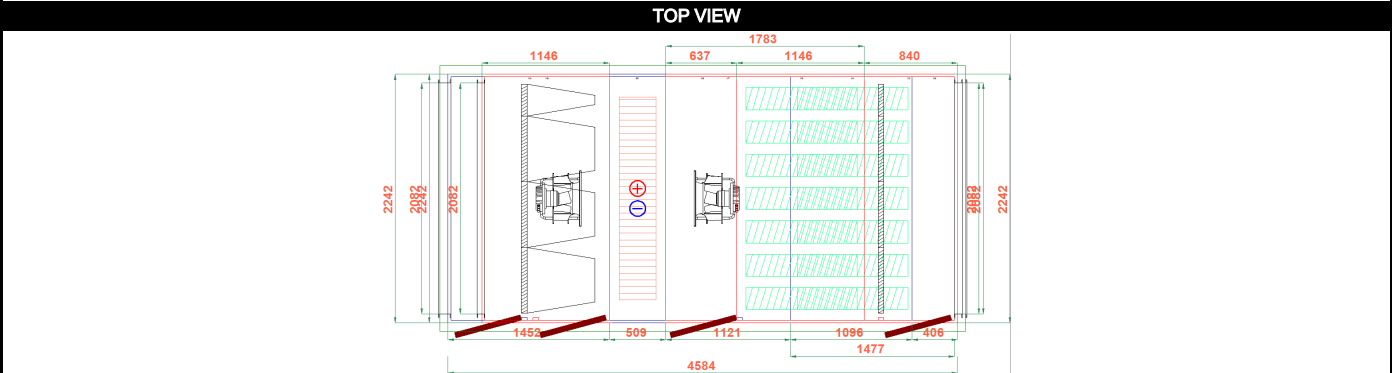
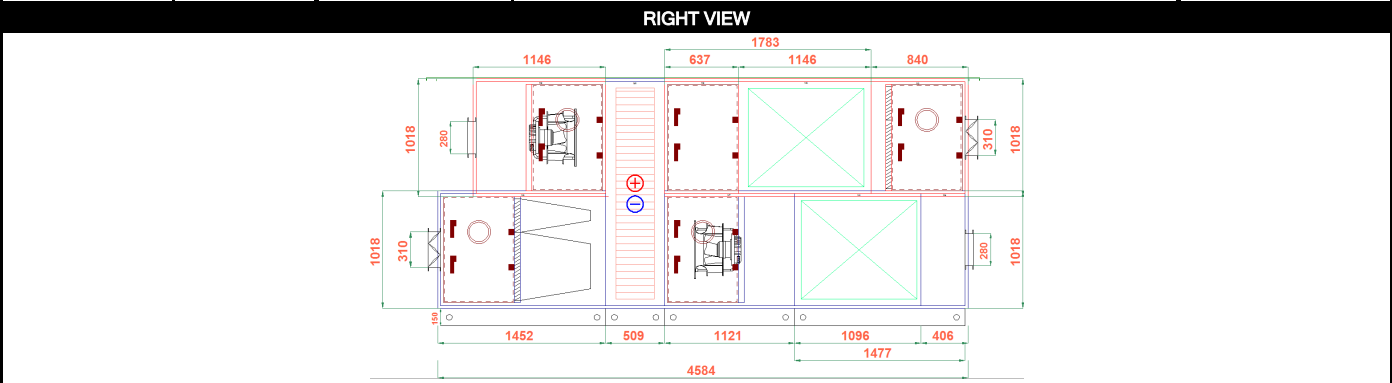


TECHNICAL DATA			
Date	12/03/2018	Rev. Date	03/05/2018
Project No	2233	Proj.Trace No	32495
Project Name	HEAT ECOVERY UNIT-ECO		
AHU Name	AHU-2		
AHU Model	JUPITER 12 X 24		



**GENERAL SPECIFICATIONS**

Supply Air Flow	Return Air Flow	Frame	Dimensions (mm)
8,000 m³/h	8,000 m³/h	25 steel profile	A2192 x H968
Supply Air Velocity	Return Air Velocity	Insulation Material	Total Weight
1.13 m/s	1.13 m/s	Rockwool 70 kg/m³	0 kg
Coil Air Velocity	Air Density	Insulation Thickness	Base Height / Installation
	1.3255 kg/m³	50 mm	150 mm / Outside
Design Outdoor Temp.	Mixing Ratio	Outside Sheet Material	Absorbed Power
-7.7 °C / 25.8 °C(Odense)	% 0.00	0.9 mm Painted Galvanize	5.06 kW
Total Heating Capacity	Total Cooling Capacity	Inside Sheet Material	Motor Power(Vant/Asp)
		0.9 mm Galvanize	
Specific Fan Power(SFP Total)	ErP Compliance	ErP Code	Real Unit CAL Class -400 Pa
0.49 kW/(m³/s)	2016 & 2018	NRVU - BVU	L3
			Real Unit CAL Class +400 Pa
			L3

Frequency Hz	NOISE LEVEL							SOUND POWER LEVEL (dB)							LwA-tot
	125	250	500	1000	2000	4000	8000	125	250	500	1000	2000	4000	8000	
Airborne Sound Power Level	55.2	57.1	55.9	54.0	53.6	48.1	34.1	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6
Supply Air Outlet Induct Sound Power Level	66.3	61.4	65.3	64.9	63.5	66.7	60.9	71.2	71.2	71.2	71.2	71.2	71.2	71.2	71.2
Supply Air Inlet Induct Sound Power Level	56.9	68.2	66.0	63.8	68.2	66.5	62.5	72.2	72.2	72.2	72.2	72.2	72.2	72.2	72.2
Return Air Outlet Induct Sound Power Level	73.6	84.3	86.0	89.4	86.9	84.6	78.0	92.4	92.4	92.4	92.4	92.4	92.4	92.4	92.4
Return Air Inlet Induct Sound Power Level	54.1	48.9	49.2	43.9	47.2	53.3	50.0	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8

**ACCESSORIES**

Lightening, Observation Glass, U-Manometer, Manometer Pressure Gauge


Model	CS Class	CAL Class -400 Pa	CAL Class +400 Pa	FBL Class	TT Class	TBF Class	Casing accoustical insulation at 125 Hz [dB]	Casing accoustical insulation at 250 Hz [dB]	Casing accoustical insulation at 500 Hz [dB]	Casing accoustical insulation at 1000 Hz [dB]	Casing accoustical insulation at 2000 Hz [dB]	Casing accoustical insulation at 4000 Hz [dB]	Casing accoustical insulation at 8000 Hz [dB]
JUPITER	D2	L1	L1	F9	T2	TB2	18.4	27.2	30.1	35.4	33.3	36.5	43.9

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		<b>TECHNICAL DATA</b>			
		Date	12/03/2018	Rev. Date	03/05/2018
		Project No	2233	Proj.Trace No	32495
		Project Name	HEAT RECOVERY UNIT-ECO		
AHUSEL V.	2.2.3.12 26/02/2018	AHU Name	AHU-2		
BSK	2/5	AHU Model	JUPITER 12 X 24		



**FRESH AIR CONNECTION**

Connection Type	Automation	Pressure Drop
Gear Damper	Automatic	10 Pa
Airflow	Dimensions	Air Velocity
8,000 m³/h	A 2082 mm x H 310 mm	3.44 m/s

**SUPPLY CONNECTION**

Connection Type	Automation	Pressure Drop
Flange	Automatic	10 Pa
Airflow	Dimensions	Air Velocity
8,000 m³/h	A 2082 mm x H 280 mm	3.81 m/s


**RETURN CONNECTION**

Connection Type	Automation	Pressure Drop
Gear Damper	Automatic	10 Pa
Airflow	Dimensions	Air Velocity
8,000 m³/h	A 2082 mm x H 310 mm	3.44 m/s

**EXHAUST CONNECTION**

Connection Type	Automation	Pressure Drop
Flange	Automatic	10 Pa
Airflow	Dimensions	Air Velocity
8,000 m³/h	A 2082 mm x H 280 mm	3.81 m/s

**FILTER (M3)**

Filter Type	Initial / Final / Design P.Drop	Air Velocity	Size/Quantity/EC*	Size/Quantity/EC*	Size/Quantity/EC*	Section Weight
G-4 Panel	28 Pa / 160 Pa / 94 Pa	1.28 m/s	592x592x50/3/NA	592x287x50/4/NA		0 kg
Filter Type	Initial / Final / Design P.Drop	Air Velocity	Size/Quantity/EC*	Size/Quantity/EC*	Size/Quantity/EC*	Spare Filter
F-7 Bag	35 Pa / 360 Pa / 197 Pa	1.28 m/s	592x592x610/3/E	592x287x610/4/B		

\* Filter Energy Performance; preferably energy classification

**ACCESSORIES**

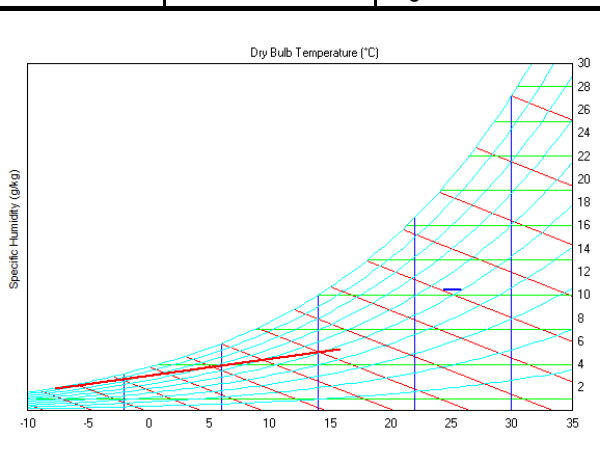
Lightening, Observation Glass, U-Manometer, Manometer Pressure Gauge



**ROTARY HEAT RECOVERY (M1)**

Model	Rpm	Quantity	Section Weight
RRU-P-E20-1825/1825-1700	15	1	0 kg

	Fresh Air		Exhaust		Capacity	Summer		Winter	
	Airflow	8,000 m³/h	8,000 m³/h			-3.84 kW	86.85 kW		
Air Vel.	1.77 m/s		1.98 m/s			Fresh	Exhaus	Fresh	Exhau
	Summer		Winter		P.D (Pa)	78	77	63	76
	Effect.	Ratio(*)	Effect.	Ratio(*)	1.2kg/m³	75	75	75	75
	78.66	78.66	79.05	79.05					



Air Inlet / Outlet	Summer				Winter			
	Fresh Air		Exhaust		Fresh Air		Exhaust	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
	DT	25.80	24.38	24.00	25.42	-7.70	15.78	22.00
WT	18.54	18.07	17.06	17.55	-8.08	10.02	15.42	0.46
RH	50.00	54.40	50.00	45.94	90.00	47.58	50.00	95.00

Condensation Pan	OACF	EATR (%)
	0.89	14.47

Frequency Inverter

\* Efficiency at balanced flow



\* OACF: Outdoor Air Correction Factor, EATR: Exhaust Air Transfer Ratio

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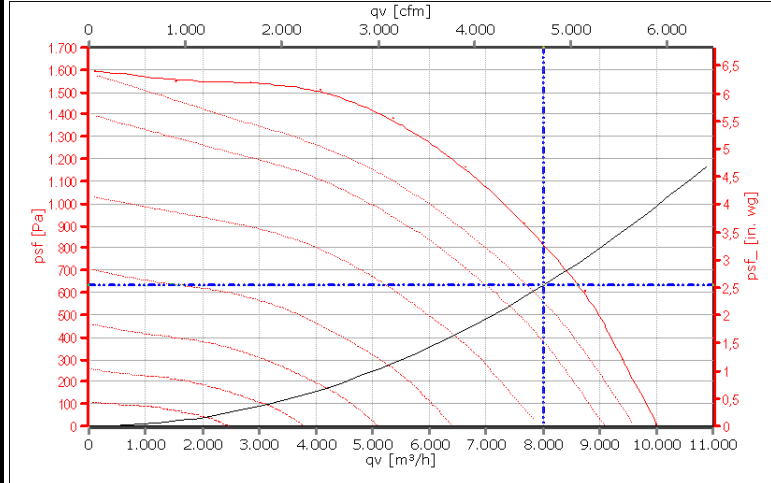
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Factory Fax: +90 216 669 09 72



	<b>TECHNICAL DATA</b>				
	Date	12/03/2018	Rev. Date	03/05/2018	
	Project No	2233	Proj.Trace No	32495	
	Project Name	HEAT ECOVERY UNIT-ECO			
AHUSEL V.	2.2.3.12 26/02/2018	AHU Name	AHU-2		
BSK	3/5	AHU Model	JUPITER 12 X 24		

<b>ACCESSORIES</b>		

**SUPPLY FAN (M7)**

<b>Airflow</b>	8,000 m³/h	<b>Fan Model</b>	EBM Papst-K3G400AQ3101	<b>Quantity</b>	1	<b>Section Weight</b>	0 kg		
<b>Internal Static Pressure</b>	382 Pa	<b>Motor P./Volt./Pha./Freq.</b>	3P/400V/50-60Hz						
<b>External Static Pressure</b>	250 Pa	<b>Total Static Pressure</b>	632 Pa						
<b>Total Pressure</b>	745 Pa	<b>Total / Static Efficiency</b>	60.01 / 50.88 %						
<b>Shaft / Absorbed Power</b>	2.76 / 2.76 kW	<b>Absorbed Pow.With VFD</b>	2.76 kW						
<b>Fan Speed</b>	2543 rpm(Max.2680 rpm)								
<b>Sound Power Level (dB)</b>								<b>LwA-tot</b>	
	Hz	125	250	500	1000	2000	4000	8000	
	<b>SPLa - Inlet Side</b>	72.9	84.2	82.0	79.8	80.2	78.5	74.5	86.6 dBA
	<b>SPLm - Outlet Side</b>	73.9	84.4	86.8	89.4	88.0	84.6	78.0	93.8 dBA
<b>Specific Fan Power(SFPe int)</b>	0.10 kW/(m³/s)	<b>Air Density</b>	1.2000 kg/m³						
<b>Backup Fan</b>	0	<b>Backup Motor</b>	0						

\* The fan system effect is taken into account in the fan performance  
 \* The fan calculated for wet conditions  
 \* Sfp is calculated based on clean filter & dry coil conditions

<b>ACCESSORIES</b>		
Lightening, Observation Glass		

**SILENCER (M4)**

<b>Airflow</b>	8,000 m³/h	<b>Sound Absorbtion (250 Hz)</b>	22 dB	<b>Pressure Drop</b>	8 Pa	<b>Silencer Thickness</b>	200 mm	<b>Silencer Material</b>	Rockwool ( 52 kg/m³ ) 50 m	<b>Section Weight</b>	0 kg
<b>Silencer Code</b>	200d 100s 7n 1000L 850H 2127A										

<b>ACCESSORIES</b>		



**EMPTY SECTION (M8)**

<b>Airflow</b>	8,000 m³/h	<b>Pressure Drop</b>	0 Pa	<b>Section Weight</b>	0 kg
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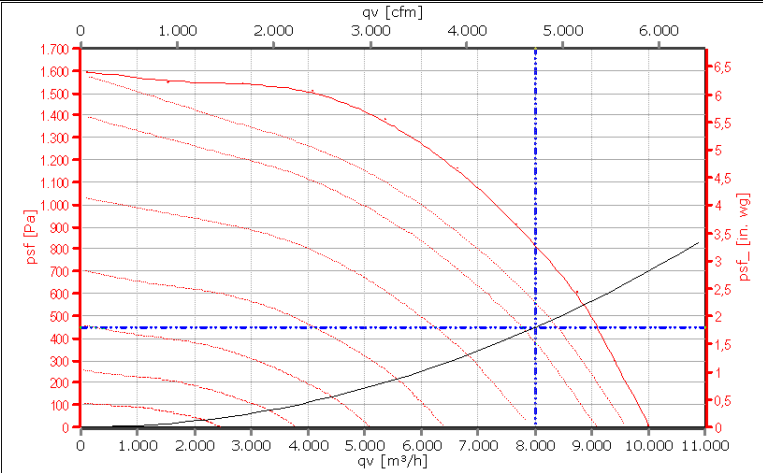
<b>ACCESSORIES</b>		

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	<b>TECHNICAL DATA</b>				
	Date	12/03/2018	Rev. Date	03/05/2018	
	Project No	2233	Proj.Trace No	32495	
	Project Name	HEAT ECOVERY UNIT-ECO			
AHUSEL V.	2.2.3.12 26/02/2018	AHU Name	AHU-2		
BSK	4/5	AHU Model	JUPITER 12 X 24		

**EXHAUST FAN (M9)**

<b>Airflow</b> 8,000 m³/h	<b>Fan Model</b> EBM Papst-K3G400AQ3101	<b>Quantity</b> 1	<b>Section Weight</b> 0 kg																																				
<b>Internal Static Pressure</b> 198 Pa	<b>Motor P./Volt./Pha./Freq.</b> 3P/400V/50-60Hz																																						
<b>External Static Pressure</b> 250 Pa																																							
<b>Total Static Pressure</b> 448 Pa																																							
<b>Total Pressure</b> 561 Pa																																							
<b>Total / Static Efficiency</b> 54.30 / 43.32 %																																							
<b>Shaft / Absorbed Power</b> 2.30 / 2.30 kW	<b>Absorbed Pow.With VFD</b> 2.30 kW																																						
<b>Fan Speed</b> 2422 rpm(Max.2680 rpm)	<table border="1" style="width: 100%;"> <tr> <th colspan="8">Sound Power Level (dB)</th> <th>LwA-tot</th> </tr> <tr> <th>Hz</th> <th>125</th> <th>250</th> <th>500</th> <th>1000</th> <th>2000</th> <th>4000</th> <th>8000</th> <th></th> </tr> <tr> <td>SPLa - Inlet Side</td> <td>72.7</td> <td>82.9</td> <td>81.7</td> <td>79.4</td> <td>79.7</td> <td>79.2</td> <td>75.1</td> <td>86.4 dBA</td> </tr> <tr> <td>SPLm - Outlet Side</td> <td>73.6</td> <td>84.3</td> <td>86.0</td> <td>89.4</td> <td>86.9</td> <td>84.6</td> <td>78.0</td> <td>93.3 dBA</td> </tr> </table>			Sound Power Level (dB)								LwA-tot	Hz	125	250	500	1000	2000	4000	8000		SPLa - Inlet Side	72.7	82.9	81.7	79.4	79.7	79.2	75.1	86.4 dBA	SPLm - Outlet Side	73.6	84.3	86.0	89.4	86.9	84.6	78.0	93.3 dBA
Sound Power Level (dB)								LwA-tot																															
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SPLa - Inlet Side	72.7	82.9	81.7	79.4	79.7	79.2	75.1	86.4 dBA																															
SPLm - Outlet Side	73.6	84.3	86.0	89.4	86.9	84.6	78.0	93.3 dBA																															
<b>Specific Fan Power(SFP<sub>e</sub> int)</b> 0.05 kW/(m³/s)	<b>Air Density</b> 1.2000 kg/m³																																						
<b>Backup Fan</b> 0	<b>Backup Motor</b> 0																																						

\* The fan system effect is taken into account in the fan performance

\* The fan calculated for wet conditions

\* Sfp is calculated based on clean filter & dry coil conditions

<b>ACCESSORIES</b>		
Lightening, Observation Glass		

<b>EMPTY SECTION (M6)</b>			
<b>Airflow</b> 8,000 m³/h	<b>Pressure Drop</b> 0 Pa	<b>Section Weight</b> 0 kg	

<b>ACCESSORIES</b>		

<b>SILENCER (M5)</b>					
<b>Airflow</b> 8,000 m³/h	<b>Sound Absorption (250 Hz)</b> 22 dB	<b>Pressure Drop</b> 8 Pa	<b>Silencer Thickness</b> 200 mm	<b>Silencer Material</b> Rockwool ( 52 kg/m³ ) 50 m	<b>Section Weight</b> 0 kg
<b>Silencer Code</b>		200d 100s 7n 1000L 850H 2127A			


<b>ACCESSORIES</b>		

<b>FILTER (M2)</b>						
<b>Filter Type</b> G-4 Panel	<b>Initial / Final / Design P.Drop</b> 28 Pa / 160 Pa / 94 Pa	<b>Air Velocity</b> 1.28 m/s	<b>Size/Quantity/EC*</b> 592x592x50/3/NA	<b>Size/Quantity/EC*</b> 592x287x50/4/NA	<b>Size/Quantity/EC*</b>	<b>Section Weight</b> 0 kg
<b>Filter Type</b>	<b>Initial / Final / Design P.Drop</b>	<b>Air Velocity</b>	<b>Size/Quantity/EC*</b>	<b>Size/Quantity/EC*</b>	<b>Size/Quantity/EC*</b>	<b>Spare Filter</b>

\* Filter Energy Performance; preferably energy classification

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	<b>TECHNICAL DATA</b>			
	Date	12/03/2018	Rev. Date	03/05/2018
	Project No	2233	Proj.Trace No	32495
	Project Name	HEAT ECOVERY UNIT-ECO		
AHUSEL V.	2.2.3.12 26/02/2018	AHU Name	AHU-2	
BSK	5/5	AHU Model	JUPITER 12 X 24	



ACCESSORIES	
Lightening, Observation Glass, U-Manometer, Manometer Pressure Gauge	



Ecodesign Requirements Table				
		Value	2016	2018
	Product	JUPITER 25		
	Erp	2016 & 2018		
A	Manufacturer	BSK Havalandırma Ekipmanları A.Ş.		
B	Model Identifier	JUPITER 12 X 24		
C	ErP Code	NRVU - BVU		
D	Type Of Drive	Variable Speed Drive (VSD)	Variable Speed Drive (VSD)	Required
E	Type Of HRS	Rotary		
	HRS Damper	Exists		
F	Thermal Efficiency of HRS	79.05 %	>= 67 %	>= 73 %
G	Nominal Flow Rate	2.22 m³/s	2.22 m³/s	
H	Effective Electrical Power Input	2.76 kW	2.30 kW	
I	SPFInt	672 W/(m³/s)	703 W/(m³/s)	<= 1101
J	Face Velocity	1.13 m/s	1.13 m/s	
K	Nominal External Drop Δps, Ext	250 Pa	250 Pa	
L	Internal Pressure Drop Δps, Int	382 Pa	198 Pa	
M	Additional Pressure Drop Δps, Add	113 Pa	113 Pa	
N	Static Fan Efficiency EC327/2011	50.88 %	43.32 %	
O	Declared Maximum Ext./Int. Leakage Rate	0.89 %		
P	Energy Performance Of Filters	B	NA	
Q	Description Of Visual Filter Warning	Manometer Pressure Gauge	Manometer Pressure Gauge	Required
R	Casing Sound Power Level (Lwa)	93.8 dB	93.3 dB	
S	Internet Address Of Instructions	www.bskhavalandirma.com.tr		

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