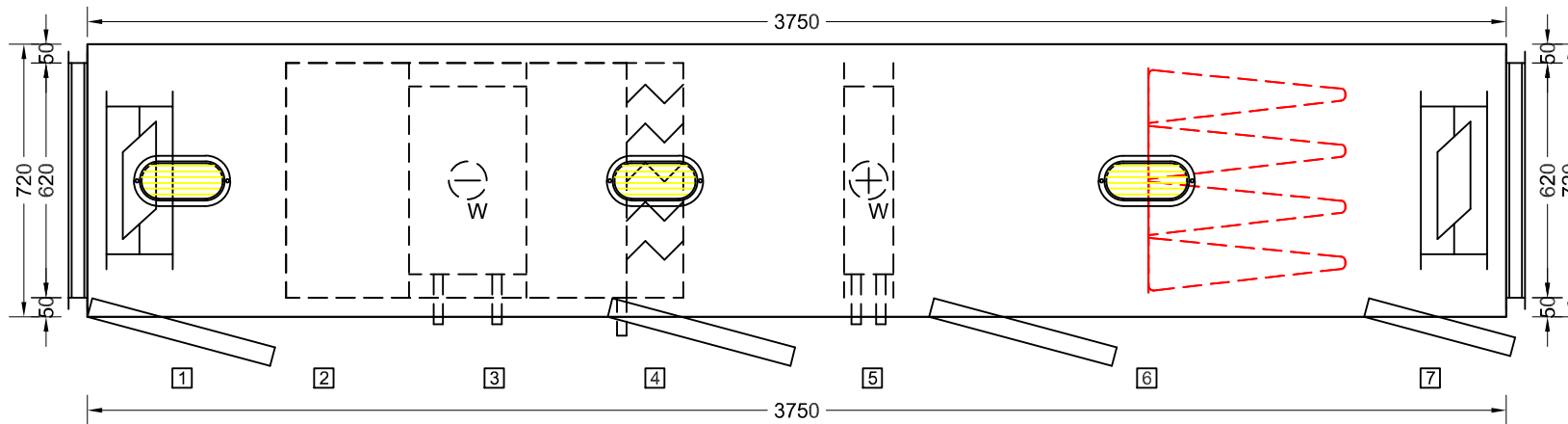
### ELEVATION

Customer	RSP	Air flow	.72	m3/s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form			
Project	Royal Free - Imaging	Weight	572	Kg	AHU No.	2	<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Location	MRI 3	E.S.P		Pa	Dwg No.	23108-2-0				
Model	AIR FLEX 6 F	Quantity	1	Nos.						

Section A: Weight +/- 10% = 572Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



### PLAN DECK

Customer	RSP	Air flow	.72	m3/s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form			
Project	Royal Free - Imaging	Weight	572	Kg	AHU No.	2	<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Location	MRI 3	E.S.P		Pa	Dwg No.	23108-2-0				
Model	AIR FLEX 6 F	Quantity	1	Nos.						

## TECHNICAL SPECIFICATION

### PROJECT DETAILS

<b>Project Name</b>	Royal Free - Imaging	<b>Quote No.</b>	AHS 23108
<b>Unit Reference</b>	CT 3	<b>Revision</b>	0
<b>Unit Model</b>	AIR FLEX 39 F	<b>Date</b>	16 Feb 2022

### MECHANICAL STANDARD ( BS EN 1886 )

#### CASING

Strength	D1
Air Leakage	L2

#### THERMAL

Transmittance	T3
Bridging	TB3

### PERFORMANCE DATA

#### SUPPLY

Air Volume	1.602	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### EXTRACT

Air Volume	0.000	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### ERP Compliance

Internal SFP	NaN	W/m <sup>3</sup> /s
ERP Compliance		

### UNIT CONSTRUCTION

#### PANEL

Nom. Thickness	50	mm
Outer Material	Goosewing Grey Coated Steel	
Inner Material	Coated Steel	
Insulation Type	Polyurethane Foam	

#### GENERAL

Location	External
Roof Type	Pitched Roof
Base Type	Full
Base Material	150x75

### UNIT DIMENSIONS

#### BOTTOM DECK

Width	1,350	mm
Height	1,080	mm
Length	3,800	mm
Base	150	mm

#### TOP DECK

Width		mm
Height		mm
Length		mm
Base		mm

#### O/ALL

Width	1,350	mm
Height	1,330	mm
Length	3,800	mm
Weight +/- 10%	851	kg

### SPECIFIC FAN POWER

#### SUPPLY FAN

Filter Condition		
Absorbed Power	NaN	kW
Drive Efficiency	NaN	%
Inverter Efficiency	NaN	%
Motor Efficiency	NaN	%

#### EXTRACT FAN

Filter Condition		
Absorbed Power		kW
Drive Efficiency		%
Inverter Efficiency		%
Motor Efficiency		%

#### SFP<sub>E</sub>

NaN w/l/s

### NOTES

AHU will be delivered to site in 1 sections. Should further splits be required additional costs and length will be incurred.

## SUPPLY PATH

### INLET SECTION

Component 001

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.870	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

### INCLUDED OPTIONS / NOTES

LED Bulkhead Light c/w Switch  
Test Point

Component 002

### COOLING COIL SECTION

Component 003

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	1.602	m <sup>3</sup> /s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	26.00	°C	Glycol Type	None		Fin Material	Aluver - Standard	
Air on (wb)	20.00	°C	Percentage	0	%	Casing Material	Stainless steel 304	
Relative Humid.	57.9	%	Inlet Temp.	6.00	°C	Header Material	Copper	
Air off (db)	12.00	°C	Outlet Temp.	12.00	°C	Inlet Conn. Size	1 1/2"	BSPM
Air off (wb)	11.90	°C	Flow Rate	1.83	l/s	Outlet Conn. Size	1 1/2"	BSPM
Relative Humid.	99	%	Fluid Press. Drop	31	kPa	Coil Drain Tray	Yes	
Total Duty	46.03	kW	Internal Volume	37.22	l	Material	St/St (304)	
Sens. Duty	28.12	kW				Coil Int. Drain Tray	No	
Air Press. Drop	104	Pa				Material	None	
Face Velocity	1.77	m/s				Eliminator	No	
Sens. Heat Ratio	61	%				Loose Flange	No	

### AHU DRAIN TRAY

Material	St/St (304)	Model Type	Fixed
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### INCLUDED OPTIONS / NOTES

St/St HTM Compliant Cleanable Drain Tray

### ELIMINATOR SECTION

Component 004

AIR SIDE			CONSTRUCTION			
Air Volume	1.602	m <sup>3</sup> /s	Casing Material	Plastic		
Air Press. Drop	8	Pa	Dims (WxH)	1210x960	mm	

### INCLUDED OPTIONS / NOTES

LED Bulkhead Light c/w Switch  
Test Point

### HEATING COIL SECTION

Component 005

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	1.602	m <sup>3</sup> /s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	16.00	°C	Inlet Temp.	80.00	°C	Fin Material	Cu - Standard	
Air off (db)	28.00	°C	Outlet Temp.	60.00	°C	Casing Material	Galv Steel	
Total Duty	23.66	kW	Flow Rate	0.28	l/s	Header Material	Copper	
Air Press. Drop	20	Pa	Fluid Press. Drop	16	kPa	Inlet Conn. Size	1"	BSPM
Face Velocity	1.74	m/s	Internal Volume	11.42	l	Outlet Conn. Size	1"	BSPM
						Dims (WxH)	1210x970	mm
						Dims (D)	160	mm

**FILTER SECTION**

Component 006

**AIR SIDE**

Air Volume	1.602	m <sup>3</sup> /s
Face Velocity	1.54	m/s
Air Pd ( Clean )	43	Pa
Air Pd ( Average )	97	Pa
Air Pd ( Dirty )	150	Pa

**SPECIFICATION**

Type	Bag
Grade	F7
Withdrawal	Front

**DETAILS**

Qty	2
Nom. Size (WxHxD)	610x610x520 mm
Qty	2
Nom. Size (WxHxD)	610x305x520 mm

**INCLUDED OPTIONS / NOTES**

Minihelic Gauge (0-250Pa)  
LED Bulkhead Light c/w Switch  
Test Point

**OUTLET SECTION**

Component 007

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.870	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

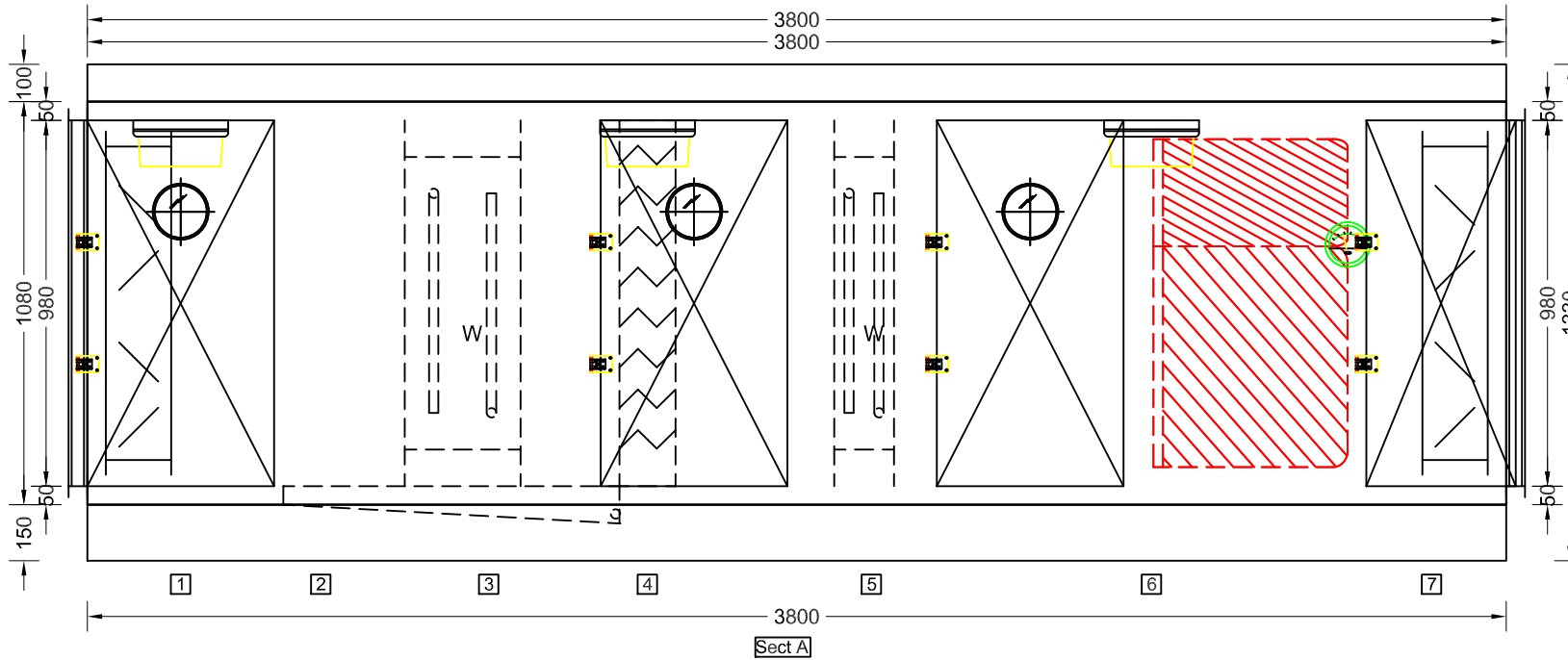
**INCLUDED OPTIONS / NOTES**

Test Point

Section A: Weight +/- 10% = 851Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



### ELEVATION

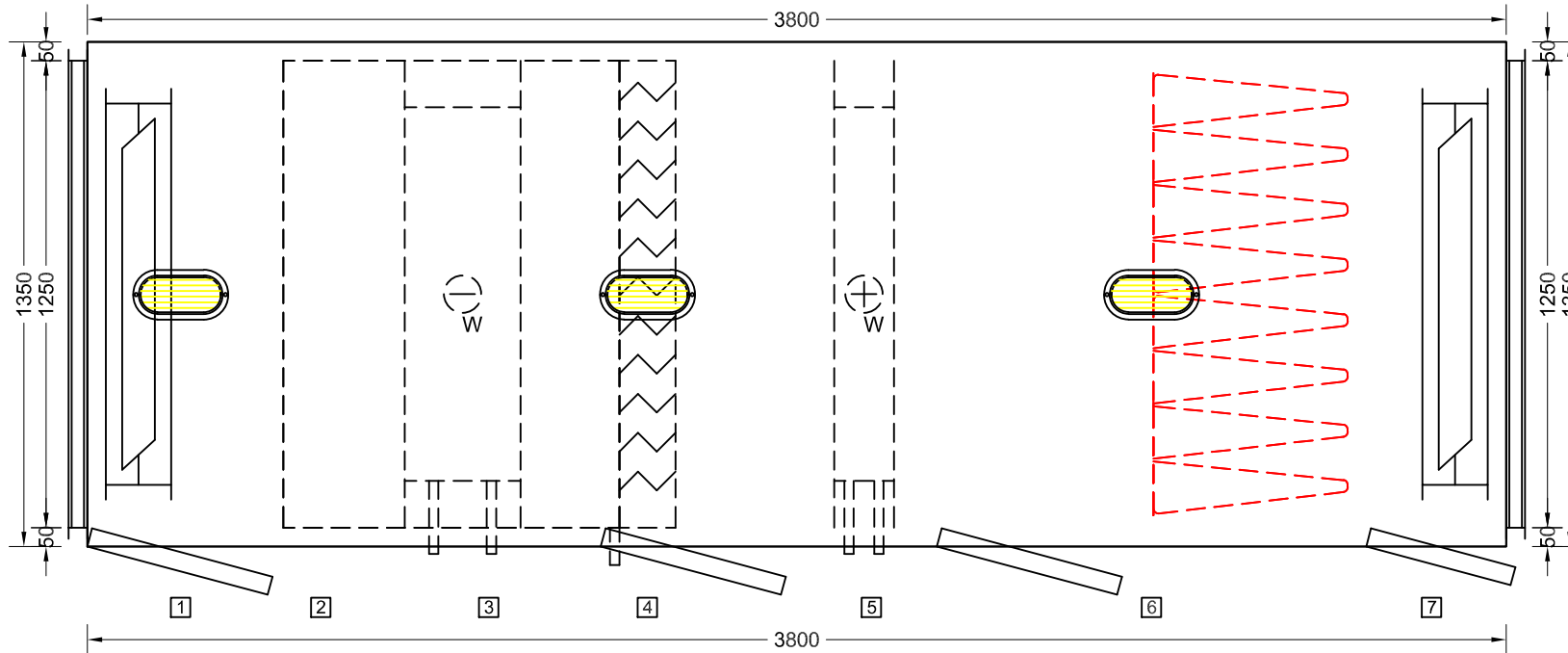
Customer	RSP	Air flow	1.6	m <sup>3</sup> /s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	851	Kg	AHU No.	3						
Location	CT 3	E.S.P		Pa	Dwg No.	23108-3-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								



Section A: Weight +/- 10% = 851Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



### PLAN DECK

Customer	RSP	Air flow	1.6	m <sup>3</sup> /s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	851	Kg	AHU No.	3						
Location	CT 3	E.S.P		Pa	Dwg No.	23108-3-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								

## TECHNICAL SPECIFICATION

### PROJECT DETAILS

<b>Project Name</b>	Royal Free - Imaging	<b>Quote No.</b>	AHS 23108
<b>Unit Reference</b>	CT 2	<b>Revision</b>	0
<b>Unit Model</b>	AIR FLEX 39 F	<b>Date</b>	16 Feb 2022

### MECHANICAL STANDARD ( BS EN 1886 )

#### CASING

Strength	D1
Air Leakage	L2

#### THERMAL

Transmittance	T3
Bridging	TB3

### PERFORMANCE DATA

#### SUPPLY

Air Volume	1.752	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### EXTRACT

Air Volume	0.000	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### ERP Compliance

Internal SFP	NaN	W/m <sup>3</sup> /s
ERP Compliance		

### UNIT CONSTRUCTION

#### PANEL

Nom. Thickness	50	mm
Outer Material	Goosewing Grey Coated Steel	
Inner Material	Coated Steel	
Insulation Type	Polyurethane Foam	

#### GENERAL

Location	External
Roof Type	Pitched Roof
Base Type	Full
Base Material	150x75

### UNIT DIMENSIONS

#### BOTTOM DECK

Width	1,350	mm
Height	1,080	mm
Length	3,800	mm
Base	150	mm

#### TOP DECK

Width		mm
Height		mm
Length		mm
Base		mm

#### O/ALL

Width	1,350	mm
Height	1,330	mm
Length	3,800	mm
Weight +/- 10%	856	kg

### SPECIFIC FAN POWER

#### SUPPLY FAN

Filter Condition		
Absorbed Power	NaN	kW
Drive Efficiency	NaN	%
Inverter Efficiency	NaN	%
Motor Efficiency	NaN	%

#### EXTRACT FAN

Filter Condition		
Absorbed Power		kW
Drive Efficiency		%
Inverter Efficiency		%
Motor Efficiency		%

#### SFP<sub>E</sub>

NaN w/l/s

### NOTES

AHU will be delivered to site in 1 sections. Should further splits be required additional costs and length will be incurred.

## SUPPLY PATH

### INLET SECTION

Component 001

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	2.040	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

### INCLUDED OPTIONS / NOTES

LED Bulkhead Light c/w Switch  
Test Point

Component 002

### COOLING COIL SECTION

Component 003

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	1.752	m <sup>3</sup> /s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	26.00	°C	Glycol Type	None		Fin Material	Aluver - Standard	
Air on (wb)	20.00	°C	Percentage	0	%	Casing Material	Stainless steel 304	
Relative Humid.	57.9	%	Inlet Temp.	6.00	°C	Header Material	Copper	
Air off (db)	12.00	°C	Outlet Temp.	12.00	°C	Inlet Conn. Size	1 1/2"	BSPM
Air off (wb)	11.90	°C	Flow Rate	2.00	l/s	Outlet Conn. Size	1 1/2"	BSPM
Relative Humid.	99	%	Fluid Press. Drop	28	kPa	Coil Drain Tray	Yes	
Total Duty	50.27	kW	Internal Volume	37.22	l	Material	St/St (304)	
Sens. Duty	30.76	kW				Coil Int. Drain Tray	No	
Air Press. Drop	119	Pa				Material	None	
Face Velocity	1.93	m/s				Eliminator	No	
Sens. Heat Ratio	61	%				Loose Flange	No	

### AHU DRAIN TRAY

Material	St/St (304)	Model Type	Fixed
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### INCLUDED OPTIONS / NOTES

St/St HTM Compliant Cleanable Drain Tray

### ELIMINATOR SECTION

Component 004

AIR SIDE			CONSTRUCTION		
Air Volume	1.752	m <sup>3</sup> /s	Casing Material	Plastic	
Air Press. Drop	9	Pa	Dims (WxH)	1210x960	mm

### INCLUDED OPTIONS / NOTES

LED Bulkhead Light c/w Switch  
Test Point

### HEATING COIL SECTION

Component 005

AIR SIDE			WATER SIDE			CONSTRUCTION		
Air Volume	1.752	m <sup>3</sup> /s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	16.00	°C	Inlet Temp.	80.00	°C	Fin Material	Cu - Standard	
Air off (db)	28.00	°C	Outlet Temp.	60.00	°C	Casing Material	Galv Steel	
Total Duty	25.87	kW	Flow Rate	0.31	l/s	Header Material	Copper	
Air Press. Drop	28	Pa	Fluid Press. Drop	19	kPa	Inlet Conn. Size	1"	BSPM
Face Velocity	1.91	m/s	Internal Volume	11.42	l	Outlet Conn. Size	1"	BSPM
						Dims (WxH)	1210x970	mm
						Dims (D)	160	mm

**FILTER SECTION**

Component 006

**AIR SIDE**

Air Volume	1.752	m <sup>3</sup> /s
Face Velocity	1.68	m/s
Air Pd ( Clean )	47	Pa
Air Pd ( Average )	99	Pa
Air Pd ( Dirty )	150	Pa

**SPECIFICATION**

Type	Bag
Grade	F7
Withdrawal	Front

**DETAILS**

Qty	2
Nom. Size (WxHxD)	610x610x520 mm
Qty	2
Nom. Size (WxHxD)	610x305x520 mm

**INCLUDED OPTIONS / NOTES**

Minihelic Gauge (0-250Pa)  
LED Bulkhead Light c/w Switch  
Test Point

**OUTLET SECTION**

Component 007

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	2.040	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

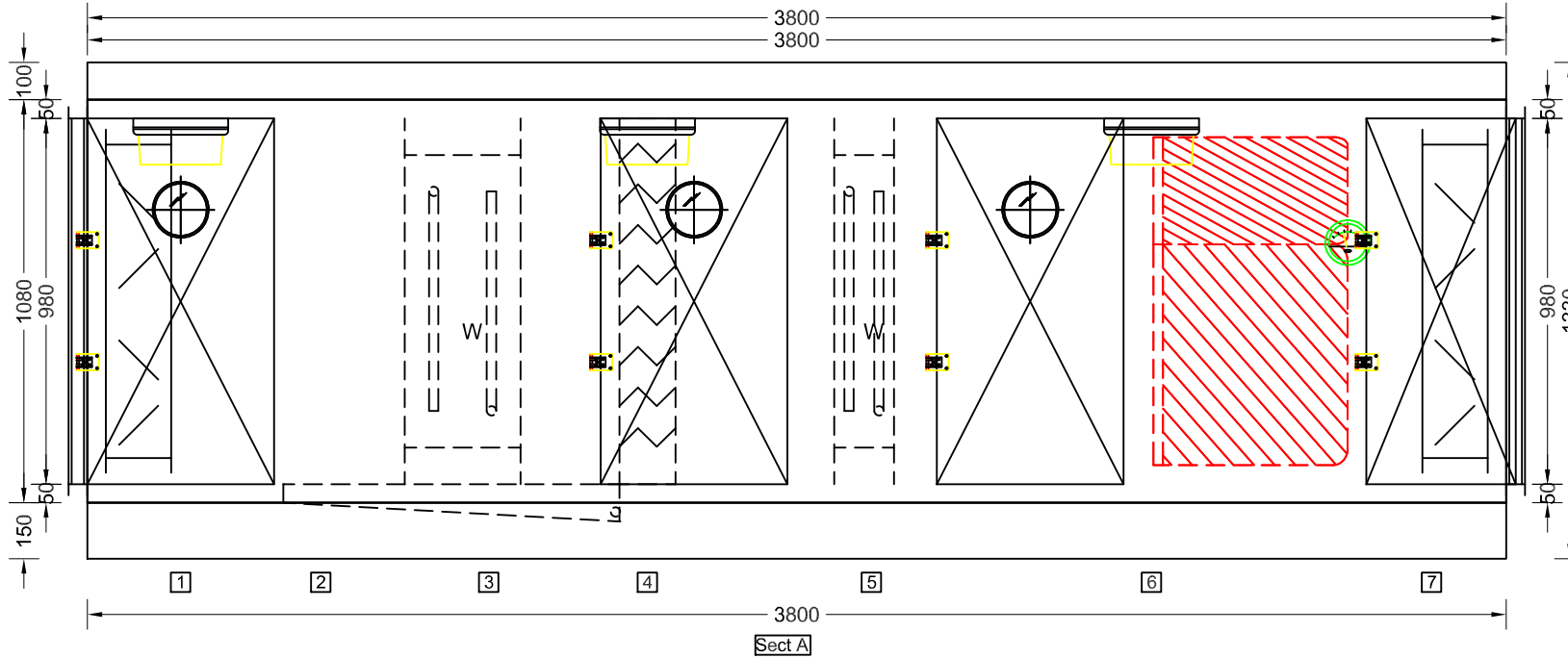
**INCLUDED OPTIONS / NOTES**

Test Point

Section A: Weight +/- 10% = 856Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



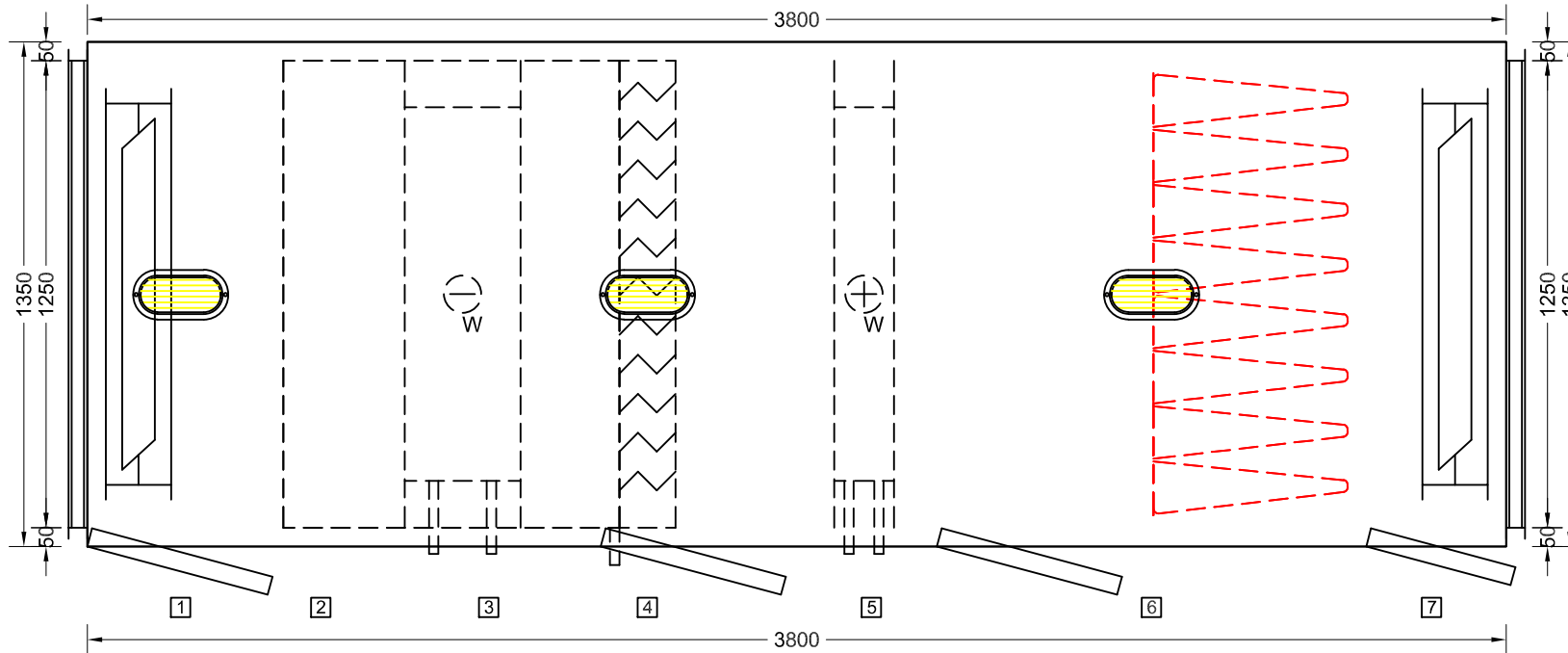
### ELEVATION

Customer	RSP	Air flow	1.75	m <sup>3</sup> /s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	856	Kg	AHU No.	4						
Location	CT 2	E.S.P		Pa	Dwg No.	23108-4-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								

Section A: Weight +/- 10% = 856Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



### PLAN DECK

Customer	RSP	Air flow	1.75	m3/s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	856	Kg	AHU No.	4						
Location	CT 2	E.S.P		Pa	Dwg No.	23108-4-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								

## TECHNICAL SPECIFICATION

### PROJECT DETAILS

<b>Project Name</b>	Royal Free - Imaging	<b>Quote No.</b>	AHS 23108
<b>Unit Reference</b>	CT 1	<b>Revision</b>	0
<b>Unit Model</b>	AIR FLEX 39 F	<b>Date</b>	16 Feb 2022

### MECHANICAL STANDARD ( BS EN 1886 )

#### CASING

Strength	D1
Air Leakage	L2

#### THERMAL

Transmittance	T3
Bridging	TB3

### PERFORMANCE DATA

#### SUPPLY

Air Volume	1.617	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### EXTRACT

Air Volume	0.000	m <sup>3</sup> /s
Ext. Stat. Pressure	0	Pa

#### ERP Compliance

Internal SFP	NaN	W/m <sup>3</sup> /s
ERP Compliance		

### UNIT CONSTRUCTION

#### PANEL

Nom. Thickness	50	mm
Outer Material	Goosewing Grey Coated Steel	
Inner Material	Coated Steel	
Insulation Type	Polyurethane Foam	

#### GENERAL

Location	External
Roof Type	Pitched Roof
Base Type	Full
Base Material	150x75

### UNIT DIMENSIONS

#### BOTTOM DECK

Width	1,350	mm
Height	1,080	mm
Length	3,800	mm
Base	150	mm

#### TOP DECK

Width		mm
Height		mm
Length		mm
Base		mm

#### O/ALL

Width	1,350	mm
Height	1,330	mm
Length	3,800	mm
Weight +/- 10%	851	kg

### SPECIFIC FAN POWER

#### SUPPLY FAN

Filter Condition		
Absorbed Power	NaN	kW
Drive Efficiency	NaN	%
Inverter Efficiency	NaN	%
Motor Efficiency	NaN	%

#### EXTRACT FAN

Filter Condition		
Absorbed Power		kW
Drive Efficiency		%
Inverter Efficiency		%
Motor Efficiency		%

#### SFP<sub>E</sub>

NaN w/l/s

### NOTES

AHU will be delivered to site in 1 sections. Should further splits be required additional costs and length will be incurred.

**SUPPLY PATH**

**INLET SECTION** **Component 001**

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.890	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

**INCLUDED OPTIONS / NOTES**

LED Bulkhead Light c/w Switch  
Test Point

**Component 002**

**COOLING COIL SECTION** **Component 003**

<b>AIR SIDE</b>			<b>WATER SIDE</b>			<b>CONSTRUCTION</b>		
Air Volume	1.617	m3/s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	26.00	°C	Glycol Type	None		Fin Material	Aluver - Standard	
Air on (wb)	20.00	°C	Percentage	0	%	Casing Material	Stainless steel 304	
Relative Humid.	57.9	%	Inlet Temp.	6.00	°C	Header Material	Copper	
Air off (db)	12.00	°C	Outlet Temp.	12.00	°C	Inlet Conn. Size	1 1/2"	BSPM
Air off (wb)	11.90	°C	Flow Rate	1.85	l/s	Outlet Conn. Size	1 1/2"	BSPM
Relative Humid.	99	%	Fluid Press. Drop	32	kPa	Coil Drain Tray	Yes	
Total Duty	46.46	kW	Internal Volume	37.22	l	Material	St/St (304)	
Sens. Duty	28.38	kW				Coil Int. Drain Tray	No	
Air Press. Drop	105	Pa				Material	None	
Face Velocity	1.78	m/s				Eliminator	No	
Sens. Heat Ratio	61	%				Loose Flange	No	

**AHU DRAIN TRAY**

Material	St/St (304)	Model Type	Fixed
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**INCLUDED OPTIONS / NOTES**

St/St HTM Compliant Cleanable Drain Tray

**ELIMINATOR SECTION** **Component 004**

<b>AIR SIDE</b>			<b>CONSTRUCTION</b>		
Air Volume	1.617	m3/s	Casing Material	Plastic	
Air Press. Drop	8	Pa	Dims (WxH)	1210x960	mm

**INCLUDED OPTIONS / NOTES**

LED Bulkhead Light c/w Switch  
Test Point

**HEATING COIL SECTION** **Component 005**

<b>AIR SIDE</b>			<b>WATER SIDE</b>			<b>CONSTRUCTION</b>		
Air Volume	1.617	m3/s	Medium	Water		Tube Material	Cu - standard	
Air on (db)	16.00	°C	Inlet Temp.	80.00	°C	Fin Material	Cu - Standard	
Air off (db)	28.00	°C	Outlet Temp.	60.00	°C	Casing Material	Galv Steel	
Total Duty	23.88	kW	Flow Rate	0.29	l/s	Header Material	Copper	
Air Press. Drop	20	Pa	Fluid Press. Drop	16	kPa	Inlet Conn. Size	1"	BSPM
Face Velocity	1.76	m/s	Internal Volume	11.42	l	Outlet Conn. Size	1"	BSPM
						Dims (WxH)	1210x970	mm
						Dims (D)	160	mm



**FILTER SECTION**

Component 006

**AIR SIDE**

Air Volume	1.617	m <sup>3</sup> /s
Face Velocity	1.55	m/s
Air Pd ( Clean )	43	Pa
Air Pd ( Average )	97	Pa
Air Pd ( Dirty )	150	Pa

**SPECIFICATION**

Type	Bag
Grade	F7
Withdrawal	Front

**DETAILS**

Qty	2
Nom. Size (WxHxD)	610x610x520 mm
Qty	2
Nom. Size (WxHxD)	610x305x520 mm

**INCLUDED OPTIONS / NOTES**

Minihelic Gauge (0-250Pa)  
LED Bulkhead Light c/w Switch  
Test Point

**OUTLET SECTION**

Component 007

Conn. Type	30mm Galv Flange	Damper	Yes	Face Velocity	1.890	m/s
Conn. Size	1250 x 980 mm	Location	Internal	Actuator	By Others	
		Type	Low Loss			
		Size (WxH)	1020 x 840 mm			
		Material	Galvanised Steel			

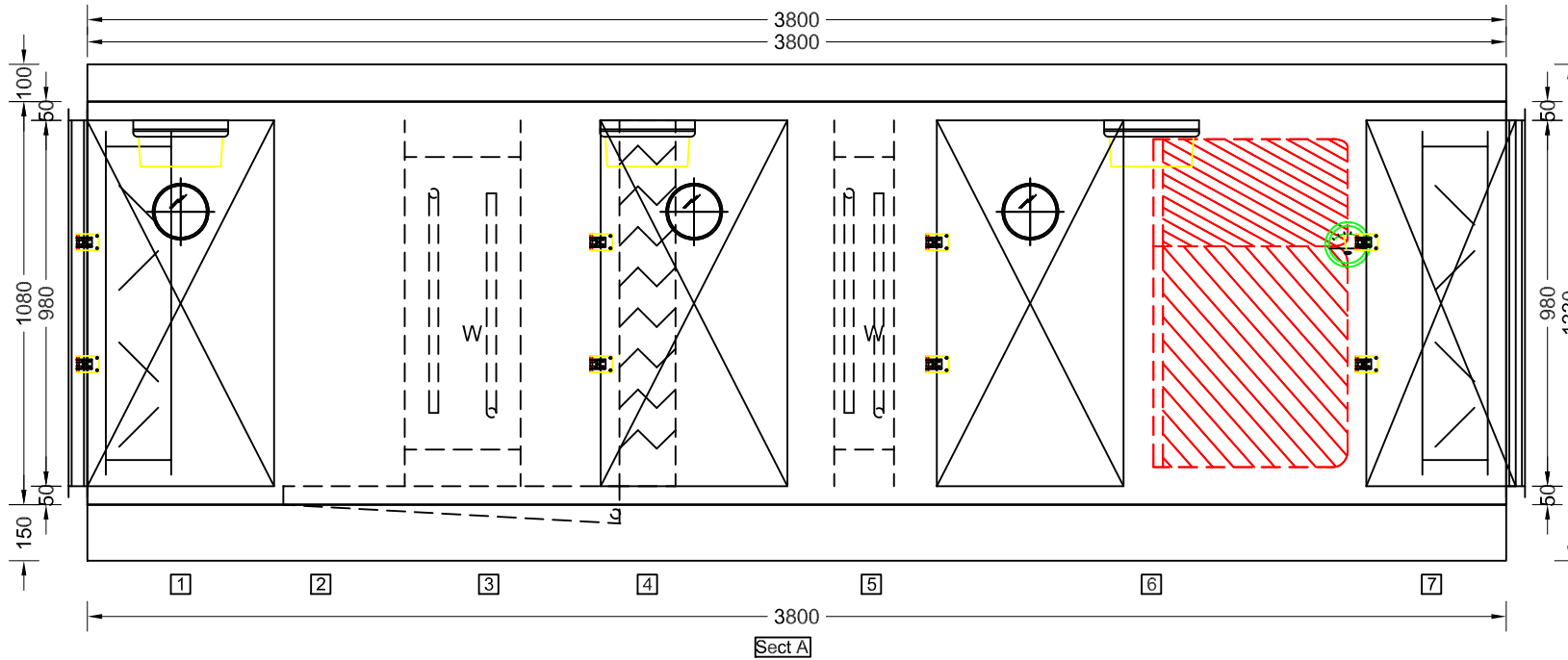
**INCLUDED OPTIONS / NOTES**

Test Point

Section A: Weight +/- 10% = 851Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



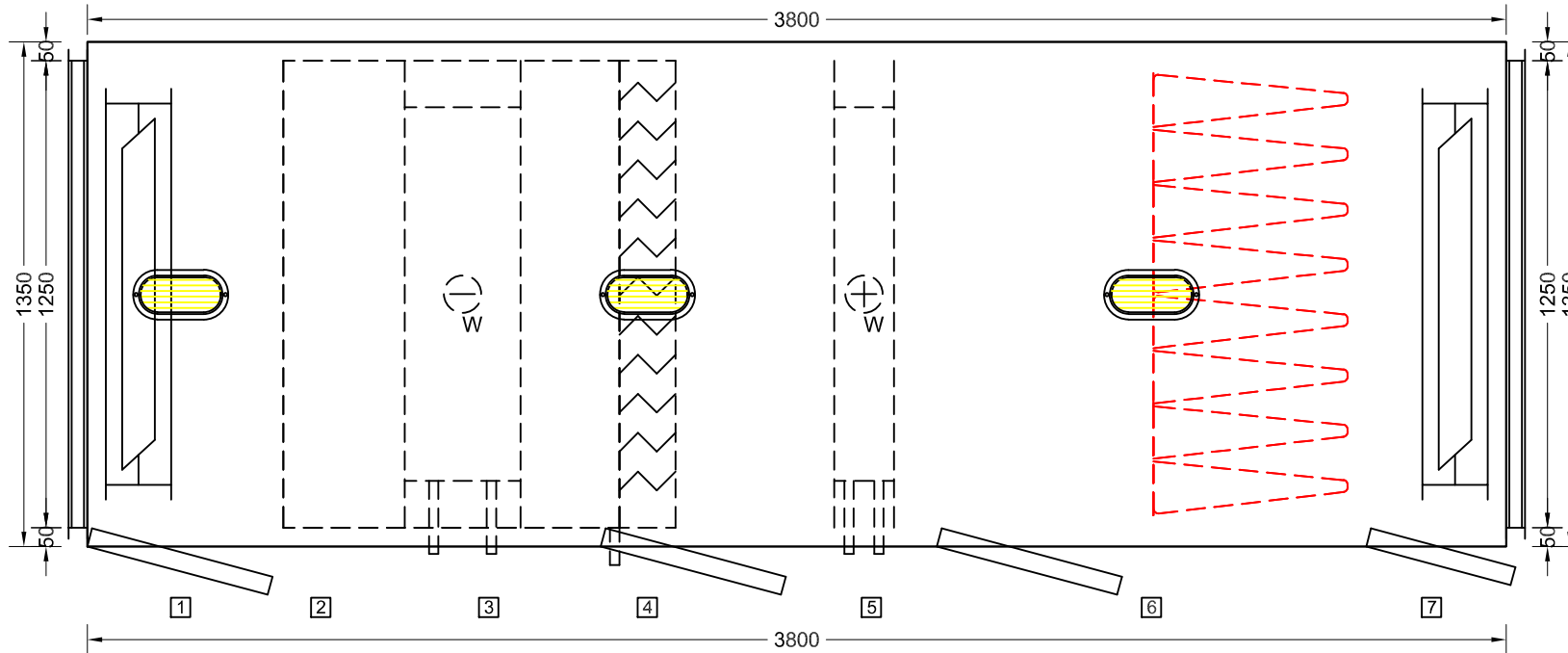
### ELEVATION

Customer	RSP	Air flow	1.62	m <sup>3</sup> /s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	851	Kg	AHU No.	5						
Location	CT 1	E.S.P		Pa	Dwg No.	23108-5-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								

Section A: Weight +/- 10% = 851Kgs

Components

- 1 Inlet Section
- 2
- 3 Chilled Water Cooling Coil
- 4 Eliminator
- 5 LPHW Heating Coil
- 6 Bag Filter
- 7 Outlet Section



### PLAN DECK

Customer	RSP	Air flow	1.62	m <sup>3</sup> /s	Not To Scale All Dimensions shown are in mm		This Drawing is property of AHS and should not be re-produced in any form		<b>AIR HANDLING SYSTEMS LTD.</b> 3 - 5 FURNACE INDUSTRIAL ESTATE SHILDON, COUNTY DURHAM. DL4 1QB	No.	Revision	Date
Project	Royal Free - Imaging	Weight	851	Kg	AHU No.	5						
Location	CT 1	E.S.P		Pa	Dwg No.	23108-5-0						
Model	AIR FLEX 39 F	Quantity	1	Nos.								