Technical specification

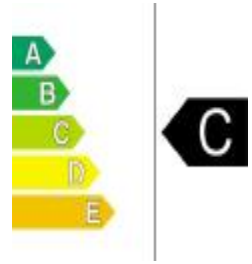
UAB "SALDA", Ragaines 100, LT-78109 Siauliai, Lithuania

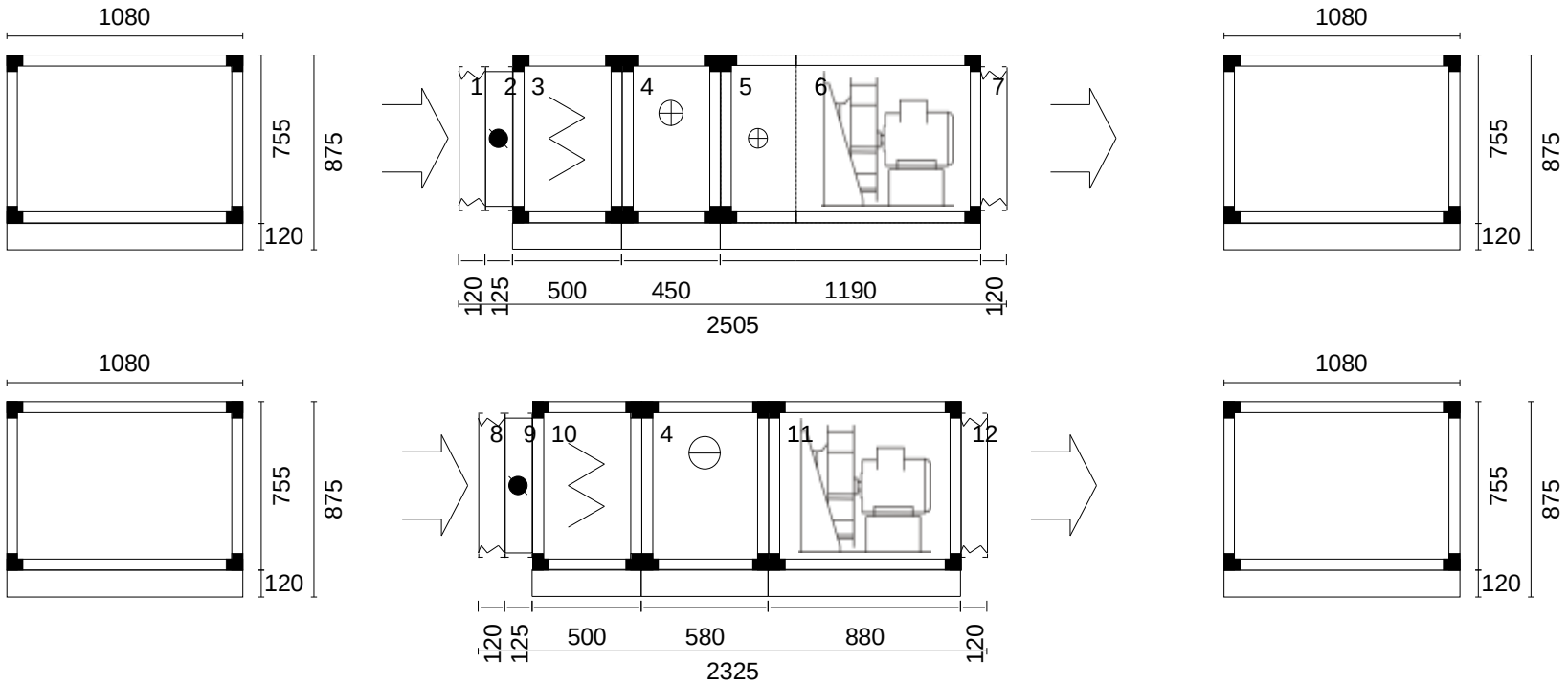
2012.10.02.

Project name: P-120776_OPK_OPK_4200W.vmss **Project date 2012.10.02**

Client: VT_2012 **Order number**

AHU with heat recovery coil					Supply air	Exhaust air
Size	3-KR/3-KR	**Support frame**	Adjustible/Adjustible	**Airflow (m3/h)**	4200	4200
Insulation thickness (mm)	50/50	**Weight (kg)**	774	**Pressure (Pa)**	600	600
Inspection side	Right/Right	**Configuration**	Indoor/Indoor	**Temperature (C)**	-24	30
Connection of sections	Standard/Standard	**Coating**	No	**Humidity (%)**	90	60
Casing	SW50/SW50	**Air density (kg/m3)**	1.2	**Air speed (m/s)**	1.86	1.86





Note: Sections can be separated on request. Due to this, the size of the unit will vary.
Note: AHU's designed operating limits -40C / 40C

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Weight of sections

8 Flexible connection	3
1 Flexible connection	3
9 Damper	12
2 Damper	12
10 Filter	62
3 Filter	62
4 Heat recovery coil	109
4 Heat recovery coil	95
11 Fan	133
5 Water heater	60
12 Flexible connection	3
6 Fan	133
7 Flexible connection	3
Support frame	46
Support frame	37

Specific fan power (SFP)

Total for AHU (kW/m3/s)	2.86
Supply air fan (kW/m3/s)	1.44
Exhaust air fan (kW/m3/s)	1.44

Internal pressure drops

Supply air

2 Damper	8
3 Filter	104
4 Heat recovery coil	170
5 Water heater	35

Total (Pa) 317
Total pressure to system (Pa) 600
Fan produced total pressure (Pa) 917

Exhaust air

9 Damper	8
10 Filter	104
4 Heat recovery coil	168/39

Total (Pa) 319
Total pressure to system (Pa) 600
Fan produced total pressure (Pa) 919

Sections

Supply air

1 Flexible connection

Flexible connection	LJ/E 1000x700

2 Damper

Size	SSK 1000x700

3 Filter

Size	2x470x570 L=500
Type:	Pocket filter F5
Clean filter pressure drop (Pa)	54
Unclean filter pressure drop (Pa)	154

Exhaust air

8 Flexible connection

Flexible connection	LJ/E 1000x700

9 Damper

Size	SSK 1000x700

10 Filter

Size	2x470x570 L=500
Type:	Pocket filter F5
Clean filter pressure drop (Pa)	54
Unclean filter pressure drop (Pa)	154

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Sections

Supply air

4 Heat recovery coil

Model	QLTN-075-057-06-20-06
Length (mm)	240
Number of tube rows	6
Fin pitch	2
Number of water passes	6
DN	DN 1x50/1x50
Volume (l)	14
Heat surface (m2)	66.2
Calculated power (kW)	37
Air temp. after section (C)	2.4
Air humidity after section (%)	8.8
Air velocity (m/s)	2.5
Water pressure drop (kPa)	7.4
Water flow rate (l/s)	1.5
Water temp. in (C)	12.0
Water temp. out (C)	5.7
Efficiency at 0C,%	50.1
Frost protection	Ethylen Glycol(30%)
kvs	5.95

5 Water heater

Requested air temp. (C)	18
Model6.30.CU.10.AL.21.02.0830.20.W.X.X.008.042.R 3/4" L	
Required capacity (kW)	22.5
Calculated capacity (kW)	22.6
Number of tube rows	2
Fin pitch	2
Number of water passes	8
Supply air temp. (C)	2
Supply air humidity (%)	50
Air temp. after heater (C)	18
Air velocity (m/s)	2.7
Air humidity after heater (%)	17.2
Volume (l)	3.3
Heat surface (m2)	17.4
	Water data
DN	DN 20
Water pressure drop (kPa)	2.51
kvs	5.26
Water flow (l/s)	0.23
Water temp. in (C)	80
Water temp. out (C)	56
Weight (kg)	60
Frost protection	(0%)
Max operating pressure (MPa)	1.6

Exhaust air

4 Heat recovery coil

Model	QLFN-080-053-04-20-10-1
Length (mm)	183
Number of tube rows	4
Fin pitch	2
Number of water passes	10
DN	DN 1x25/1x25
Volume (l)	8
Heat surface (m2)	44.3
Calculated power (kW)	37
Air temp. after section (C)	15.9
Air humidity after section (%)	100.0
Air velocity (m/s)	2.8
Water pressure drop (kPa)	79.4
Water flow rate (l/s)	1.5
Water temp. in (C)	5.7
Water temp. out (C)	12.0
Efficiency at 0C,%	50.1
Frost protection	Ethylen Glycol(30%)
kvs	5.95

11 Fan

Model	ER40C-4DN.E7.CR,130591/2F01
Total pressure (Pa)	918.6
Static pressure (Pa)	883.4
Fan working speed (rpm)	2154
Max fan speed (rpm)	2500
Fan efficiency (%)	64
Consumed power from mains (kw)	1.67
SFP (kW/m3/s)	1.44
Wheel diameter (mm)	400
Connection opening (mm)	1000x700
Type:	Direct-driven centrifugal fan
	Motor data
Motor efficiency class	IE2
Motor voltage	3~ 400V Δ
Rated motor output (kW)	2.2
Rated motor speed (rpm)	1440
Rated motor current (A)	4.6
Motor protection	PTC thermistors
Used with frequency converter	
Operating frequency (Hz)	75
Max frequency (Hz)	87

12 Flexible connection

Flexible connection	LJ/E 1000x700

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Sections

Supply air **Exhaust air**

Max operating temperature (C)	100

6 Fan

Model	ER40C-4DN.E7.CR,130591/2F01
Total pressure (Pa)	916.9
Static pressure (Pa)	881.7
Fan working speed (rpm)	2153
Max fan speed (rpm)	2500
Fan efficiency (%)	64
Consumed power from mains (kw)	1.67
SFP (kW/m3/s)	1.44
Wheel diameter (mm)	400
Connection opening (mm)	1000x700
Type:	Direct-driven centrifugal fan
	Motor data
Motor efficiency class	IE2
Motor voltage	3~ 400V Δ
Rated motor output (kW)	2.2
Rated motor speed (rpm)	1440
Rated motor current (A)	4.6
Motor protection	PTC thermistors
Used with frequency converter	
Operating frequency (Hz)	75
Max frequency (Hz)	87

7 Flexible connection

Flexible connection	LJ/E 1000x700

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Sound data

6 Supply air fan

Frequency	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		Total	
To surroundings (1m)	67	62	60	48	51	43	36	26	dB	56	dB(A)
Inlet	67	66	75	71	70	68	66	62	dB	75	dB(A)
Outlet	73	72	80	77	81	75	71	66	dB	84	dB(A)

1 Exhaust air fan

Frequency	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz		Total	
To surroundings (1m)	67	62	60	48	51	43	36	26	dB	56	dB(A)
Inlet	67	66	75	71	70	68	66	62	dB	75	dB(A)
Outlet	73	72	80	77	81	75	71	66	dB	84	dB(A)