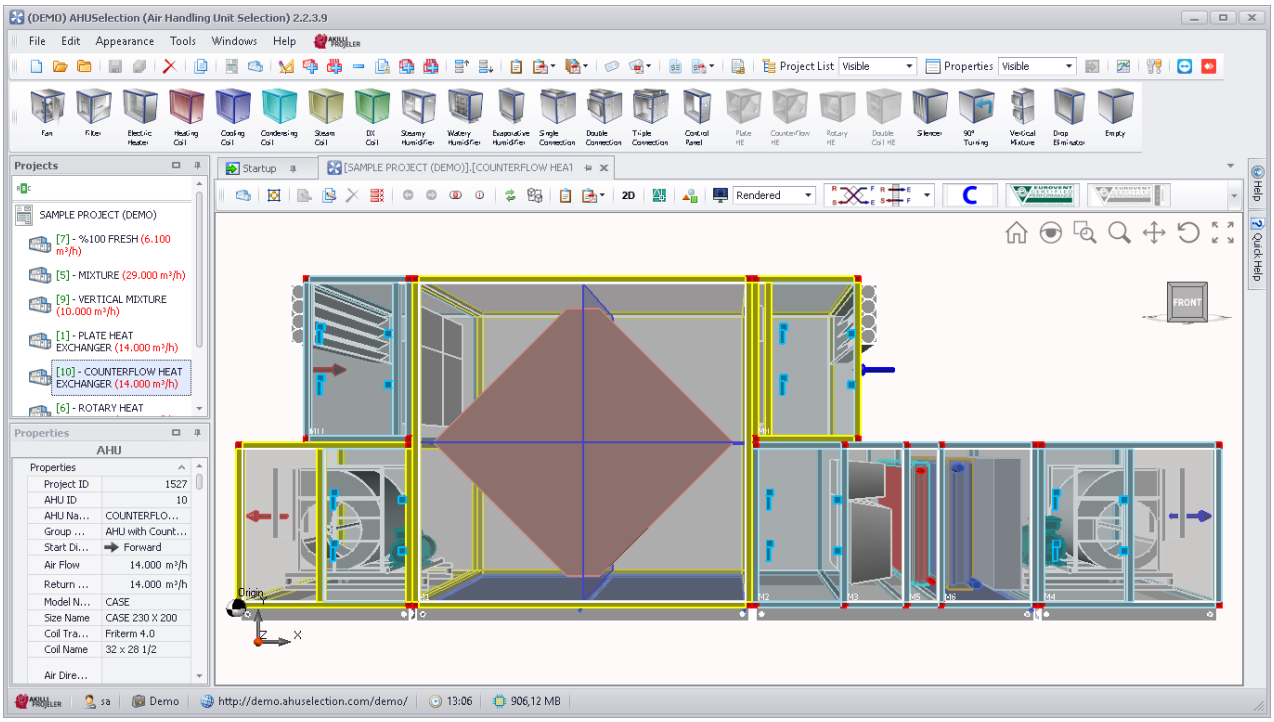
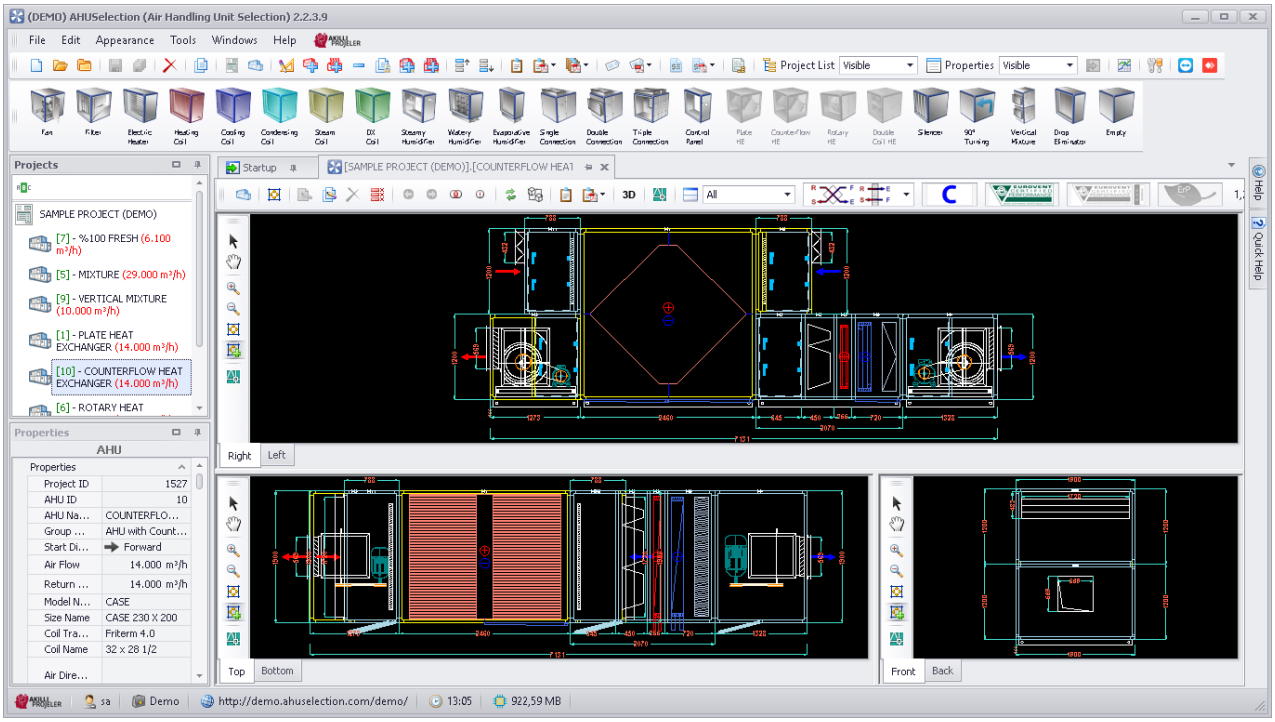
AHU SELECTION

3D / 2D VECTORIAL DRAWING

You can design AHU via 3D/2D design tool. You can see all the surfaces of the AHU by 3D/2D design tool. The drawing of the AHU on the screen is vectorial and all of the AHU selection can be exported to 3D/2D CAD softwares with many popular 3D/2D file formats. The drawing you see on your screen while designing the AHU and the drawing you will see in the 3D/2D CAD software will be the same.



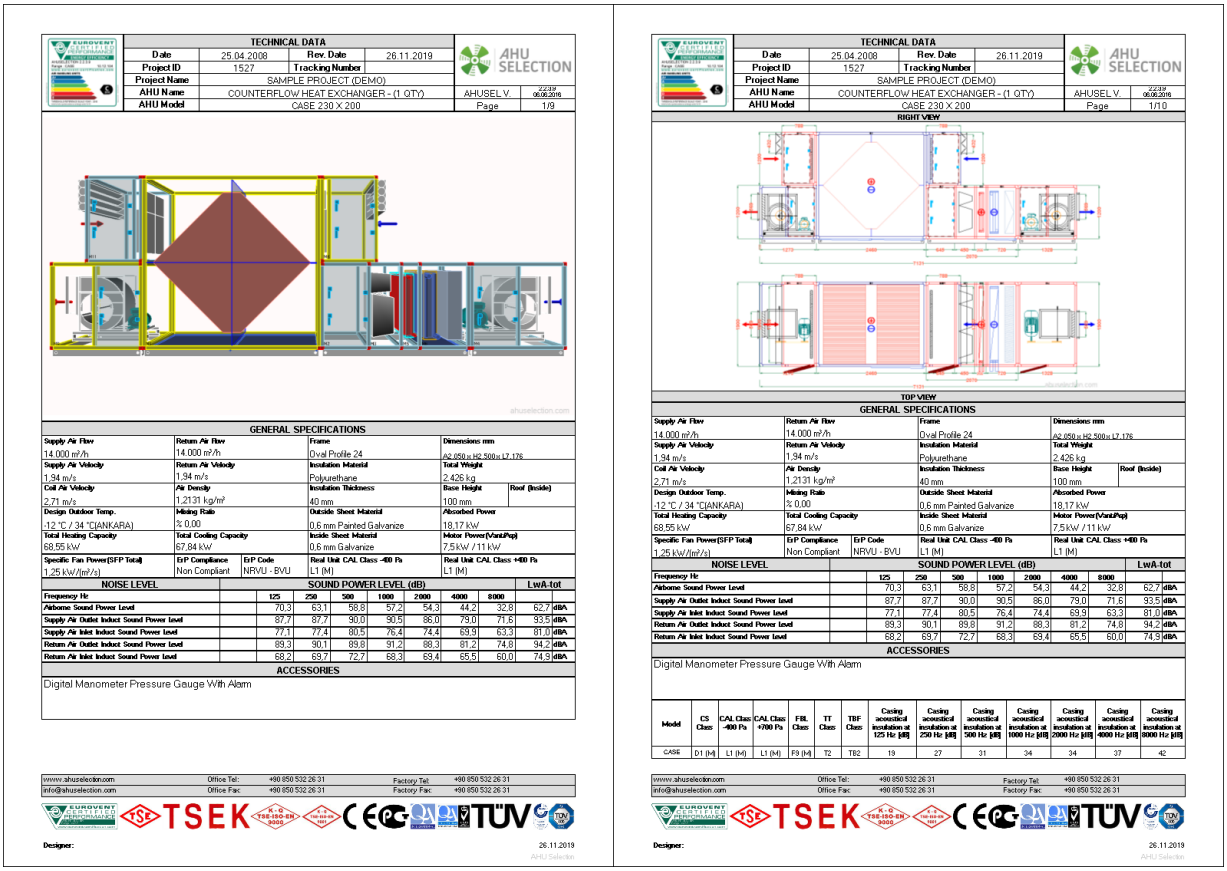


EUROVENT

Software is compliant for Eurovent certificate. Reference companies have obtained Eurovent certificate several times.

TECHNICAL REPORT

You can obtain the technical report with your own logo and your own company information. You can transfer the technical report into PDF, Excel, Word or Html formats. You can also send the file in that format via e-mail from the program.



TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019
Project ID	1527	Tracking Number	
Project Name	SAMPLE PROJECT (DEMO)		
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)	AHUSEL V.	22.2.59 06.06.2016
AHU Model	CASE 230 X 200	Page	1/9

GENERAL SPECIFICATIONS

Supply Air Flow: 14.000 m³/h	Return Air Flow: 14.000 m³/h	Frame: Oval Profile 24	Dimensions mm: A2.050 x H2.500 x L7.176	
Supply Air Velocity: 1,94 m/s	Return Air Velocity: 1,94 m/s	Insulation Material: Polyurethane	Total Weight: 2.426 kg	
Coil Air Velocity: 2,71 m/s	Air Density: 1,2131 kg/m³	Insulation Thickness: 40 mm	Base Height: 100 mm	Roof (Inside)
Design Outdoor Temp.: -12 °C / 34 °C(ANKARA)	Mixing Rate: % 0,00	Outside Sheet Material: 0,6 mm Painted Galvanize	Absorbed Power: 18,17 kW	
Total Heating Capacity: 68,55 kW	Total Cooling Capacity: 67,84 kW	Inside Sheet Material: 0,6 mm Galvanize	Motor Power(Vanti/Pusp): 7,5 kW / 11 kW	
Specific Fan Power(SFP Total): 1,25 kW/(m³/s)	ErP Compliance: Non Compliant	ErP Code: NRVU - BVU	Real Unit CAL Class -400 Pa: L1 (M)	Real Unit CAL Class +400 Pa: L1 (M)

NOISE LEVEL	SOUND POWER LEVEL (dB)								LwA-tot	
Frequency Hz	125	250	500	1000	2000	4000	8000			
Airborne Sound Power Level	70,3	63,1	58,8	57,2	54,3	44,2	32,8	62,7	dBA
Supply Air Outlet Induct Sound Power Level	87,7	87,7	90,0	90,5	86,0	79,0	71,6	93,5	dBA
Supply Air Inlet Induct Sound Power Level	77,1	77,4	80,5	76,4	74,4	69,9	63,3	81,0	dBA
Return Air Outlet Induct Sound Power Level	89,3	90,1	89,8	91,2	88,3	81,2	74,8	94,2	dBA
Return Air Inlet Induct Sound Power Level	68,2	69,7	72,7	68,3	69,4	65,5	60,0	74,9	dBA

ACCESSORIES

Digital Manometer Pressure Gauge With Alarm

www.ahuselection.com	Office Tel:	+90 850 532 26 31	Factory Tel: +90 850 532 26 31
info@ahuselection.com	Office Fax:	+90 850 532 26 31	Factory Fax: +90 850 532 26 31

Designer: 26.11.2019

TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019
Project ID	1527	Tracking Number	
Project Name	SAMPLE PROJECT (DEMO)		
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)	AHUSEL V.	22.2.59 06.06.2016
AHU Model	CASE 230 X 200	Page	1/10

RIGHT VIEW

TOP VIEW

GENERAL SPECIFICATIONS

Supply Air Flow: 14.000 m³/h	Return Air Flow: 14.000 m³/h	Frame: Oval Profile 24	Dimensions mm: A2.050 x H2.500 x L7.176	
Supply Air Velocity: 1,94 m/s	Return Air Velocity: 1,94 m/s	Insulation Material: Polyurethane	Total Weight: 2.426 kg	
Coil Air Velocity: 2,71 m/s	Air Density: 1,2131 kg/m³	Insulation Thickness: 40 mm	Base Height: 100 mm	Roof (Inside)
Design Outdoor Temp.: -12 °C / 34 °C(ANKARA)	Mixing Rate: % 0,00	Outside Sheet Material: 0,6 mm Painted Galvanize	Absorbed Power: 18,17 kW	
Total Heating Capacity: 68,55 kW	Total Cooling Capacity: 67,84 kW	Inside Sheet Material: 0,6 mm Galvanize	Motor Power(Vanti/Pusp): 7,5 kW / 11 kW	
Specific Fan Power(SFP Total): 1,25 kW/(m³/s)	ErP Compliance: Non Compliant	ErP Code: NRVU - BVU	Real Unit CAL Class -400 Pa: L1 (M)	Real Unit CAL Class +400 Pa: L1 (M)

NOISE LEVEL	SOUND POWER LEVEL (dB)								LwA-tot	
Frequency Hz	125	250	500	1000	2000	4000	8000			
Airborne Sound Power Level	70,3	63,1	58,8	57,2	54,3	44,2	32,8	62,7	dBA
Supply Air Outlet Induct Sound Power Level	87,7	87,7	90,0	90,5	86,0	79,0	71,6	93,5	dBA
Supply Air Inlet Induct Sound Power Level	77,1	77,4	80,5	76,4	74,4	69,9	63,3	81,0	dBA
Return Air Outlet Induct Sound Power Level	89,3	90,1	89,8	91,2	88,3	81,2	74,8	94,2	dBA
Return Air Inlet Induct Sound Power Level	68,2	69,7	72,7	68,3	69,4	65,5	60,0	74,9	dBA

ACCESSORIES

Digital Manometer Pressure Gauge With Alarm

Model	CS Class	CAL Class -400 Pa	CAL Class +700 Pa	FIL Class	TT Class	TBF Class	Casing acoustical insulation at 125 Hz [dB]	Casing acoustical insulation at 250 Hz [dB]	Casing acoustical insulation at 500 Hz [dB]	Casing acoustical insulation at 1000 Hz [dB]	Casing acoustical insulation at 2000 Hz [dB]	Casing acoustical insulation at 4000 Hz [dB]	Casing acoustical insulation at 8000 Hz [dB]
CASE	D1 (M)	L1 (M)	L1 (M)	F9 (M)	T2	TB2	19	27	31	34	34	37	42

www.ahuselection.com	Office Tel:	+90 850 532 26 31	Factory Tel: +90 850 532 26 31
info@ahuselection.com	Office Fax:	+90 850 532 26 31	Factory Fax: +90 850 532 26 31

Designer: 26.11.2019

TECHNICAL DATA				
Date	25.04.2008	Rev. Date	26.11.2019	
Project ID	1527	Tracking Number		
Project Name	SAMPLE PROJECT (DEMO)			
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)		AHUSEL V.	22.03/ 06.06.2016
AHU Model	CASE 230 X 200		Page	2/10

FRESH AIR CONNECTION

Connection Type	Automation	Pressure Drop
Gear Damper	Automatic	10 Pa
Airflow	**Dimensions:**	**Air Velocity**
14.000 m³/h	A 1.720 mm / H 432 mm	5,23 m/s

SUPPLY CONNECTION

Connection Type	Automation	Pressure Drop
Open	Automatic	0 Pa
Airflow	**Dimensions:**	**Air Velocity**
14.000 m³/h	A 1.610 mm / H 1.110 mm	1,94 m/s

RETURN CONNECTION

Connection Type	Automation	Pressure Drop
Gear Damper	Automatic	10 Pa
Airflow	**Dimensions:**	**Air Velocity**
14.000 m³/h	A 1.720 mm / H 432 mm	5,23 m/s

EXHAUST CONNECTION

Connection Type	Automation	Pressure Drop
Flange	Automatic	0 Pa
Airflow	**Dimensions:**	**Air Velocity**
14.000 m³/h	A 569 mm x H 569 mm	12,01 m/s

FILTER (M8)

Filter Type	Initial / Final / Design P.Dop	Air Velocity	Size/Quantity/EC*	Size/Quantity/EC*	Size/Quantity/EC*	Section Weight
M-5 Panel	114 Pa / 220Pa / 167 Pa	2,99 m/s	610x610x48/2/E	610x305x48/3/C		149 kg
Filter Type	**Initial / Final / Design P.Dop**	**Air Velocity**	**Size/Quantity/EC***	**Size/Quantity/EC***	**Size/Quantity/EC***	**Spare Filter**
						☐

* Filter Energy Performance; preferably energy classification

ACCESSORIES

Digital Manometer Pressure Gauge With Alarm

COUNTERFLOW HEAT EXCHANGER (M1)

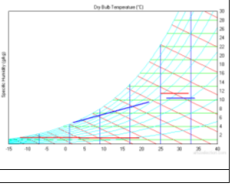
Model	Maximum Internal Leakage Rate	Quantity	Section Weight
Klingenburg-GS Kombi 110 / 1790	1 %	1	973 kg

	Fresh Air	Exhaust	Capacity	Summer	Winter
Airflow	14.000 m³/h	14.000 m³/h		-35,18 kW	133,33 kW
Air Vol.	1,66 m³/s	1,89 m³/s		Fresh / Exhaus	Fresh / Exhaus
	Summer / Inlet °C / Outlet	Winter / Inlet °C / Outlet	P.D	250 Pa / 244 Pa	232 Pa / 262 Pa
Wet	82,47 / 82,47	92,12 / 92,12	1.2kg/m³	228 Pa / 228 Pa	228 Pa / 228 Pa
Dry	82,47 / 82,47	83,35 / 83,35			

Air Inlet / Outlet	Summer Fresh Air Inlet	Summer Fresh Air Outlet	Summer Exhaust Inlet	Summer Exhaust Outlet	Winter Fresh Air Inlet	Winter Fresh Air Outlet	Winter Exhaust Inlet	Winter Exhaust Outlet
DT	34,00 °C	26,58 °C	25,00 °C	32,42 °C	-12,00 °C	19,32 °C	22,00 °C	1,94 °C
WT	19,47 °C	17,44 °C	17,76 °C	19,78 °C	-12,32 °C	6,22 °C	15,34 °C	1,94 °C
RH	28,00 %	42,83 %	51,59 %	33,56 %	90,00 %	8,74 %	51,78 %	100,00

Condensation Pan	Size mm	Bypass Damper
Stainless Steel	2.170-1.344-246-21-1.790-18	

* Efficiency at balanced flow



www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019

TECHNICAL DATA				
Date	25.04.2008	Rev. Date	26.11.2019	
Project ID	1527	Tracking Number		
Project Name	SAMPLE PROJECT (DEMO)			
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)		AHUSEL V.	22.03/ 06.06.2016
AHU Model	CASE 230 X 200		Page	3/10

ACCESSORIES

SUPPLY FAN (M9)

Airflow	Motor Type	Fan Model		Quantity	Section Weight
14.000 m³/h	AGM 132 S-2b	Nicotra-RDH 450 R		1	370 kg
Internal Static Pressure	Motor P.Volt./Pha./Freq.	Isolator	Isolator Count	Backup Fan	Backup Motor
389 Pa	7,5 kW/3P/380V/50Hz	Rubber	4		
External Static Pressure	System Effect	Motor Speed			
600 Pa	10 Pa	3000 (2890)rp			
Total Static Pressure	Fan Pulley				
989 Pa	SPA 224x2+2517 Ø35 mm				
Total Pressure	Motor Pulley				
1070 Pa	SPA 160x2+2012 Ø38 mm				
Total / Static Efficiency	Belt				
75,17 / 75,17 %	2xSPA 1.800 mm				
Motor / Inverter Efficiency	☐ Frequency Inverter Included				
87,60 / 97,00 %					
Shaft Power / Absorbed Power	Absorbed Pow.With VFD				
5,54 / 7,44 kW	7,66 kW				
Fan Speed	Running Frequency				
2057 rpm (Max.2500 rpm)	50 HZ				
Fan Outlet Air Velocity	Air Density				
12,01 m/s	1,1256 kg/m³				

Specific Fan Power (SFPs int)	Sound Power Level (dB)								LwA-sur
0,65 kW/(m³/s)	Hz	63	125	250	500	1000	2000	4000	8000	
Electrical Current	SPLs - Inlet Side	85,5	86,1	86,4	89,5	85,4	81,4	76,3	70,3	90,5 dBA
11,64 A (Max.13,38 A)	SPLm - Outlet Side	89,5	87,7	87,7	90,0	90,5	86,0	79,0	71,6	93,7 dBA

* 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

ACCESSORIES

FILTER (M11)

Filter Type	Initial / Final / Design P.Dop	Air Velocity	Size/Quantity/EC*	Size/Quantity/EC*	Size/Quantity/EC*	Section Weight
M-5 Panel	114 Pa / 220Pa / 167 Pa	2,99 m/s	610x610x48/2/E	610x305x48/3/C		149 kg
Filter Type	**Initial / Final / Design P.Dop**	**Air Velocity**	**Size/Quantity/EC***	**Size/Quantity/EC***	**Size/Quantity/EC***	**Spare Filter**
						☐

* Filter Energy Performance; preferably energy classification

ACCESSORIES

Digital Manometer Pressure Gauge With Alarm

EMPTY SECTION (M2)

Airflow	Droplet Eliminator	Pressure Drop	Section Weight
14.000 m³/h		0 Pa	85 kg

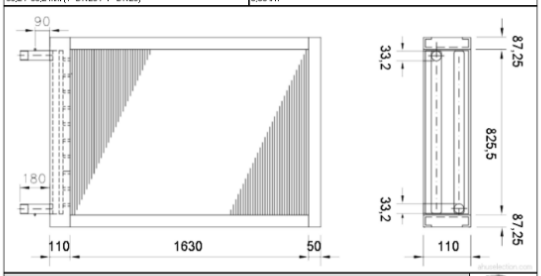
www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019

TECHNICAL DATA				
Date	25.04.2008	Rev. Date	26.11.2019	
Project ID	1527	Tracking Number		
Project Name	SAMPLE PROJECT (DEMO)			
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)		AHUSEL V.	22.03/ 06.06.2016
AHU Model	CASE 230 X 200		Page	5/10

COIL (Heating) (M5)

Airflow	Capacity / Sensible	Required Cap.	Face Vel.	Quantity	Tube Mat.	Fin Mat.	Section Weight
14.000 m³/h	68,55/68,55 kW		2,89 m/s	1	Copper	Aluminium	48 kg
Coil Code			**Tube Thickness**	**Fin Thickness**	**Fresh Air Frac.**	**Return Air Frac.**	
Fritemi-32 x 28 1/2 26T 1R 1630A 3.2P 13NC			0,35 mm	0,12 mm	100 %	%	
Droplet Elimin. / Press. Dop	**Condensation Pan / Hmin U-Trap**		**Size [W x H x L] mm**		**Conn. Material**	**Frame Material**	
			1.630 x 826 x 110		Steel	Galvanized Steel	
Fluid Kind	**Fluid In / Out**						
WATER	90/70 °C						
Air Inlet Drybulb Temperature	**Air Outlet Drybulb Temperature**						
1,94 °C	17,12 °C						
Air Inlet Wetbulb Temperature	**Air Outlet Wetbulb Temperature**						
1,94 °C	9,16 °C						
Air Inlet Relative Humidity	**Air Outlet Relative Humidity**						
100,00 %	35,99 %						
Air Inlet - Outlet Enthalpy	**Fluid Flow / Vol. Flow**						
14,07 - 29,48 kj/kg	2.939 kg/h / 3.045 dm³/h						
Air Press.Drop	**Fluid Press.Drop / Fluid Velocity**						
20 Pa	9,95 kPa / 0,53 m/s						
Coil Area	**Tube Inner Volume**						
21,46 m²	6,47 L						
Manifold / Conn.QTY	**Conn.Direction**						
1 / 1	Right						
Connection Sizes			**Air Condensation**				
33,2 / 33,2 mm (1" DN25 / 1" DN25)			0,00 l/h				



ACCESSORIES

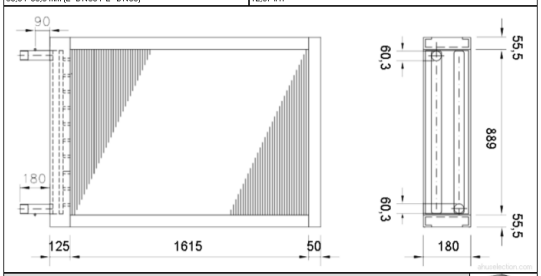
www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019

TECHNICAL DATA				
Date	25.04.2008	Rev. Date	26.11.2019	
Project ID	1527	Tracking Number		
Project Name	SAMPLE PROJECT (DEMO)			
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)		AHUSEL V.	22.03/ 06.06.2016
AHU Model	CASE 230 X 200		Page	6/9

COIL (Cooling) (Wet Surface) (M6)

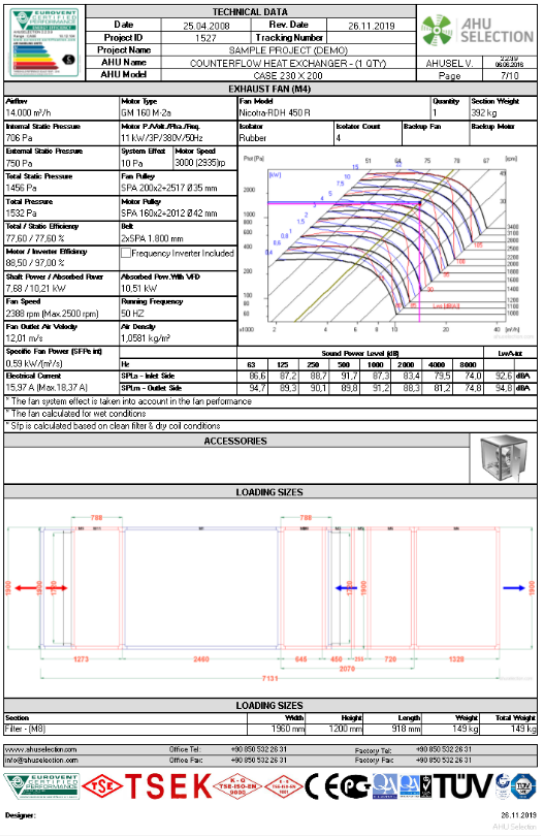
Airflow	Capacity / Sensible	Required Cap.	Face Vel.	Quantity	Tube Mat.	Fin Mat.	Section Weight
14.000 m³/h	67,84/59,21 kW		2,71 m/s	1	Copper	Aluminium	197 kg
Coil Code			**Tube Thickness**	**Fin Thickness**	**Fresh Air Frac.**	**Return Air Frac.**	
Fritemi-32 x 28 1/2 28T 4R 1615A 3.2P 28NC			0,35 mm	0,12 mm	100 %	%	
Droplet Elimin. / Press. Dop	**Condensation Pan / Hmin U-Trap**		**Size [W x H x L] mm**		**Conn. Material**	**Frame Material**	
Polypropylene / 30 Pa	Stainless Steel / 148,6 mm		1.615 x 889 x 180		Steel	Galvanized Steel	
Fluid Kind	**Fluid In / Out**						
WATER	6/12 °C						
Air Inlet Drybulb Temperature	**Air Outlet Drybulb Temperature**						
32,42 °C	17,86 °C						
Air Inlet Wetbulb Temperature	**Air Outlet Wetbulb Temperature**						
19,78 °C	14,62 °C						
Air Inlet Relative Humidity	**Air Outlet Relative Humidity**						
33,56 %	73,97 %						
Air Inlet - Outlet Enthalpy	**Fluid Flow / Vol. Flow**						
61,73 - 44,62 kj/kg	9.696 kg/h / 9.697 dm³/h						
Air Press.Drop(Wet/Dry)	**Fluid Press.Drop / Fluid Velocity**						
59 Pa / 56 Pa	12,01 kPa / 0,78 m/s						
Coil Area	**Tube Inner Volume**						
91,60 m²	27,47 L						
Manifold / Conn.QTY	**Conn.Direction**						
1 / 1	Right						
Connection Sizes			**Air Condensation**				
60,3 / 60,3 mm (2" DN50 / 2" DN50)			12,37 l/h				



ACCESSORIES

www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019



TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019		
Project ID	1527	Tracking Number			
Project Name	SAMPLE PROJECT (DEMO)				
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)			AHUSEL V.	22.2.0 06.06.2016
AHU Model	CASE 230 X 200			Page	7/10

EXHAUST FAN (M4)

Airflow 14.000 m³/h	Motor Type GM 160 M-2a	Fan Model Nicotra-RDH 450 R		Quantity 1	Section Weight 392 kg
Internal Static Pressure 706 Pa	Motor P./Volt./Pha./Freq. 11 kW/3P/380V/50Hz	Isolator Rubber	Isolator Count 4	Backup Fan	Backup Motor
External Static Pressure 750 Pa	System Effect 10 Pa	Motor Speed 3000 (2935)rp			
Total Static Pressure 1456 Pa	Fan Pulley SPA 200x2=2517 Ø35 mm				
Total Pressure 1532 Pa	Motor Pulley SPA 160x2=2012 Ø42 mm				
Total / Static Efficiency 77,60 / 77,60 %	Belt 2xSPA 1.900 mm				
Motor / Inverter Efficiency 88,50 / 97,00 %	Frequency Inverter Included				
Shaft Power / Absorbed Power 7,68 / 10,21 kW	Absorbed Pow.With VFD 10,51 kW				
Fan Speed 2388 rpm (Max.2500 rpm)	Running Frequency 50 HZ				
Fan Outlet Air Velocity 12,01 m/s	Air Density 1,0581 kg/m³				

Specific Fan Power (SFPt int) 0,59 kW/(m³/s)

Hz	63	125	250	500	1000	2000	4000	8000	LwA,tot
SPLa - Inlet Side	86,6	87,2	88,7	91,7	87,3	83,4	79,5	74,0	92,6 dBA
SPLm - Outlet Side	94,7	89,3	90,1	89,8	91,2	88,3	81,2	74,8	94,8 dBA

Electrical Current 15,97 A (Max.18,37 A)

* 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

ACCESSORIES

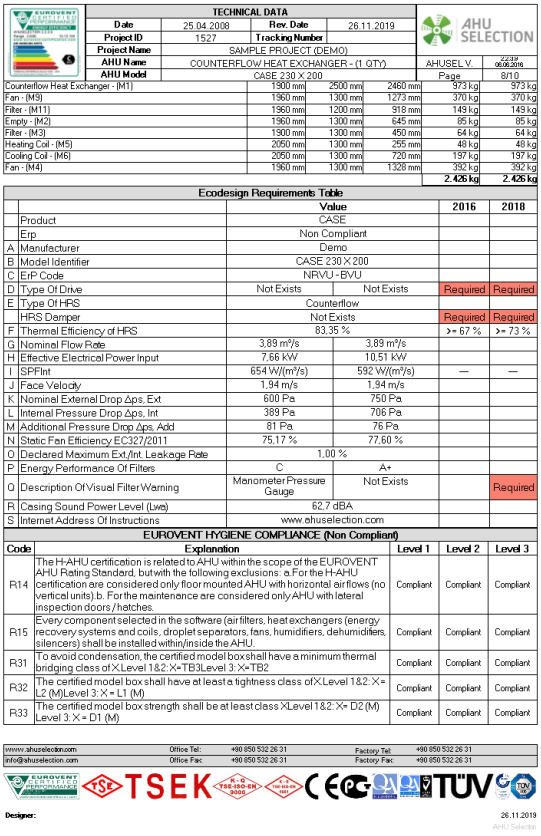
LOADING SIZES

LOADING SIZES

Section	Width	Height	Length	Weight	Total Weight
Filter - (M3)	1960 mm	1.200 mm	918 mm	149 kg	149 kg

www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019



TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019		
Project ID	1527	Tracking Number			
Project Name	SAMPLE PROJECT (DEMO)				
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)			AHUSEL V.	22.2.0 06.06.2016
AHU Model	CASE 230 X 200			Page	8/10

Counterflow Heat Exchanger - (M1)	1900 mm	2500 mm	2460 mm	973 kg / 973 kg
Fan - (M3)	1960 mm	1300 mm	1273 mm	370 kg / 370 kg
Filter - (M11)	1960 mm	1200 mm	918 mm	149 kg / 149 kg
Empty - (M2)	1960 mm	1300 mm	645 mm	85 kg / 85 kg
Filter - (M3)	1900 mm	1300 mm	450 mm	64 kg / 64 kg
Heating Coil - (M5)	2050 mm	1300 mm	255 mm	48 kg / 48 kg
Cooling Coil - (M6)	2050 mm	1300 mm	720 mm	197 kg / 197 kg
Fan - (M4)	1960 mm	1300 mm	1328 mm	392 kg / 392 kg
				2.426 kg / 2.426 kg

Ecodesign Requirements Table

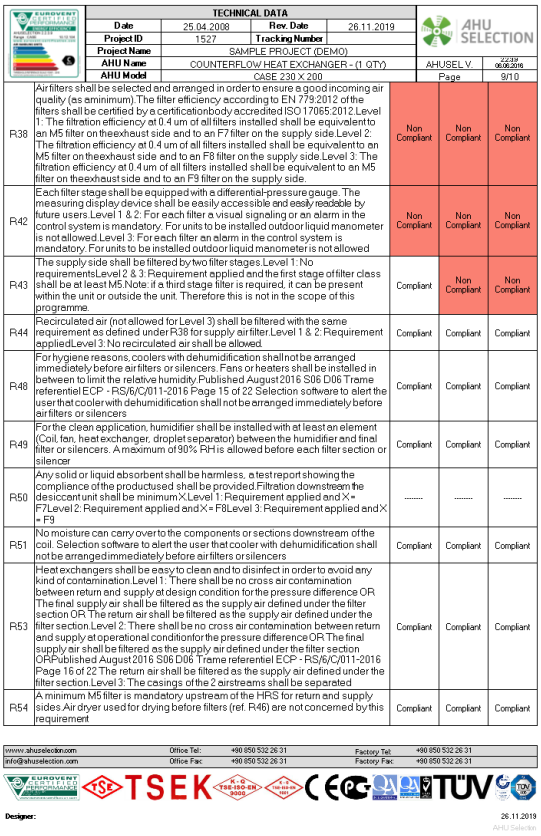
		Value		2016	2018
	Product	CASE			
	Erp	Non Compliant			
A	Manufacturer	Demo			
B	Model Identifier	CASE 230 X 200			
C	ErP Code	NRVU - BVU			
D	Type Of Drive	Not Exists	Not Exists	Required	Required
E	Type Of HRS	Counterflow			
	HRS Damper	Not Exists		Required	Required
F	Thermal Efficiency of HRS	83,35 %		>= 67 %	>= 73 %
G	Nominal Flow Rate	3,89 m³/s	3,89 m³/s		
H	Effective Electrical Power Input	7,66 kW	10,51 kW		
I	SPFInt	654 W/(m³/s)	592 W/(m³/s)	—	—
J	Face Velocity	1,94 m/s	1,94 m/s		
K	Nominal External Drop Δps, Ext	600 Pa	750 Pa		
L	Internal Pressure Drop Δps, Int	389 Pa	706 Pa		
M	Additional Pressure Drop Δps Add	81 Pa	76 Pa		
N	Static Fan Efficiency EC327/2011	75,17 %	77,60 %		
O	Declared Maximum Ext./Int. Leakage Rate	1,00 %			
P	Energy Performance Of Filters	C	A+		
Q	Description Of Visual Filter Warning	Manometer Pressure Gauge	Not Exists		Required
R	Casing Sound Power Level (Lwa)	62,7 dBA			
S	Internet Address Of Instructions	www.ahuselection.com			

EUROVENT HYGIENE COMPLIANCE (Non Compliant)

Code	Explanation	Level 1	Level 2	Level 3
R14	The H-AHU certification is related to AHU within the scope of the EUROVENT AHU Rating Standard, but with the following exclusions: a.For the H-AHU certification are considered only floor mounted AHU with horizontal air flows (no vertical units). b. For the maintenance are considered only AHU with lateral inspection doors / hatches.	Compliant	Compliant	Compliant
R15	Every component selected in the software (air filters, heat exchangers (energy recovery systems and coils, droplet separators, fans, humidifiers, dehumidifiers, silencers) shall be installed within/inside the AHU.	Compliant	Compliant	Compliant
R31	To avoid condensation, the certified model box shall have a minimum thermal bridging class of X:Level 1&2: X=TB3Level 3: X=TB2	Compliant	Compliant	Compliant
R32	The certified model box shall have at least a tightness class of X:Level 1&2: X= L2 (M)Level 3: X= L1 (M)	Compliant	Compliant	Compliant
R33	The certified model box strength shall be at least class X:Level 1&2: X= D2 (M) Level 3: X = D1 (M)	Compliant	Compliant	Compliant

www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019



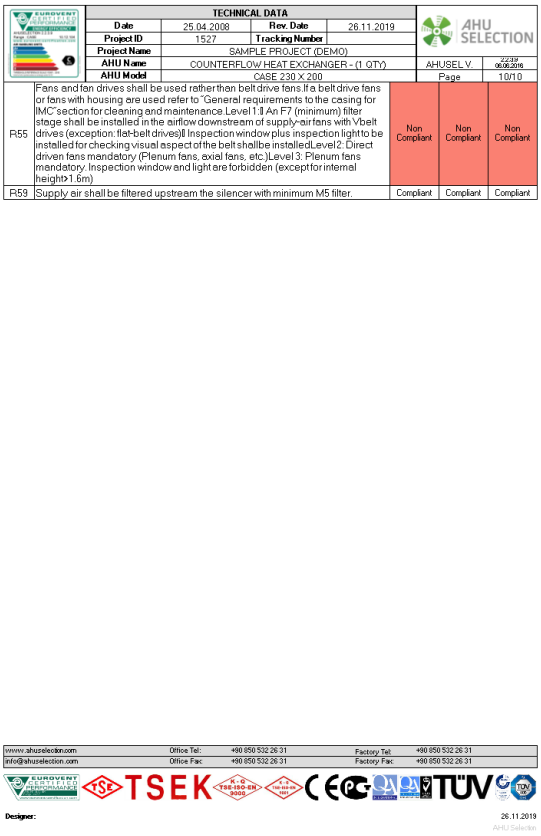
TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019		
Project ID	1527	Tracking Number			
Project Name	SAMPLE PROJECT (DEMO)				
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)			AHUSEL V.	22.2.0 06.06.2016
AHU Model	CASE 230 X 200			Page	9/10

R38	Air filters shall be selected and arranged in order to ensure a good incoming air quality (as aminimum).The filter efficiency according to EN 779:2012 of the filters shall be certified by a certificationbody accredited ISO 17065:2012.Level 1: The filtration efficiency at 0.4 um of all filters installed shall be equivalent to an M5 filter on theexhaust side and to an F7 filter on the supply side.Level 2: The filtration efficiency at 0.4 um of all filters installed shall be equivalent to an M5 filter on theexhaust side and to an F8 filter on the supply side.Level 3: The filtration efficiency at 0.4 um of all filters installed shall be equivalent to an M5 filter on theexhaust side and to an F9 filter on the supply side.	Non Compliant	Non Compliant	Non Compliant
R42	Each filter stage shall be equipped with a differential-pressure gauge. The measuring display device shall be easily accessible and easily readable by future users.Level 1 & 2: For each filter a visual signaling or an alarm in the control system is mandatory. For units to be installed outdoor liquid manometer is not allowed.Level 3: For each filter an alarm in the control system is mandatory. For units to be installed outdoor liquid manometer is not allowed	Non Compliant	Non Compliant	Non Compliant
R43	The supply side shall be filtered by two filter stages.Level 1: No requirementsLevel 2 & 3: Requirement applied and the first stage of filter class shall be at least M5.Note: if a third stage filter is required, it can be present within the unit or outside the unit. Therefore this is not in the scope of this programme.	Compliant	Non Compliant	Non Compliant
R44	Recirculated air (not allowed for Level 3) shall be filtered with the same requirement as defined under R38 for supply air filter.Level 1 & 2: Requirement appliedLevel 3: No recirculated air shall be allowed.	Compliant	Compliant	Compliant
R48	For hygiene reasons, coolers with dehumidification shall not be arranged immediately before air filters or silencers. Fans or heaters shall be installed in between to limit the relative humidity.Published August 2016 S06 D06 Trame referentiel ECP - RS/6/C/011-2016 Page 15 of 22 Selection software to alert the user that cooler with dehumidification shall not be arranged immediately before air filters or silencers	Compliant	Compliant	Compliant
R49	For the clean application, humidifier shall be installed with at least an element (Coil, fan, heat exchanger, droplet separator) between the humidifier and final filter or silencers. A maximum of 90% RH is allowed before each filter section or silencer	Compliant	Compliant	Compliant
R50	Any solid or liquid absorbent shall be harmless, a test report showing the compliance of the productused shall be provided.Filtration downstream the desiccant unit shall be minimum X.Level 1: Requirement applied and X= F7Level 2: Requirement applied and X= F8Level 3: Requirement applied and X = F9	.....	.....	.....
R51	No moisture can carry over to the components or sections downstream of the coil. Selection software to alert the user that cooler with dehumidification shall not be arranged immediately before air filters or silencers	Compliant	Compliant	Compliant
R53	Heat exchangers shall be easy to clean and to disinfect in order to avoid any kind of contamination.Level 1: There shall be no cross air contamination between return and supply at design condition for the pressure difference OR The final supply air shall be filtered as the supply air defined under the filter section.OR.The return air shall be filtered as the supply air defined under the filter section.Level 2: There shall be no cross air contamination between return and supply at operational conditionfor the pressure difference OR.The final supply air shall be filtered as the supply air defined under the filter section ORPublished August 2016 S06 D06 Trame referentiel ECP - RS/6/C/011-2016 Page 16 of 22 The return air shall be filtered as the supply air defined under the filter section.Level 3: The casings of the 2 airstreams shall be separated	Compliant	Compliant	Compliant
R54	A minimum M5 filter is mandatory upstream of the HRS for return and supply sides.Air dryer used for drying before filters (ref. R46) are not concerned by this requirement	Compliant	Compliant	Compliant

www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

Designer: 26.11.2019



TECHNICAL DATA

Date	25.04.2008	Rev. Date	26.11.2019		
Project ID	1527	Tracking Number			
Project Name	SAMPLE PROJECT (DEMO)				
AHU Name	COUNTERFLOW HEAT EXCHANGER - (1 QTY)			AHUSEL V.	22.2.0 06.06.2016
AHU Model	CASE 230 X 200			Page	10/10

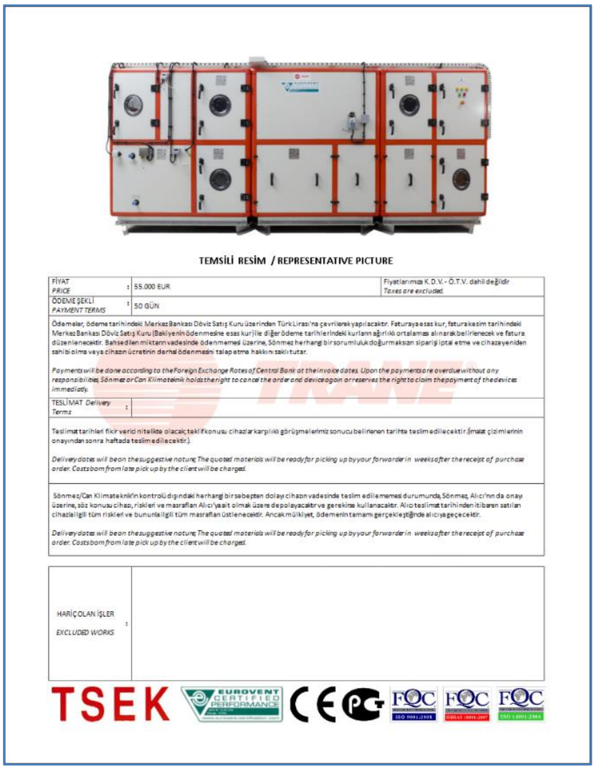
R55	Fans and fan drives shall be used rather than belt drive fans.If a belt drive fans or fans with housing are used refer to "General requirements to the casing for IMC" section for cleaning and maintenance. Level 1 & An F7 (minimum) filter stage shall be installed in the airflow downstream of supply-air fans with Vbelt drives (exception: flat-belt drives)ll Inspection window plus inspection light to be installed for checking visual aspect of the belt shall be installed.Level 2: Direct driven fans mandatory (Plenum fans, axial fans, etc.)Level 3: Plenum fans mandatory. Inspection window and light are forbidden (except for internal height>1.6m)	Non Compliant	Non Compliant	Non Compliant
R59	Supply air shall be filtered upstream the silencer with minimum M5 filter.	Compliant	Compliant	Compliant

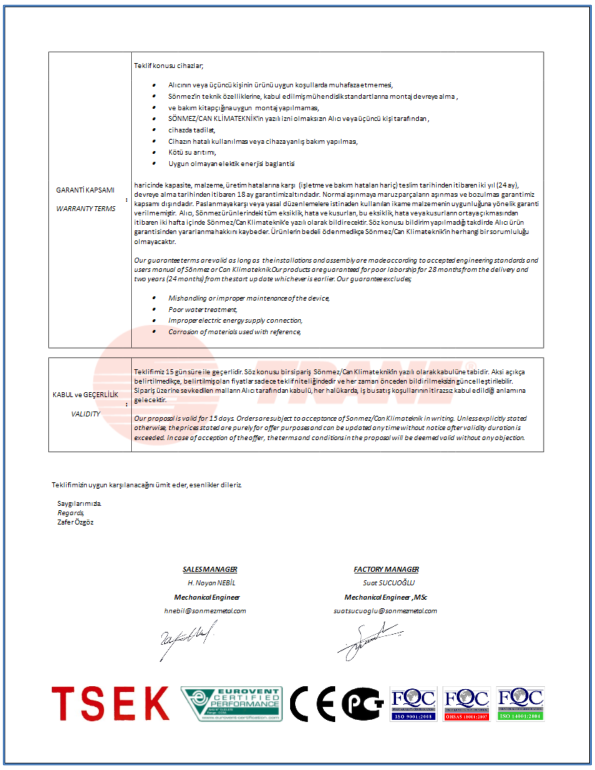
www.ahuselection.com Office Tel: +90 850 532 26 31 Factory Tel: +90 850 532 26 31
info@ahuselection.com Office Fax: +90 850 532 26 31 Factory Fax: +90 850 532 26 31

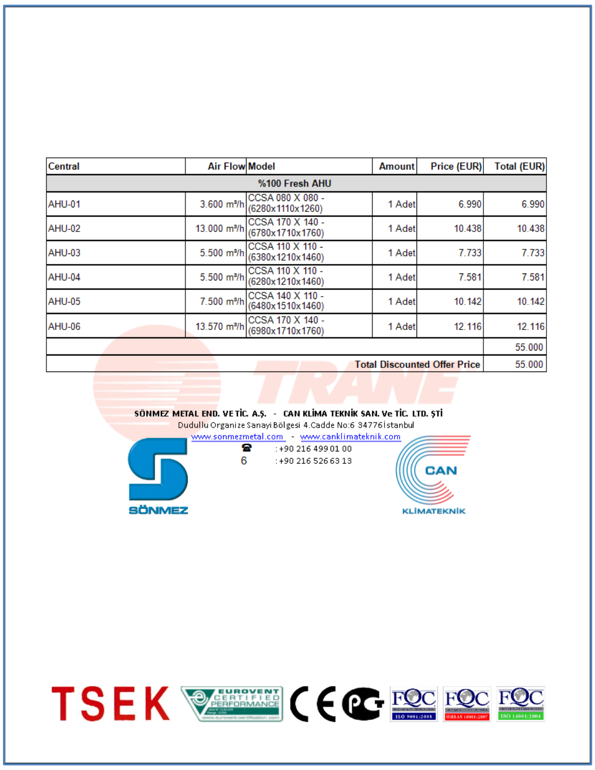
Designer: 26.11.2019

PROFORMA INVOICE

You can make a special design of proforma invoice and generate your proforma invoices via this program. You can also export the proforma invoice in different formats as in technical report and can send via e-mail.







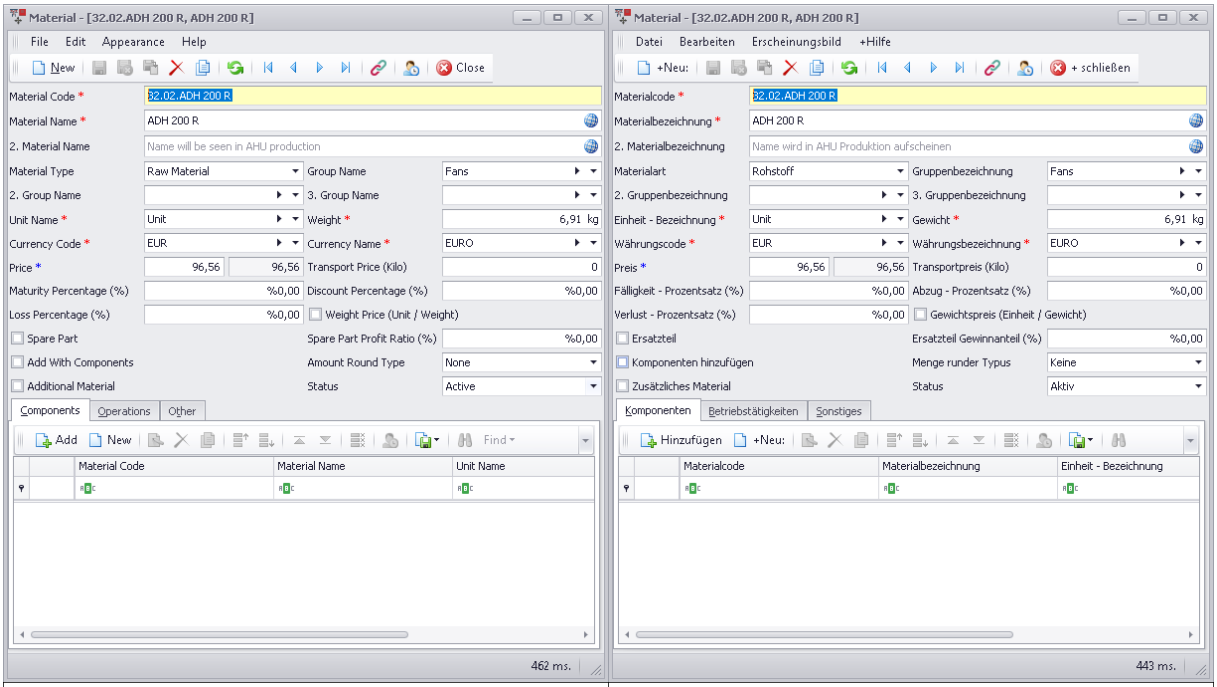
Central	Air Flow	Model	Amount	Price (EUR)	Total (EUR)
%100 Fresh AHU					
AHU-01	3.600 m³/h	CCSA 080 X 080 - (6280x1110x1260)	1 Adet	6.990	6.990
AHU-02	13.000 m³/h	CCSA 170 X 140 - (6780x1710x1760)	1 Adet	10.438	10.438
AHU-03	5.500 m³/h	CCSA 110 X 110 - (6380x1210x1460)	1 Adet	7.733	7.733
AHU-04	5.500 m³/h	CCSA 110 X 110 - (6280x1210x1460)	1 Adet	7.581	7.581
AHU-05	7.500 m³/h	CCSA 140 X 110 - (6480x1510x1460)	1 Adet	10.142	10.142
AHU-06	13.570 m³/h	CCSA 170 X 140 - (6980x1710x1760)	1 Adet	12.116	12.116
					55.000
				Total Discounted Offer Price	55.000

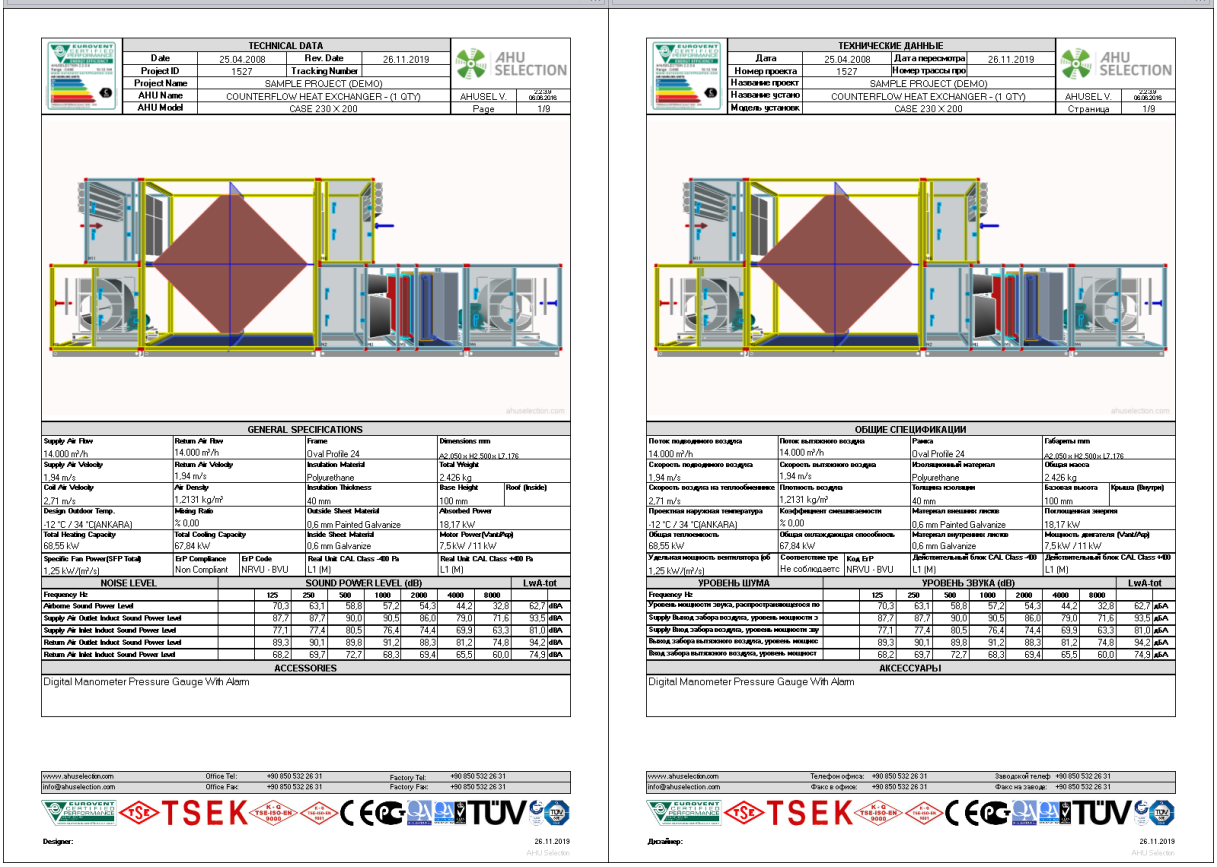
SÖNMEZ METAL END. VE TİC. A.Ş. - CAN KLİMA TEKNİK SAN. Ve TİC. LTD. ŞTİ
Dudullu Organize Sanayi Bölgesi 4.Cadde No:6 34776İstanbul
www.sonmezmetal.com - www.canklimateknik.com
: +90 216 499 01 00
: +90 216 526 63 13

TSEK

MULTIPLE LANGUAGE SUPPORT (TURKISH, ENGLISH, RUSSIAN, GERMAN, DUTCH, SPANISH, FRENCH, LATVIAN, POLISH)

All the screens of program can operate in Turkish, English, Russian, German, Dutch. Additionally the technical report can also operate Spanish, French, Latvian, Polish.

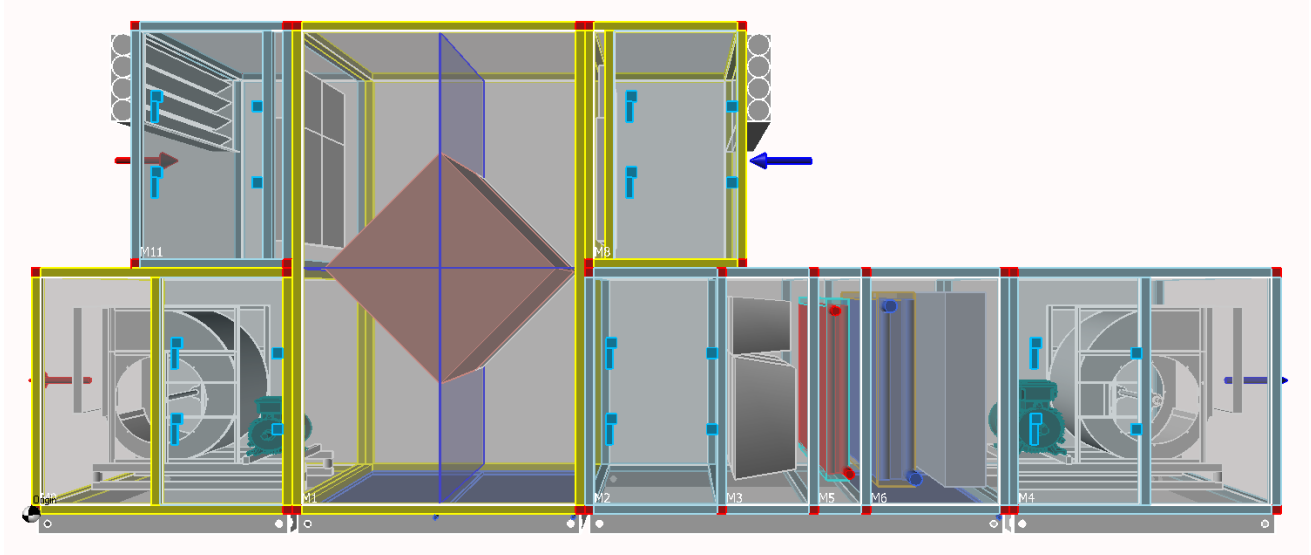


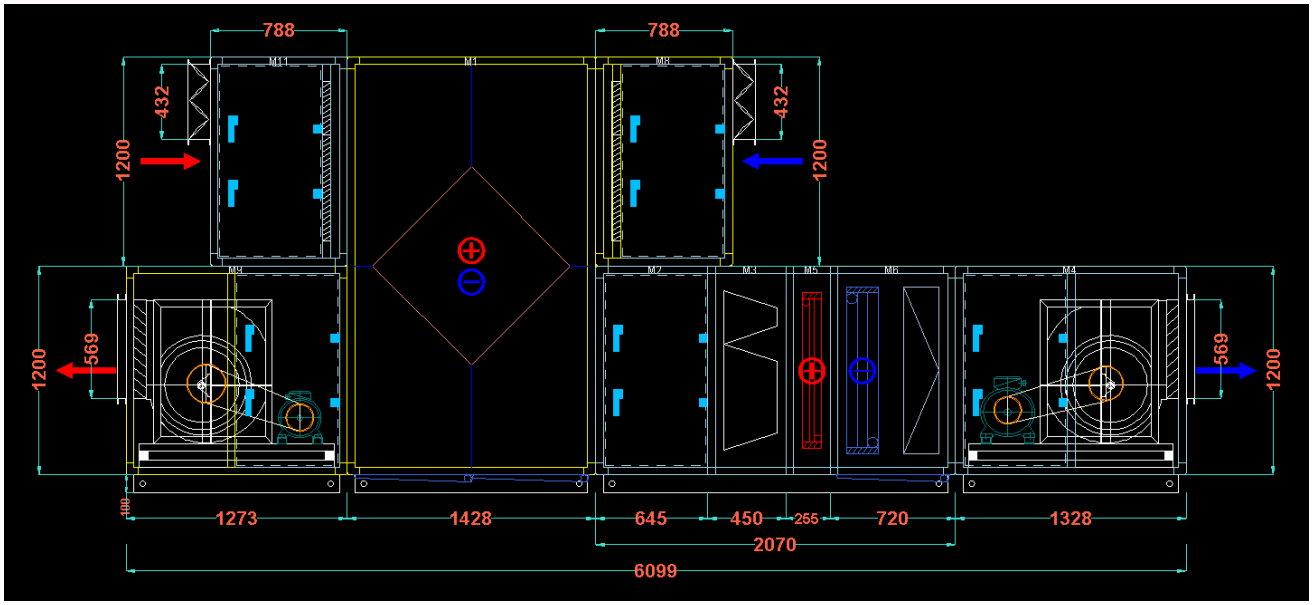


HEAT EXCHANGER

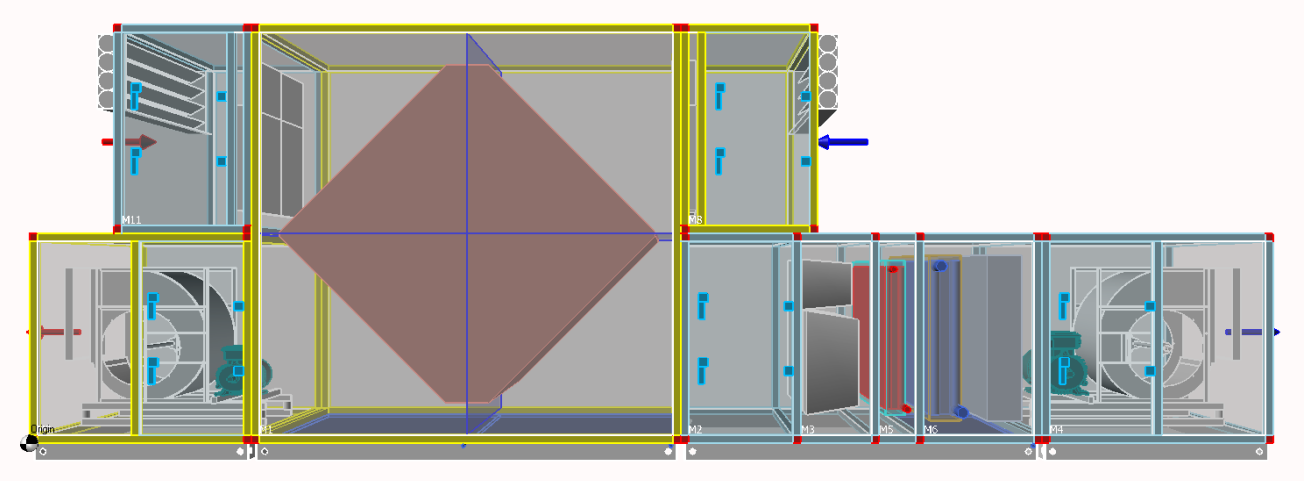
You can select “Crossflow”, “Counterflow”, “Rotary” and “Run Around Coil” heat exchanger modules.

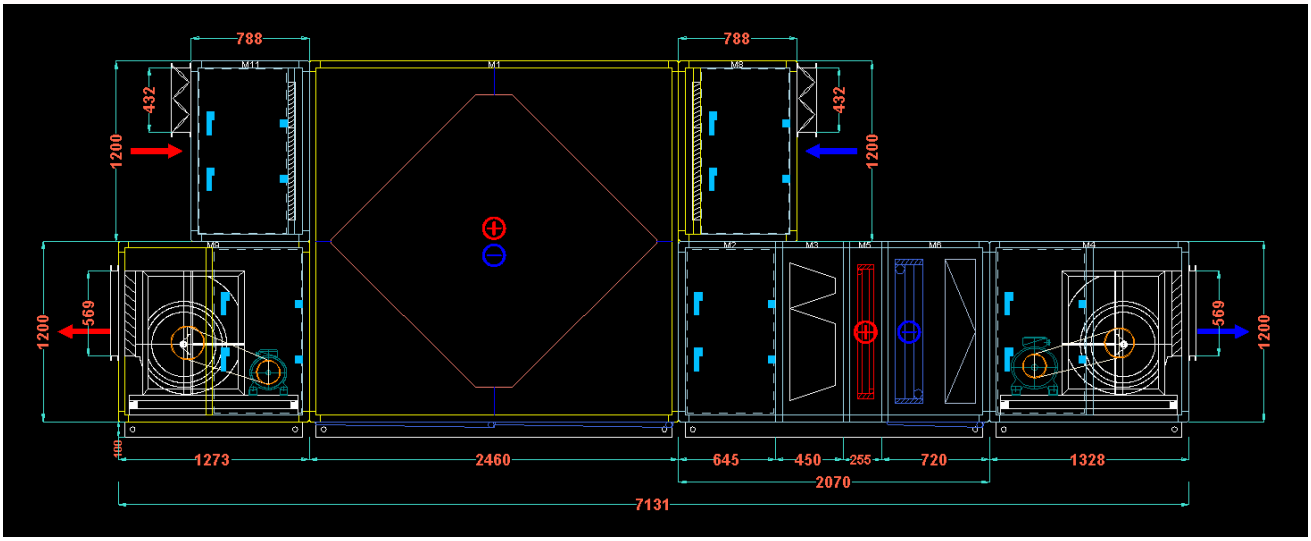
1. Crossflow **Heat Exchanger**



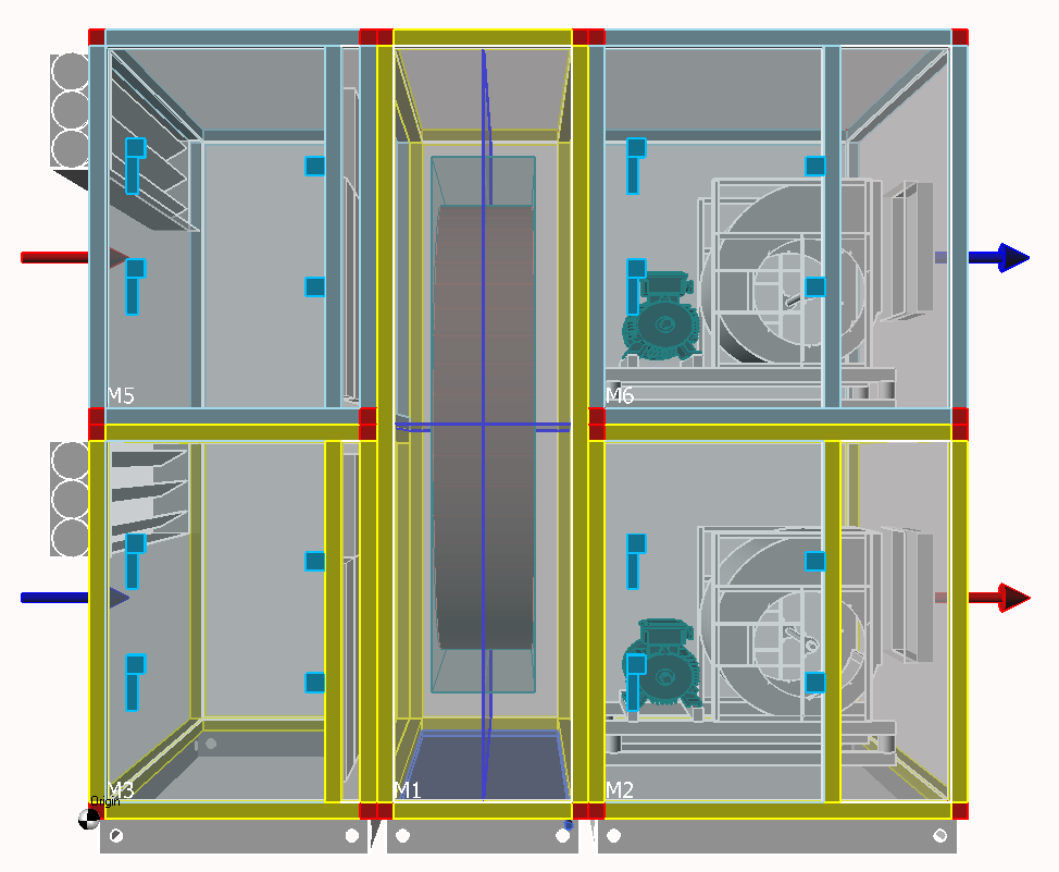


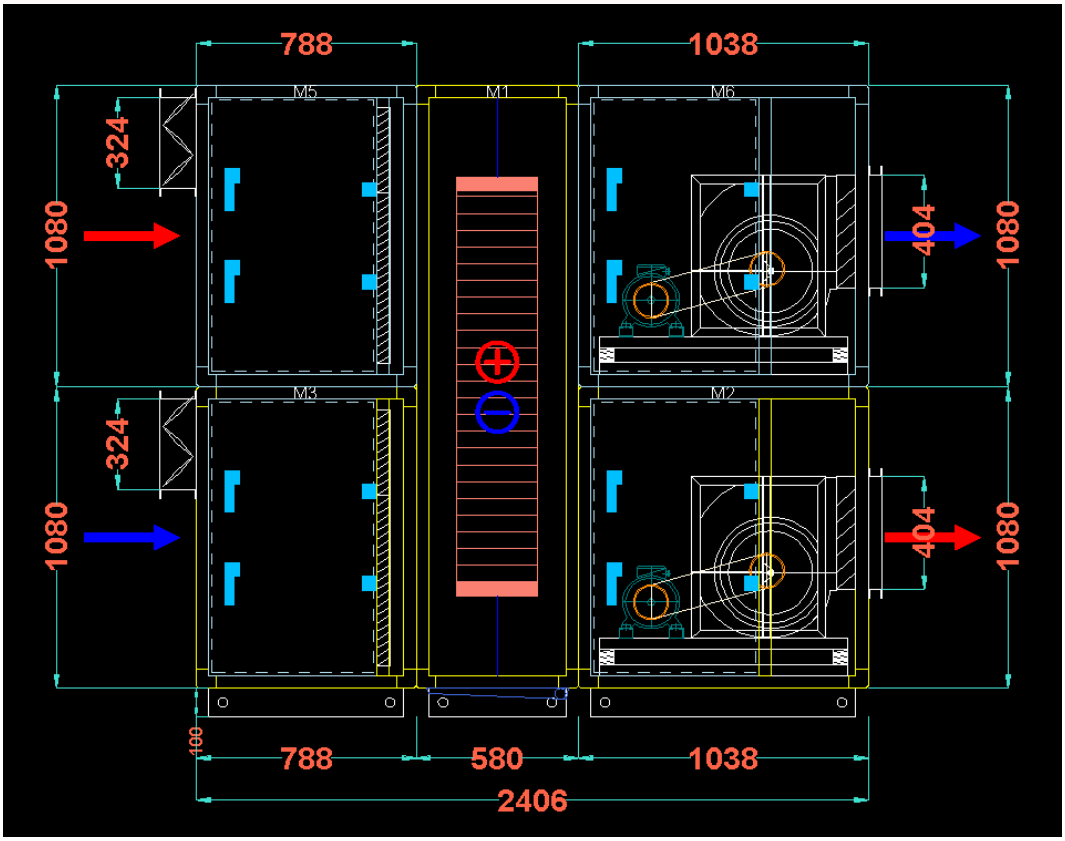
2. Counterflow Heat Exchanger



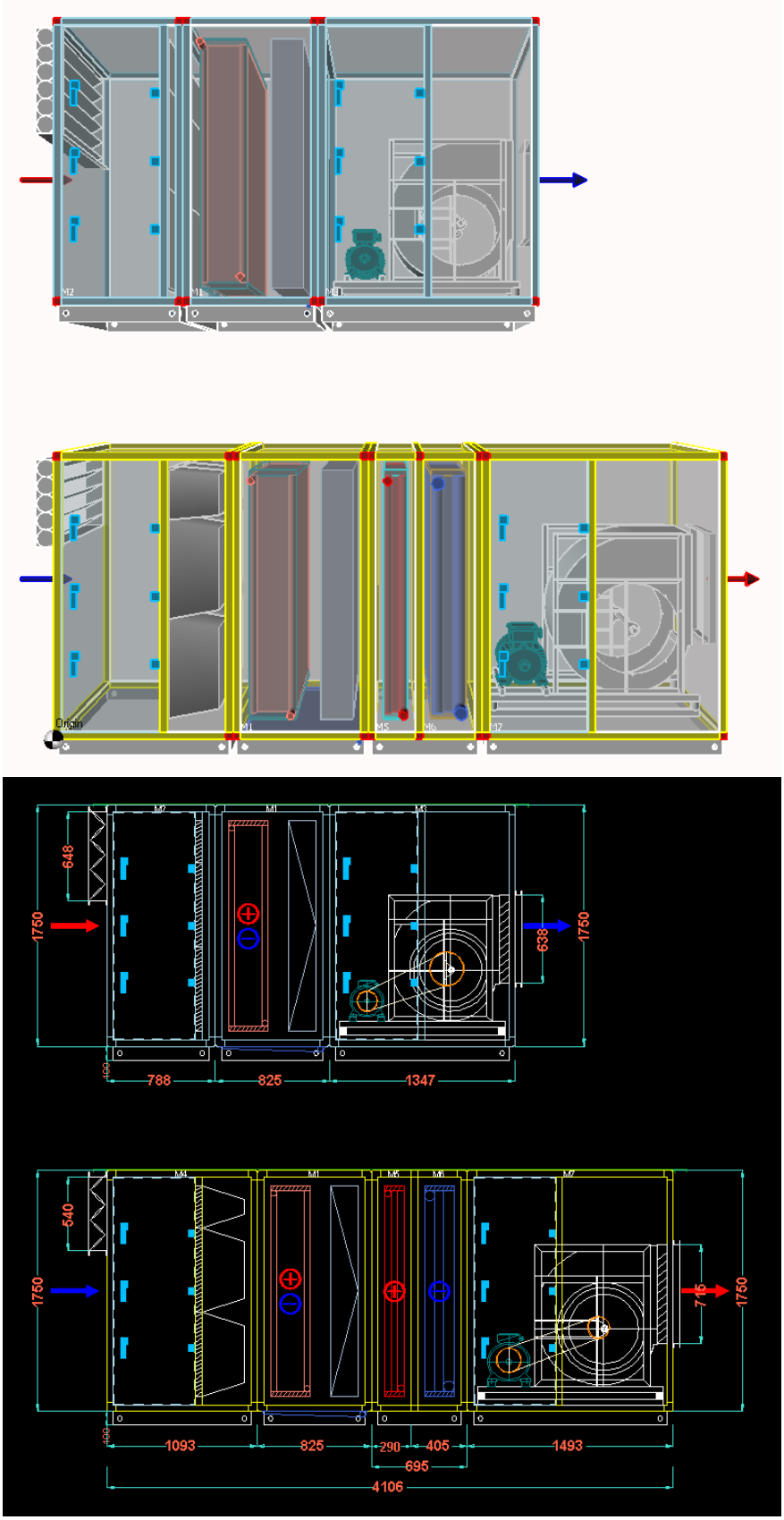


3. Rotary Heat Exchanger



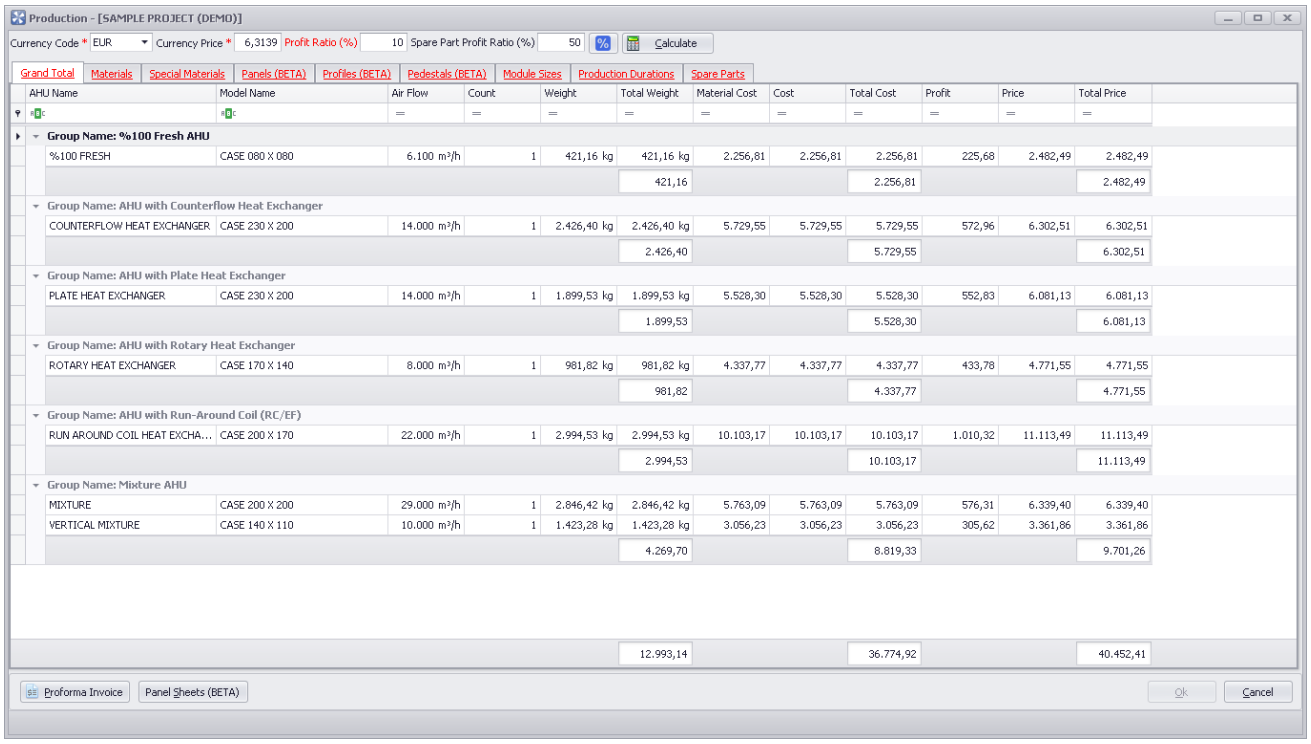


4. Run Around Coil Heat Exchanger

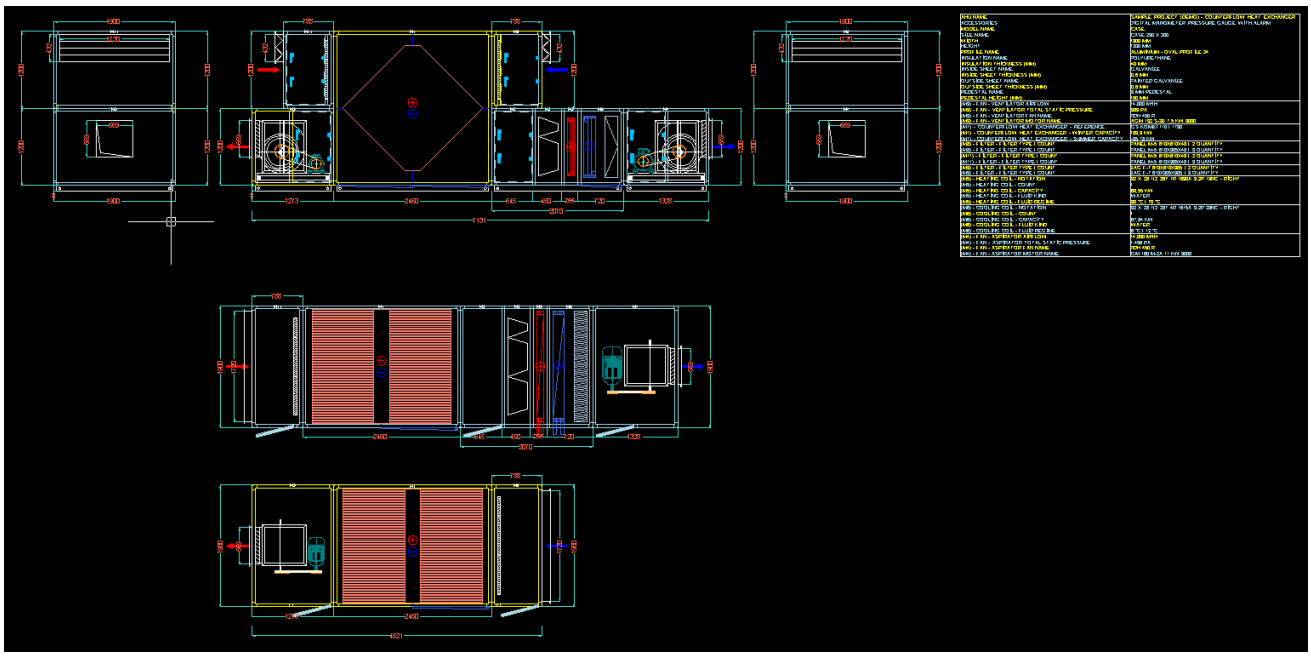


PRODUCTION / PRICING

You can obtain detailed production information of all material and workmanship used during the production of AHU, based on module, AHU and project. You can calculate production duration of AHU. All surface drawings of the AHU can be exported as 2D format for the production. And drawing contains all necessary information of the AHU as text.



AHU Name	Model Name	Air Flow	Count	Weight	Total Weight	Material Cost	Cost	Total Cost	Profit	Price	Total Price
Group Name: %100 Fresh AHU											
%100 FRESH	CASE 080 X 080	6.100 m³/h	1	421,16 kg	421,16 kg	2.256,81	2.256,81	2.256,81	225,68	2.482,49	2.482,49
					421,16			2.256,81			2.482,49
Group Name: AHU with Counterflow Heat Exchanger											
COUNTERFLOW HEAT EXCHANGER	CASE 230 X 200	14.000 m³/h	1	2.426,40 kg	2.426,40 kg	5.729,55	5.729,55	5.729,55	572,96	6.302,51	6.302,51
					2.426,40			5.729,55			6.302,51
Group Name: AHU with Plate Heat Exchanger											
PLATE HEAT EXCHANGER	CASE 230 X 200	14.000 m³/h	1	1.899,53 kg	1.899,53 kg	5.528,30	5.528,30	5.528,30	552,83	6.081,13	6.081,13
					1.899,53			5.528,30			6.081,13
Group Name: AHU with Rotary Heat Exchanger											
ROTARY HEAT EXCHANGER	CASE 170 X 140	8.000 m³/h	1	981,82 kg	981,82 kg	4.337,77	4.337,77	4.337,77	433,78	4.771,55	4.771,55
					981,82			4.337,77			4.771,55
Group Name: AHU with Run-Around Coil (RC/EF)											
RUN AROUND COIL HEAT EXCHA...	CASE 200 X 170	22.000 m³/h	1	2.994,53 kg	2.994,53 kg	10.103,17	10.103,17	10.103,17	1.010,32	11.113,49	11.113,49
					2.994,53			10.103,17			11.113,49
Group Name: Mixture AHU											
MIXTURE	CASE 200 X 200	29.000 m³/h	1	2.846,42 kg	2.846,42 kg	5.763,09	5.763,09	5.763,09	576,31	6.339,40	6.339,40
VERTICAL MIXTURE	CASE 140 X 110	10.000 m³/h	1	1.423,28 kg	1.423,28 kg	3.056,23	3.056,23	3.056,23	305,62	3.361,86	3.361,86
					4.269,70			8.819,33			9.701,26
					12.993,14			36.774,92			40.452,41

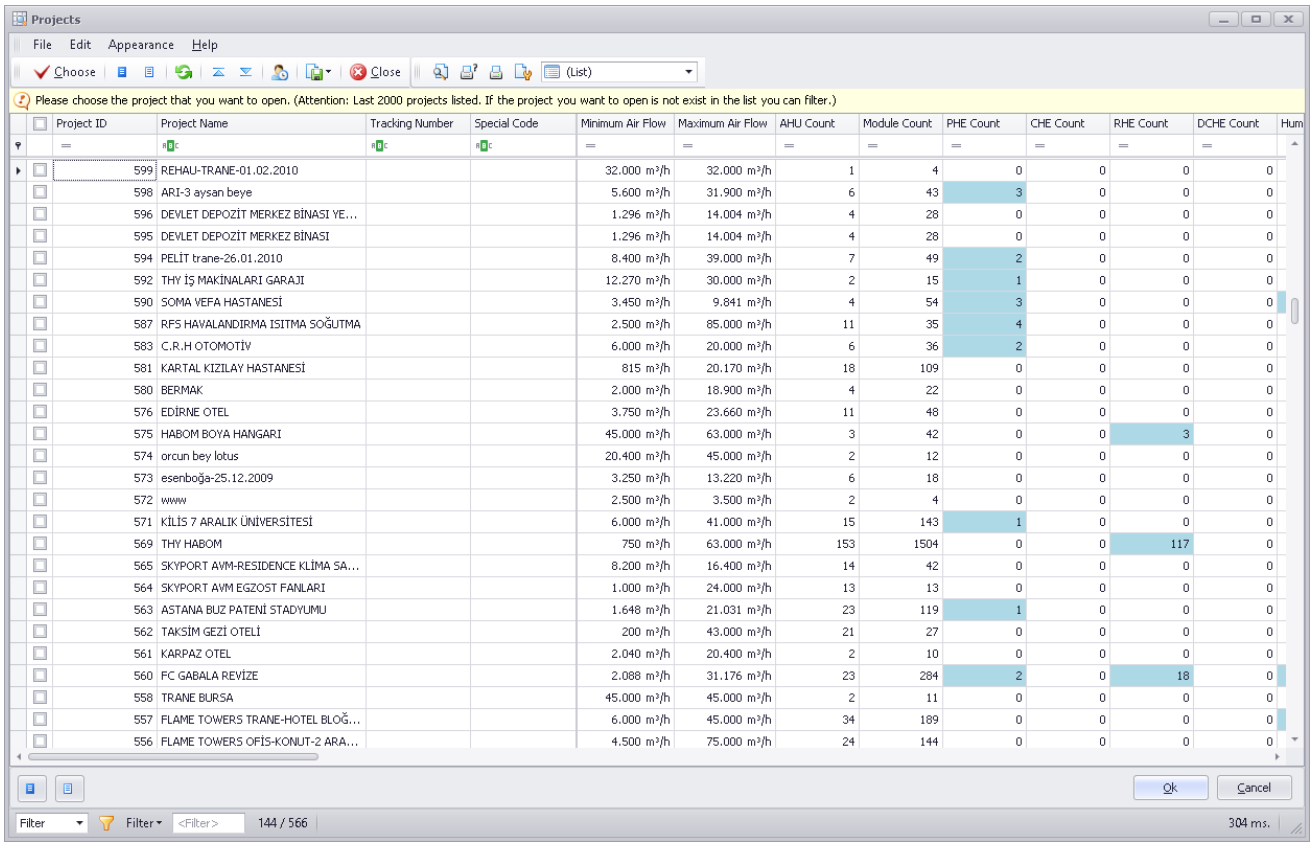


INTERNET

You can select the AHU through Internet all over the world.

COMMON DATABASE

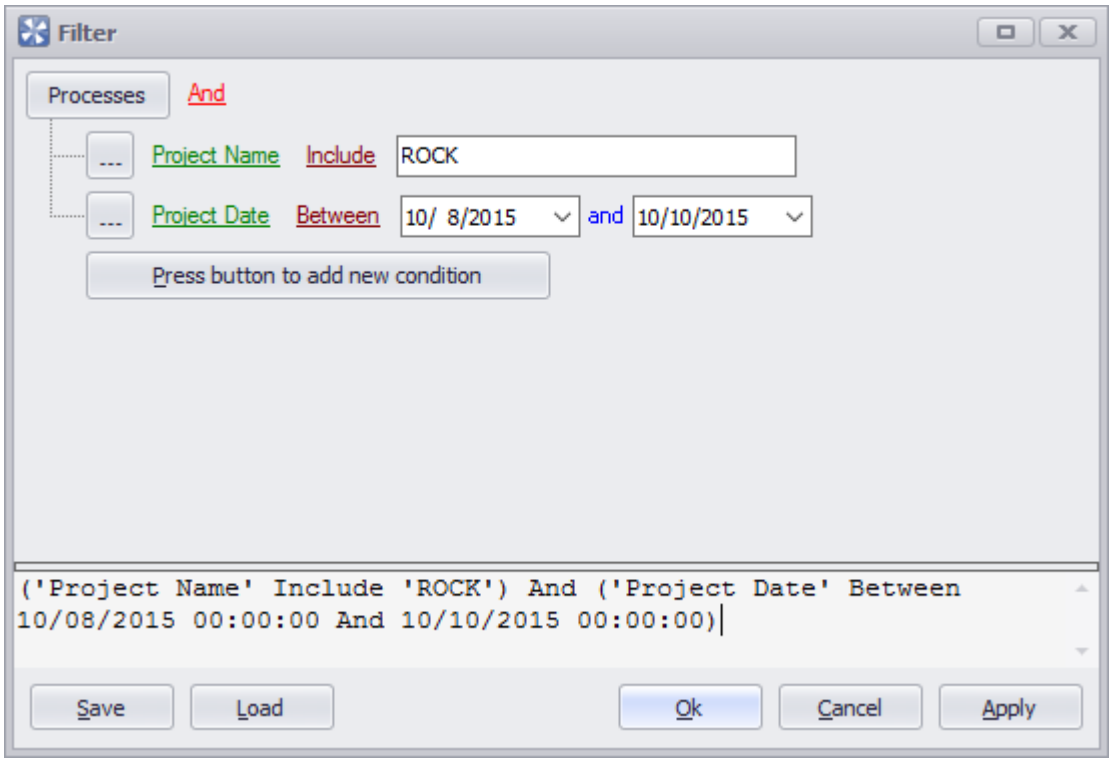
The projects prepared by all of the users are stored in a common database and the users can access the projects within the scope of their authorization.



Project ID	Project Name	Tracking Number	Special Code	Minimum Air Flow	Maximum Air Flow	AHU Count	Module Count	PHE Count	CHE Count	RHE Count	DCHE Count	Hum
599	REHAU-TRANE-01.02.2010			32.000 m³/h	32.000 m³/h	1	4	0	0	0	0	
598	ARI-3 aysan beye			5.600 m³/h	31.900 m³/h	6	43	3	0	0	0	
596	DEVLET DEPOZİT MERKEZ BİNASI YE...			1.296 m³/h	14.004 m³/h	4	28	0	0	0	0	
595	DEVLET DEPOZİT MERKEZ BİNASI			1.296 m³/h	14.004 m³/h	4	28	0	0	0	0	
594	PELİT trane-26.01.2010			8.400 m³/h	39.000 m³/h	7	49	2	0	0	0	
592	THY İŞ MAKİNALARI GARAJI			12.270 m³/h	30.000 m³/h	2	15	1	0	0	0	
590	SOMA VEFA HASTANESİ			3.450 m³/h	9.841 m³/h	4	54	3	0	0	0	
587	RFS HAVALANDIRMA ISITMA SOĞUTMA			2.500 m³/h	85.000 m³/h	11	35	4	0	0	0	
583	C.R.H OTOMOTİV			6.000 m³/h	20.000 m³/h	6	36	2	0	0	0	
581	KARTAL KIZILAY HASTANESİ			815 m³/h	20.170 m³/h	18	109	0	0	0	0	
580	BERMAK			2.000 m³/h	18.900 m³/h	4	22	0	0	0	0	
576	EDİRNE OTEL			3.750 m³/h	23.660 m³/h	11	48	0	0	0	0	
575	HABOM BOYA HANGARI			45.000 m³/h	63.000 m³/h	3	42	0	0	3	0	
574	orcun bey lotus			20.400 m³/h	45.000 m³/h	2	12	0	0	0	0	
573	esenboğa-25.12.2009			3.250 m³/h	13.220 m³/h	6	18	0	0	0	0	
572	www			2.500 m³/h	3.500 m³/h	2	4	0	0	0	0	
571	KİLİS 7 ARALIK ÜNİVERSİTESİ			6.000 m³/h	41.000 m³/h	15	143	1	0	0	0	
569	THY HABOM			750 m³/h	63.000 m³/h	153	1504	0	0	117	0	
565	SKYPORT AVM-RESIDENCE KLİMA SA...			8.200 m³/h	16.400 m³/h	14	42	0	0	0	0	
564	SKYPORT AVM EGZOST FANLARI			1.000 m³/h	24.000 m³/h	13	13	0	0	0	0	
563	ASTANA BUZ PATENİ STADYUMU			1.648 m³/h	21.031 m³/h	23	119	1	0	0	0	
562	TAKSİM GEZİ OTELİ			200 m³/h	43.000 m³/h	21	27	0	0	0	0	
561	KARPAZ OTEL			2.040 m³/h	20.400 m³/h	2	10	0	0	0	0	
560	FC GABALA REVİZE			2.088 m³/h	31.176 m³/h	23	284	2	0	18	0	
558	TRANE BURSA			45.000 m³/h	45.000 m³/h	2	11	0	0	0	0	
557	FLAME TOWERS TRANE-HOTEL BLOĞ...			6.000 m³/h	45.000 m³/h	34	189	0	0	0	0	
556	FLAME TOWERS OFİS-KONUT-2 ARA...			4.500 m³/h	75.000 m³/h	24	144	0	0	0	0	

DETAILED PROJECT SEARCH

Finding previous projects will be hard when stored projects increased much. To avoid this situation users can search any value in the project. For example; users can list projects which project name includes “ROCK” or AHU airflow is greater than or equal to 50.000 m3/h or “Klingenburg” branded rotary heat recovery module including AHUs.

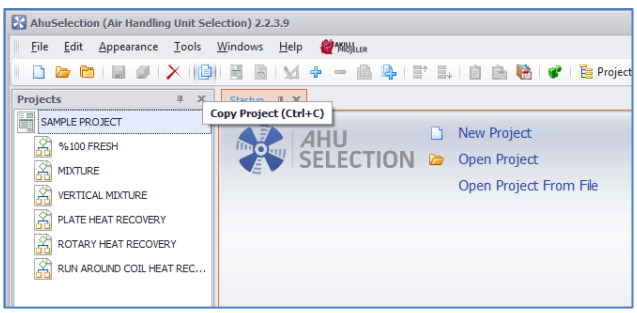


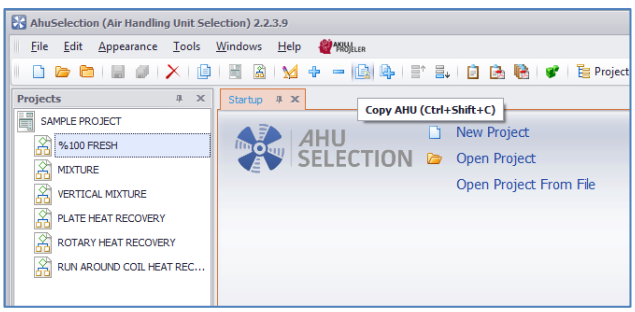
USER FRIENDLY

Its user-friendly interface will easily adapt you into using the program. As all of the screens operate with the same standard logic, after learning how a screen is used, it will be much easier to understand and learn the others.

PROJECT / AHU COPYING

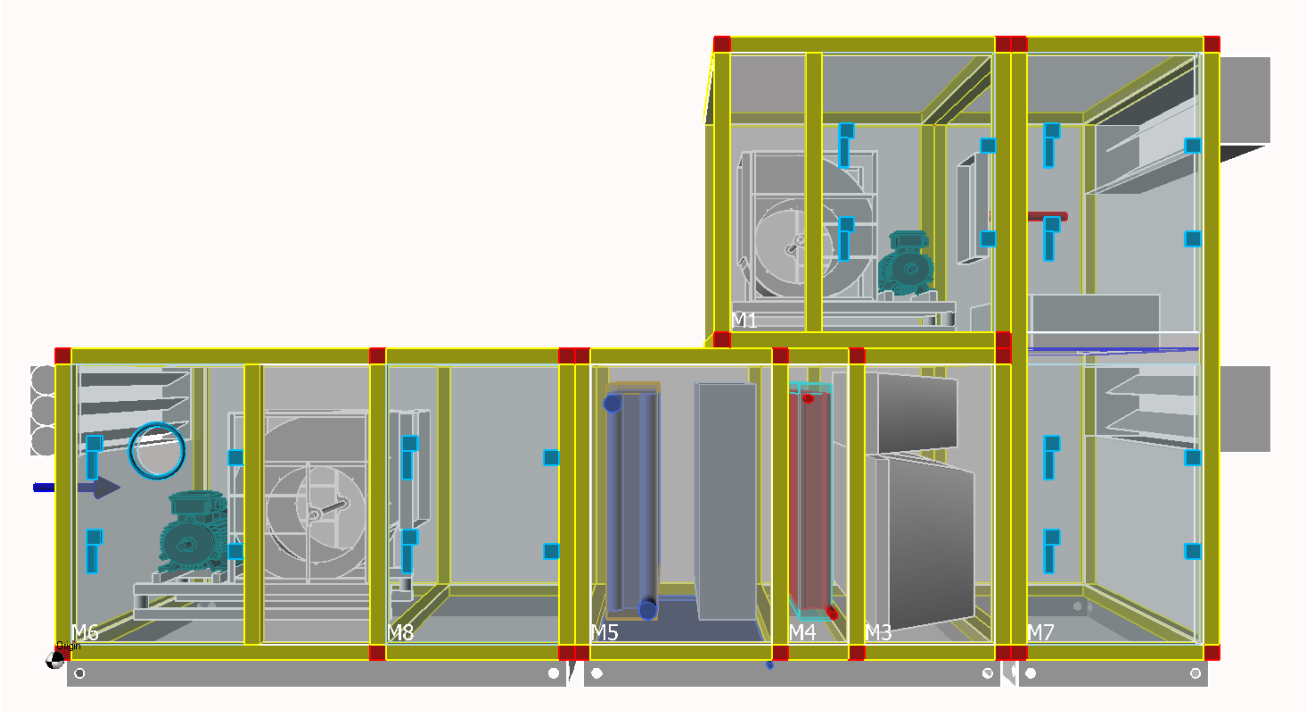
You can copy and edit the previously prepared project / AHU with a single button and save as a new project / AHU.

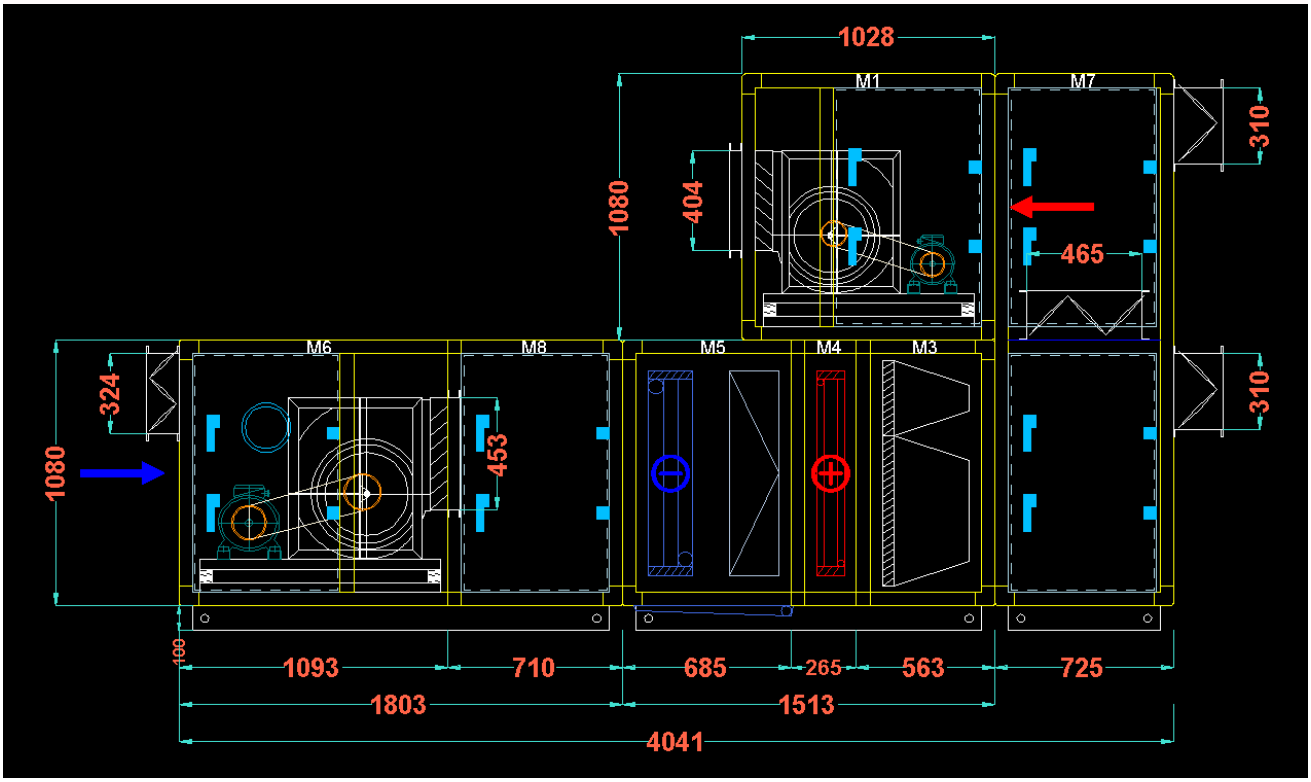




TURNING MODULES

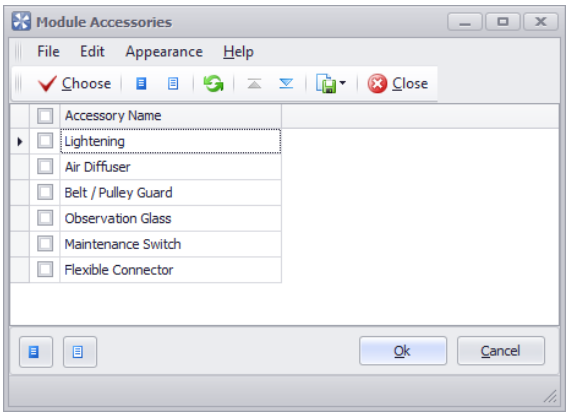
With the help of 90° and 180° rotation modules, you can design AHUs with two or more layers without using heat recovery module. It is also possible to design an AHU in the shape of maze by 90° rotation module.





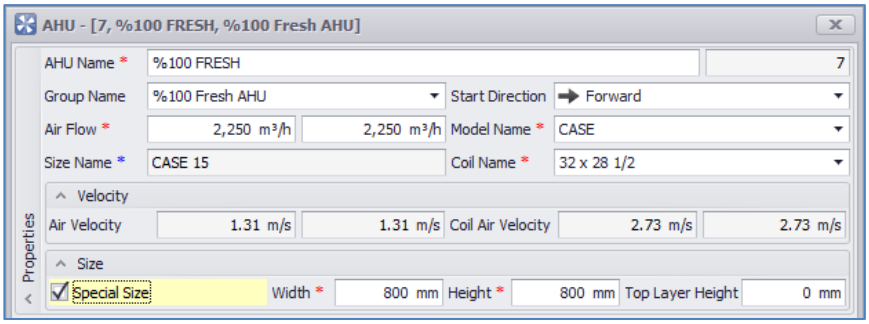
ACCESSORIES

You can define new module-based accessory types, select them in your preferred AHUs and add automatically to the cost of AHU.



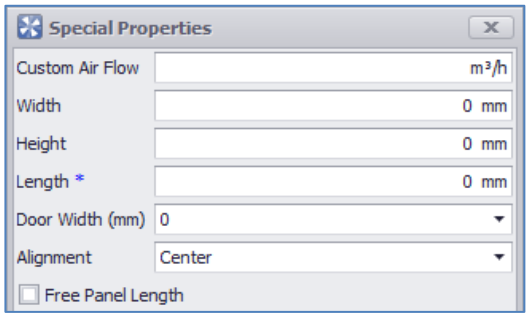
CUSTOM SIZE

You can specify a new AHU dimension specific for that AHU except the standard AHU modules during selection. It is also possible to specify module-based special dimension within the AHU.



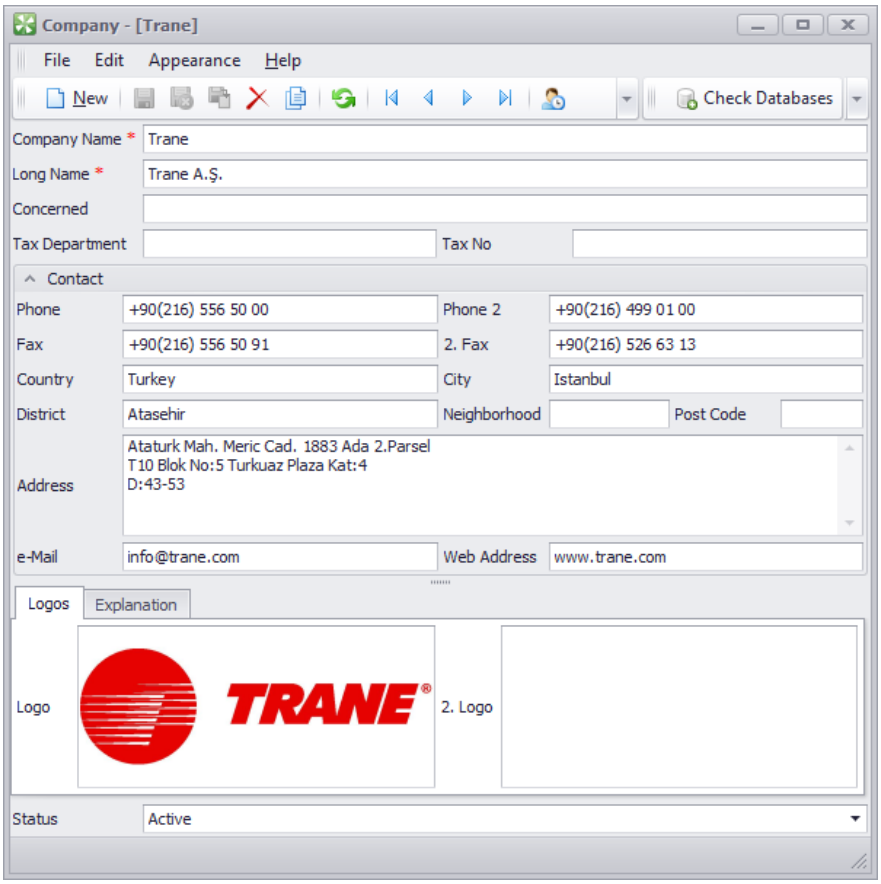
MODULE CUSTOM SIZE

It is also possible to specify module-based special dimension within the AHU.



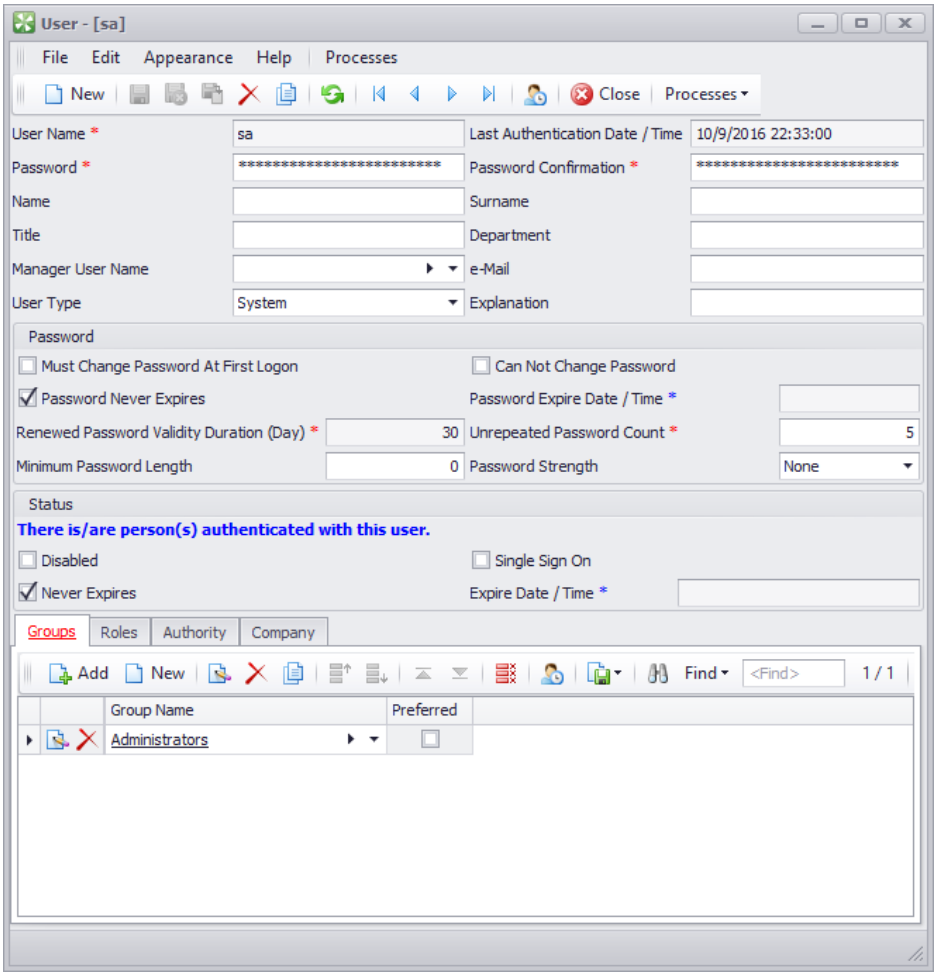
COMPANIES

You can authorize a person/company outside your own company who prepares an external project to access the projects prepared by that person or company and you can also access to those projects. You might not permit that person or company to view your production costs, specify a multiplier for the company-based prices they will see and give prices for each organization with special profit margin.



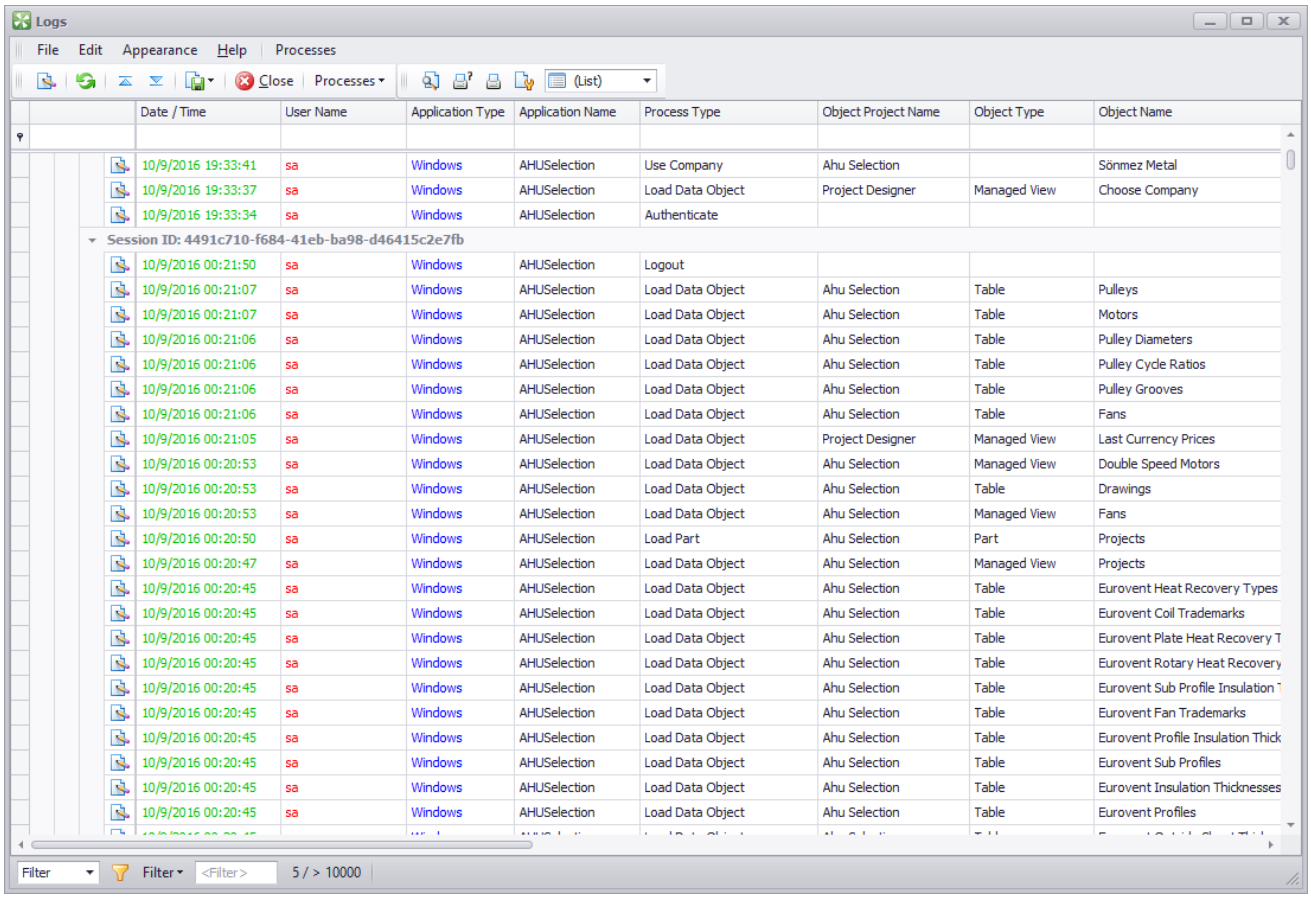
SECURITY / AUTHORIZATION

Every user can use software with their own user name and password, users can not use software without user name and password. You can authorize the application in a very detailed way. For instance; at the BackOffice part of application, we can authorize a single user for updating the prices of materials by permitting that user's access to only section of materials, and not permitting adding new records and deleting those. We can turn off that user's authorization to access all other sections, thereby preventing user based faults.



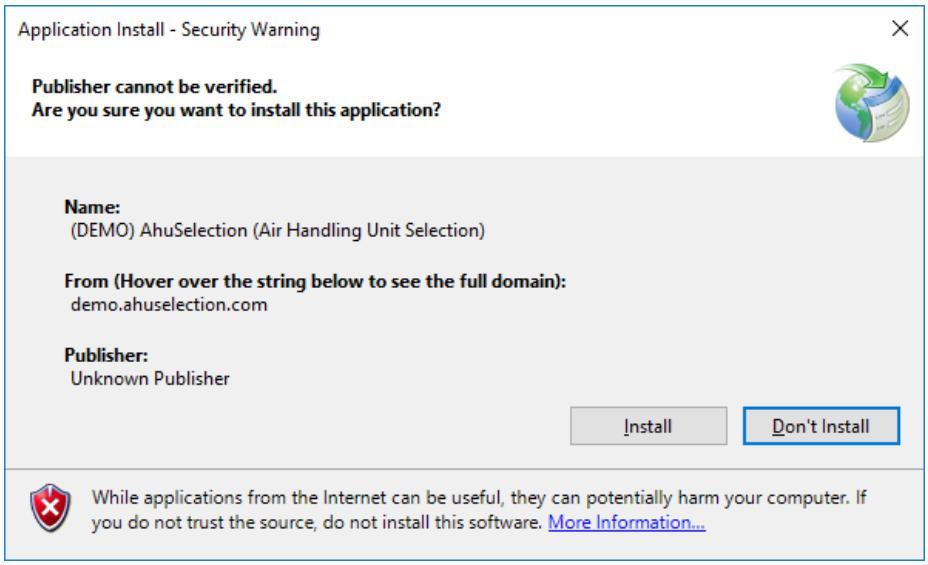
LOGS

All the transactions done by users are recorded in the server. All the things about the date and time of user's log in, where exactly in the program is used, which date is added, edited or deleted, when the program was logged off, and through which IP Address, MAC Address, computer the transactions was made and by which user are recorded. Thus, any fault that might occur on the records and the user that caused it can easily be specified. Also, it is possible to bring back the changed or deleted records. By doing this, the changes in the data which are made by fault or malicious intention can be taken back.



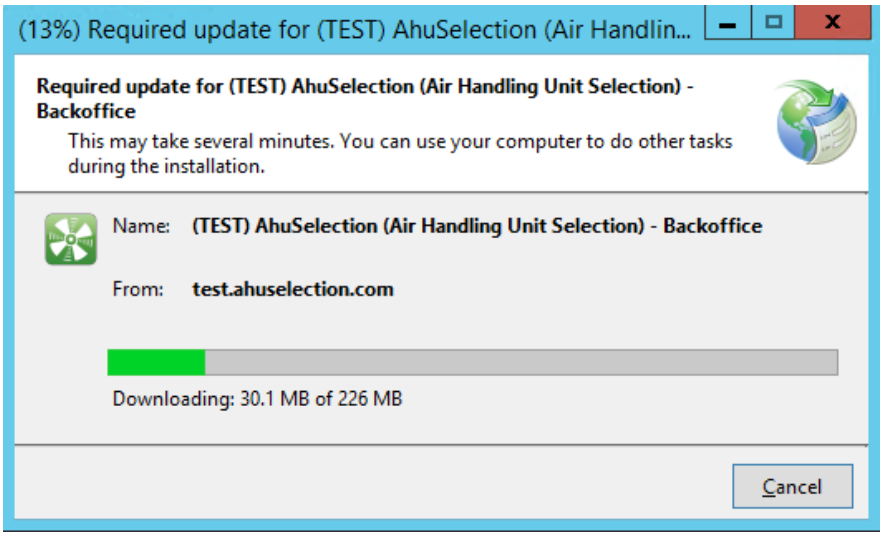
INSTALLATION

When the program is initially installed into the computer, you can start using it as logging into a web site. In order to make the installation, you will login to the web site where the application will be operated, click on a link from there and start using the application. If there are any files or programs needed for the operation of program; the program will download from Internet and there is no need for you to make any settings etc.



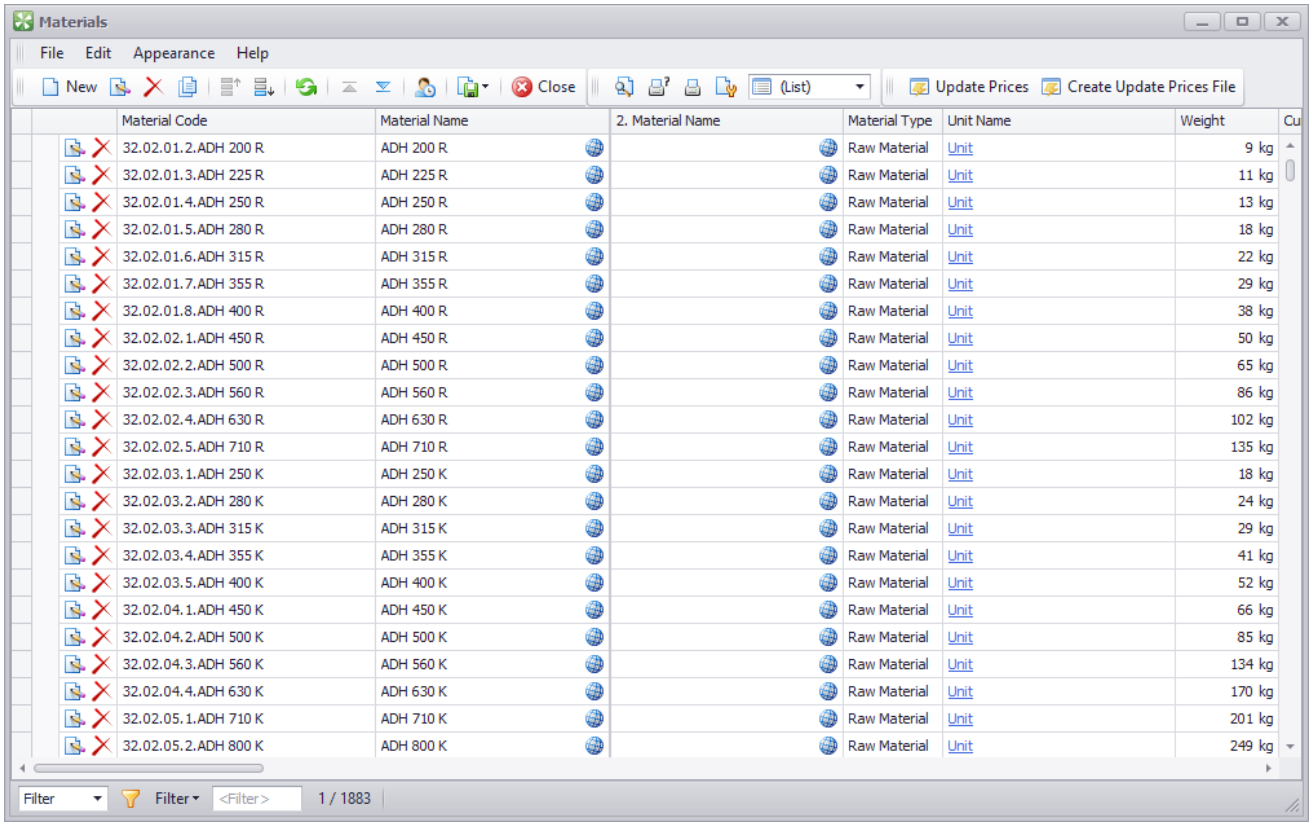
UPDATE

The application checks at any time of operation for a new edition, downloads automatically if there is any, and user does not need to do anything.



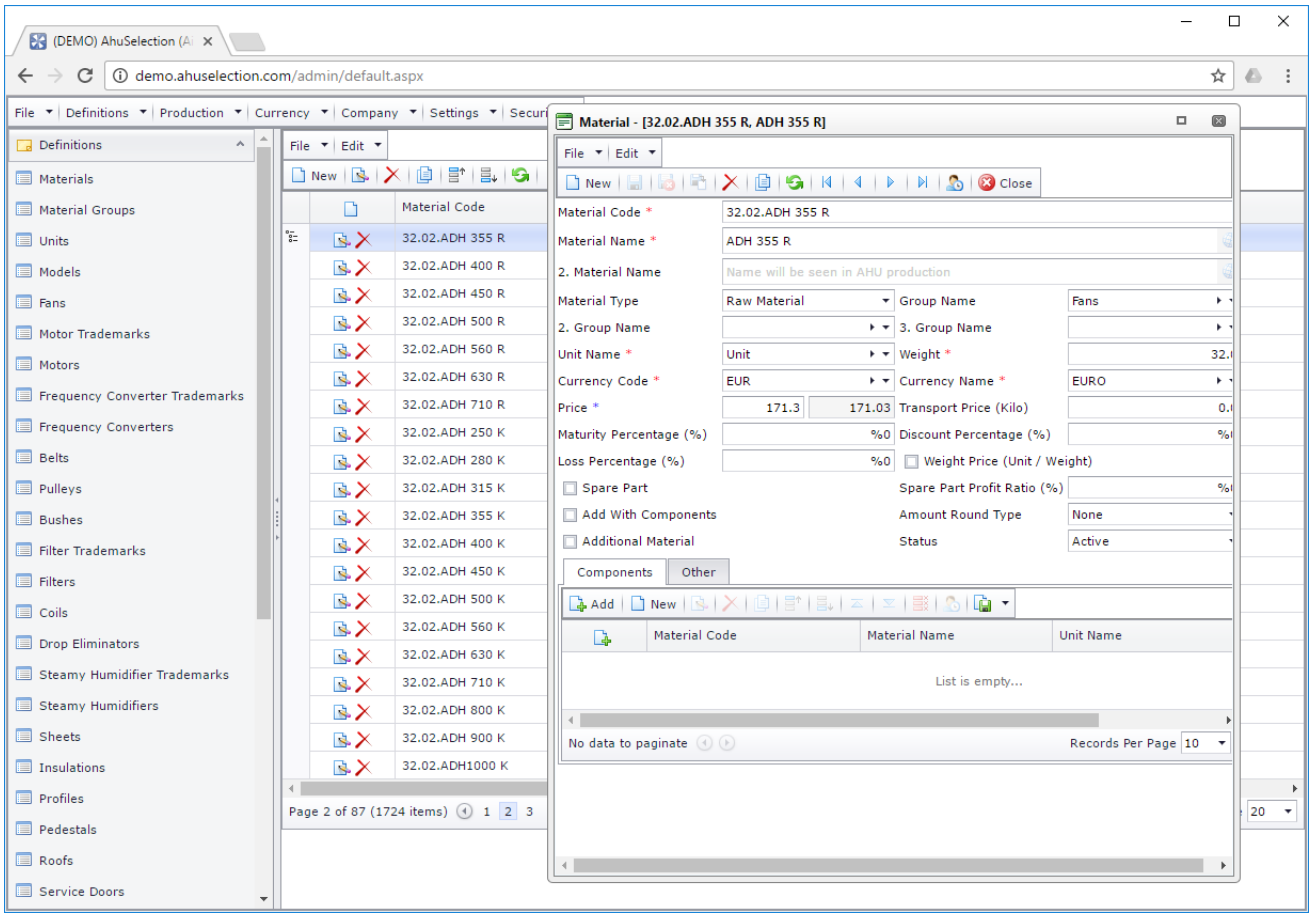
MATERIALS

It is also possible to define new filter, profile, model, accessory, sheet, insulation, belt, pulley, bush, drop eliminator, roof and steam humidifier.



WEB

Our BackOffice program is operated as a Windows application from the Web and it can also be operated on “Internet Explorer”, “Firefox”, “Chrome”, “Safari”, “Opera” browsers without any installation.



MODULES / CELLS

	Fan (Nicotra, Nicotra-Gebhardt, Ziehl-Abegg, Yilida, Comefri, Punker, Soler&Palau, Kruger, EbmPapst, Sanmu)
	Filter (Panel, Bag, Hepa, Carbon Cartridge, Compact)
	Electric Heater
	Coil (Heating, Cooling, Condensing, Steam, DX) (Friterm, Coils32)
	Steam Humidifier
	Watery Humidifier
	Evaporative Humidifier

	Single Connection
	Double Connection Mixture
	Triple Connection Mixture
	Vertical Mixture
	Crossflow Heat Exchanger (Recuperator, Heatex, Klingenburg, Hoval, Karyer, Barbor)
	Counterflow Heat Exchanger (Klingenburg, Eri, Hoval)
	Rotary Heat Exchanger (Recuperator, Heatex, Klingenburg, Enventus, DRI, Hoval, Karyer)
	Double Coil / Run Around Coil Heat Exchanger (Friterm, Coils32)
	Silencer
	90° Turning
	Drop Eliminator
	Empty

SUPPORTED BRANDS

NICOTRA Gebhardt fan|tastic solutions	ZIEHL-ABEGG	comefri	Yilida
punker	S&P	KRUGER	ebmpapst
SANMU	FRITERM	TERMOKAR	RECUPERATOR
Enventus	HEATEX	KLINGENBURG	DRI

CERTIFICATES

REFERENCES


LIROK
MG
KLIMA HVAC Solutions
STJÖRNUBLIKK
GEA group
EKSAS
metadec
www.metadec-ahu.com
BENDIQ air handling unit
UNI-Aire Air Conditioning Experts
CHE
LNCE
MAC
AR PASSION TO SAVE ENERGY
AirCoil Experts In Heat Transfer
CMV
CERTUS
CLBK
DCM DELTA CONSTRUCTION MANUFACTURING
ECO COOLER
HNB GROUP
MANELLI COOLING , HEATING , AIR CONDITIONING
POOYESH TAHVIEH cooling solutions
ventox
ATMOSFERVENT
FORM 55
HYT HAVALANDIRMA YALITIM TESİSAT 10.yıl
KLİSEF
VENSAART İKLİMLENDİRME | HVAC SYSTEMS
AERA air innovation
KHS
VIACLIMATE
tezel
Smart Air
GMC AIR
Akal
GÜNTER
BVN VENTILATION SYSTEMS & ELECTRICAL MOTORS
Fanexfan
ACTIVENT
AKTİF MOTOR Havalandırma Sistemleri

SAYFAN	AIRONN	DOĞUŞ TEKNİK	