

Unit feet supplied loose

	a	b	c	d	e	f	g
Supply air	Airflow	6.407					
	Ext. pressure	Pa	300				
	Tot. pressure	Pa	581				
	Motor power	kW	1 x 2,600				
	Power supply		3x400 V - 50 Hz				
	PHW-heating	kW	47,29				
	PCW-cooling	kW	17,66				
Exhaust air	Airflow		6.407				
	Ext. pressure		Pa	300			
	Tot. pressure		Pa	581			
	Motor power		kW	1 x 2,600			
	Power supply			3x400 V - 50 Hz			
	PHW-heating		kW	47,29			
	PCW-cooling		kW	17,66			
No.	Modif.	Date	Name				



Total weight ca.: 1.304 kg

scale: 1:40

Client: UAB "NIT"
 Project: ZHK Inova DG
 Order: 22-211-1792
 Model: /6-AL 18/6
 Position Nr. 112
 Date: 30.08.2022
 Name: Valder T.
 checked: [Signature]
 scale: 1:40





euroclima
We care for better air



Name Walder T. Date 31.08.2022 - 08:29

Order 22-211-1792
Position 112
AHU-2
Project Terminalo g. 14, Vilnius

Drawing 112 [Pcs] 1
Date 30.08.2022

Client UAB "NIT"
Street Vilnius - LIT
23328

Revision	Execution	External unit
	Weight [kg]	1.301
TECHNICAL DATA	specific fan power [W/(m³/s)]	1957
ZHK Inova DG	EU 1253/2014 compliance	2018 OK

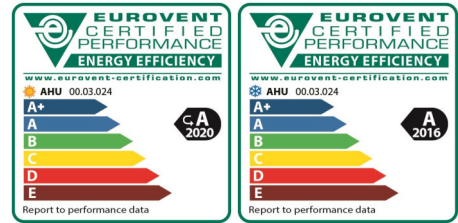
Supply air	Size:18/6	Weight:1028 [kg]	Surface: 21,4 [m2]	Velocity: 1,59 [m/s]
design	L-TF-PT-VF-H-L-K		Dimensions [mm]	L: 3.965,0 W: 1.930 H: 740
Air volume [m³/h]	6.407		Panel inside	50 [mm] galvanized steel 1,00 mm
external pressure drop [Pa]	300		Panel inside bottom	galvanized steel
total pressure drop [Pa]	712		Guides	galvanized steel
Specific fan power [W/(m³/s)]	1.027		Panel outside	White A47SME 0,70 mm

Exhaust air	Size:18/6	Weight:273 [kg]	Surface: 7,4 [m2]	Velocity: 1,59 [m/s]
design	TF-PT-VF-L		Dimensions [mm]	L: 2.897,5 W: 1.930 H: 740
Air volume [m³/h]	6.407		Panel inside	50 [mm] galvanized steel 1,00 mm
external pressure drop [Pa]	300		Panel inside bottom	galvanized steel
total pressure drop [Pa]	581		Guides	galvanized steel
Specific fan power [W/(m³/s)]	930		Panel outside	White A47SME 0,70 mm

Supply air

L Empty section		305,0 [mm]	1,49 [m2]	63,00 [kg]	3 [Pa]
Opening:	7 Full opening	Dimensions [mm]		1.770,0 x 550,0	
(23) Damper	Frame	GI	seal lip	No	3 [Pa]
torque [Nm]	7,1	Blades	GI	Blade drive	Gearwheels , PPGF
Axle	1	drive type	Suitable for actuator, in air dir. right		
(25) Flexible canvas	GI	Temp. [°C]	80,00	Dimensions [mm]	1.770,0 x 550,0 x 100,0 [Pa]
(22) 1 Pcs	Equipotential wire 6 mm²				

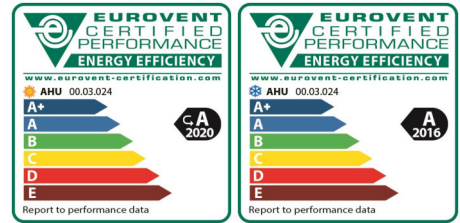
TF Bag Filter		610,0 [mm]	2,98 [m2]	90,00 [kg]	130 [Pa]
Manufacture	Camfil		Filter surface [m2]	12,30	
Type	Basic-Flo-F7 tmax.=70°C		Cells pcs x size [mm]	3 x 592,0 x 592,0	
Init.-Dim.-Fin. press. drop [Pa]	80-130-180		Galvanized frames (front removable) clean air side		
Class ISO 16890	ePM2.5 70%		Final pressure control necessary, not included!		
Airflow [m³/h]	6.407		Final pressure drop acc. EN 13053		
Bag length [mm]	520,0				
Filter energy class (EN 779:2012)	D				
Filter media type	Synthetic				
Standard hinged door	ZIS	Access side: right	Dimensions [mm]	457,5 x 610,0 -[L]	
(300) 1 Pcs	Door lock				
(178) 1 set	Pressure test points mounted				



Order 22-211-1792
Drawing 112
Position 112
Unit AHU-2

Pieces 1
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PT	Plate exchanger - diagonal	1.372,5 [mm]	8,73 [m2]	516,00 [kg]	128 [Pa]
Type	REC+95-1640-31-BP185-14-B	max. allowed pressure difference			800 [Pa]
With bypass	185,0 [mm]	Density [kg/m ³]			1,20
<u>Winter condition</u>		<u>Cooling condition</u>			
Supply [m ³ /h]	6.407 air-side humid p.d. [101	Supply [m ³ /h]	air-side humid p.d. [P	
Entering [°C]	-23,00 Humidity [%]	90,0	Entering [°C]	Humidity [%]	
Leaving [°C]	16,30 Humidity [%]	5,0	Leaving [°C]	Humidity [%]	
exhaust [m ³ /h]	6.407 air-side humid p.d. [145	exhaust [m ³ /h]	air-side humid p.d. [P	
Entering [°C]	22,00 Humidity [%]	40,0	Entering [°C]	Humidity [%]	
Leaving [°C]	-6,20 Humidity [%]	96,0	Leaving [°C]	Humidity [%]	
Temperature efficiency (project data) [%]	87,3	Temperature efficiency (project data) [%]			
Temperature efficiency (EUROVENT) [%]	79,5	Effectiveness AHRI (1061-2013-C1) [%]			
Effectiveness AHRI (1061-2013-C1) [%]	87,3	condense water qty. [l/h]			
condense water qty. [l/h]	32,89	Recovery capacity [kW]			
Recovery capacity [kW]	84,41	Standard pressuredrop (supply/exhaust)			
128 / 143 [Pa]					
Efficiency values refer to supply air side					
Attention: Please respect the maximal allowed pressure difference as above. Electrical Pressure control necessary. Respect: INSTRUCTION MANUAL					
Drain pan	GI - H: 35,0 mm - flat	Size	1.292,5x1.830,0 Ø1"-R	not threaded	
<u>Bypass-dampers</u>	drive type	Suitable for actuator x 1	External		
(178)	2 set	Pressure test points mounted			
VF	Supply air-Plug fan	610,0 [mm]	2,98 [m2]	115,00 [kg]	6 [Pa]
Fan	Nicotra/Gebhardt/PFP A3-0400 2.6kW 400V-	EC-Motor			IME M6F5
Air volume [m ³ /h] (density: [kg/m ³ 1,20)	1 x 6.407,00	Protection			IP55
External press [Pa]	300	Insulation class			F
ext. press. on intake / outlet [Pa]	-50 / 250	Nominal power [kW]			2,600
dyn.press.drop [Pa]	61	Speed +-2% [1/min]			2.485
Tot. pressure [Pa]	712	Current +-5% [A]			4,20
Speed [1/min]	2.233	Voltage [V]			3x400 / 50/60 Hz
sound power [db(A)]	89	Tension Range [V]			380 ... 420
System efficiency [%]	57,0	Electric absorbed power [kW]			2,05
max. nom. RPM [1/min]	2.485	Motor efficiency class			analog to IEC60034: IE 4
Calibration faktor K_A [m ² s/h]	131	Control voltage [V]			9,1
Speed control:	variable speed				
Fan octave band sound power level L _{okt} / dB		fan connection :			
Frq. [Hz]	63 125 250 500 1000 2000 4000 8000	rubber sealing			
Inlet	79 81 87 82 76 74 69 63	Temperature increase fan section [°C]			
Outlet	81 82 88 84 85 82 76 70	1,00			
No frequency converter needed!					
(47)	1 set	Motor precabeled (including cable glands)			
(53)	1 set	Gland for power cable 1 x M20 / signal cable glands 2 x M20			
Standard hinged door	ZIS	Access side: right	Dimensions [mm]	457,5 x 610,0 -[L]	
(300)	1 Pcs	Door lock			

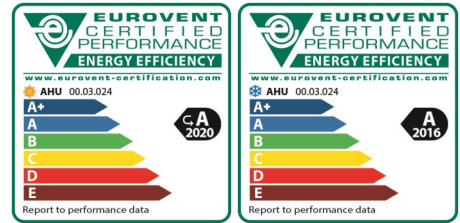


Order 22-211-1792
Drawing 112
Position 112
Unit AHU-2

Pieces 1
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Rev. date

H Heating coil	305,0 [mm]	1,49 [m2]	84,00 [kg]	35 [Pa]						
Airflow [m ³ /h] 6.407 Density [kg/m ³] 1,20	Medium	H2O + 35 vol. % propyl. glycol								
Coil face velocity [m/s] 2,1	Med. Flow [l/s] 2,4200	Content 12,6 l								
Air in [°C] 0,00	Med. velocity [m/s] 0,97									
Air out [°C] 22,00	Med. in [°C] 50,00									
Air press. Drop [Pa] 35	Med. out [°C] 45,00									
Capacity [kW] 47,29	Med. pres. drop [kPa] 7,92									
40x34-AC/2,5pa/2R-13T-1631L-13N/V1/CU-GW-2"/CU-AL-FeZn/LT1821-HT595-C140										
nos. of rows 2 Max press. [bar] 21	Connection side right									
nos. of circuits 13	Fins AL									
Fin spacing [mm] 2,50	Tubes CU									
Connection in 2" threaded	Header CU									
Connection out 2" threaded	Frames GI									
(160) 1 Pcs Antifreeze thermostat fitted on the frame (6m)										
L Empty section	457,5 [mm]	2,24 [m2]	54,00 [kg]	0 [Pa]						
Standard hinged door ZIS Access side: right	Dimensions [mm] 457,5 x 610,0 -[L]									
(300) 1 Pcs Door lock										
K Cooling coil	305,0 [mm]	1,49 [m2]	106,00 [kg]	49 [Pa]						
Airflow [m ³ /h] 6.407 Density [kg/m ³] 1,20	Medium	H2O + 35 vol. % propyl. glycol								
Coil face velocity [m/s] 2,07 SHR 1	Med. Flow [l/s] 0,9000	Content 15,1 l								
Air in [°C] 32,00 Humidity [%] 45,0	Med. velocity [m/s] 0,78									
Air out [°C] 24,00 Humidity [%] 71,8	Med. in [°C] 7,00									
Capacity [kW] 17,66	Med. out [°C] 12,00									
air-side dry p.d. [Pa] 47	Med. pres. drop [kPa] 12,36									
40x34-AR/2,5pa/3R-13T-1656L-6N/V1/CU-GW-1"/CU-AL-FeZn/LT1821-HT595-C145										
nos. of rows 3 Max press. [bar] 21	Connection side right									
nos. of circuits 6	Fins AL									
Fin spacing [mm] 2,50	Tubes CU									
Connection in 1" threaded	Header CU									
Connection out 1" threaded	Frames GI									
Opening: 7 Full opening	Dimensions [mm] 1.770,0 x 550,0									
(25) Flexible canvas GI Temp. [°C] 80,00	Dimensions [mm] 1.770,0 x 550,0 x 100,0			2 [Pa]						
(22) 1 Pcs Equipotential wire 6 mm²										
Drain pan GI - H: 35,0 mm - flat	Size 265,0x1.830,0 Ø1"-R			not threaded						
AHU sound levels	ME	63	125	250	500	1000	2000	4000	8000	Tot db (A)
1> Airborne SWL over casing [db]		69,8	64,4	62,2	56,5	55,9	52,5	44,2	38,4	60,8
2> SWL at air inlet [db]		69,5	76,5	80,0	74,0	69,0	65,0	58,0	50,0	76,0
3> SWL at air outlet [db]		73,5	79,0	84,0	81,0	80,0	76,0	69,0	63,0	84,2
4> Sound press. for 1 [m] distance from AHU		53,0	47,6	45,4	39,7	39,1	35,7	27,4	21,6	43,9
5> Sound press. for 1 [m] distance from air inlet		62,1	69,8	74,0	68,5	63,7	59,8	53,1	45,1	70,4
6> Sound press. for 1 [m] distance from air outlet		66,1	72,3	78,0	75,5	74,7	70,8	64,1	58,1	78,8
Calculated sound pressure levels are indicative only. It corresponds to : free field hemispheric sound radiation from the unit casing (4), the inlet (5) and the outlet (6) opening. Other sound sources, acoustic character of the room, air flow noise, duct connections and vibrations can influence the sound pressure in dependence. In practice, therefore measured values on site May be different from the calculated ones.										

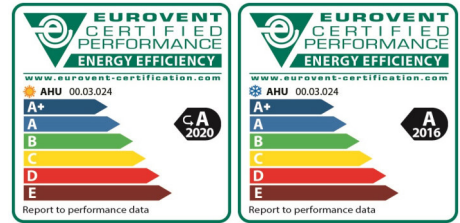
Exhaust air



Order 22-211-1792
Drawing 112
Position 112
Unit AHU-2

Pieces 1
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TF	Bag Filter	610,0 [mm]	2,98 [m2]	98,00 [kg]	68 [Pa]
	Manufacture Camfil Type Basic-Flo-M5 tmax.=70°C Init.-Dim.-Fin. press. drop [Pa] 33-66-99 Class ISO 16890 ePM10 50% Airflow [m³/h] 6.407 Bag length [mm] 520,0 Filter energy class (EN 779:2012) D Filter media type Synthetic	Filter surface [m2] 12,30 Cells pcs x size [mm] 3 x 592,0 x 592,0 Galvanized frames (front removable) clean air side Final pressure control necessary, not included! Final pressure drop acc. EN 13053			
	Standard hinged door ZIS Access side: left	Dimensions [mm] 457,5 x 610,0 -[R]			
	(300) 1 Pcs Door lock				
	Opening: 7 Full opening	Dimensions [mm] 1.770,0 x 550,0			
	(25) Flexible canvas GI Temp. [°C] 80,00	Dimensions [mm] 1.770,0 x 550,0 x 100,0 2 [Pa]			
	(22) 1 Pcs Equipotential wire 6 mm²				
	(178) 1 set Pressure test points mounted				
PT	Plate exchanger - diagonal	1.372,5 [mm]	8,73 [m2]	516,00 [kg]	143 [Pa]
For values/performances please refer to supply side					
VF	Exhaust air-Plug fan	610,0 [mm]	2,98 [m2]	113,00 [kg]	6 [Pa]
	Fan Nicotra/Gebhardt/PFP A3-0400 2.6kW 400V- Air volume [m³/h] (density: [kg/m³] 1,20) 1 x 6.407,00 External press [Pa] 300 ext. press. on intake / outlet [Pa] -250 / 50 dyn.press.drop [Pa] 61 Tot. pressure [Pa] 581 Speed [1/min] 2.141 sound power [db(A)] 89 System efficiency [%] 53,0 max. nom. RPM [1/min] 2.485 Calibration faktor K_A [m²s/h] 131 Speed control: variable speed	EC-Motor IME M6F5 Protection IP55 Insulation class F Nominal power [kW] 2,600 Speed +-2% [1/min] 2.485 Current +-5% [A] 4,20 Voltage [V] 3x400 / 50/60 Hz Tension Range [V] 380 ... 420 Electric absorbed power [kW] 1,75 Motor efficiency class analog to IEC60034: IE 4 Control voltage [V] 8,5			
	Fan octave band sound power level L _{okt} / dB	fan connection : rubber sealing			
	Frq. [Hz] 63 125 250 500 1000 2000 4000 8000	Temperature increase fan section [°C] 0,80			
	Inlet 79 81 87 82 76 74 69 63	No frequency converter needed!			
	Outlet 81 82 88 84 85 82 76 70				
	(47) 1 set Motor precabeled (including cable glands)				
	(53) 1 set Gland for power cable 1 x M20 / signal cable glands 2 x M20				
	Standard hinged door ZIS Access side: left	Dimensions [mm] 457,5 x 610,0 -[R]			
	(300) 1 Pcs Door lock				
L	Empty section	305,0 [mm]	1,49 [m2]	62,00 [kg]	3 [Pa]
	Opening: 7 Full opening	Dimensions [mm] 1.770,0 x 550,0			
	(23) Damper	Frame GI seal lip No 3 [Pa]	torque [Nm] 7,1 Blades GI Blade drive Gearwheels , PGPF		
		Axle 1 drive type Suitable for actuator, in air dir. left			
	(25) Flexible canvas GI Temp. [°C] 80,00	Dimensions [mm] 1.770,0 x 550,0 x 100,0 [Pa]			
	(22) 1 Pcs Equipotential wire 6 mm²				



Order 22-211-1792
Drawing 112
Position 112
Unit AHU-2

Pieces 1
Rev. Nr.
Rev. date

AHU sound levels	ME	63	125	250	500	1000	2000	4000	8000	Tot db (A)
1> Airborne SWL over casing [db]		69,8	64,4	62,2	56,5	55,9	52,5	44,2	38,4	60,8
2> SWL at air inlet [db]		69,5	76,5	80,0	74,0	69,0	65,0	58,0	50,0	76,0
3> SWL at air outlet [db]		78,5	82,0	88,0	84,0	85,0	82,0	76,0	70,0	89,0
4> Sound press. for 1 [m] distance from AHU		53,6	48,2	46,0	40,3	39,7	36,3	28,0	22,2	44,6
5> Sound press. for 1 [m] distance from air inlet		62,1	69,8	74,0	68,5	63,7	59,8	53,1	45,1	70,4
6> Sound press. for 1 [m] distance from air outlet		71,1	75,3	82,0	78,5	79,7	76,8	71,1	65,1	83,7

Calculated sound pressure levels are indicative only. It corresponds to : free field hemispheric sound radiation from the unit casing (4), the inlet (5) and the outlet (6) opening. Other sound sources, acoustic character of the room, air flow noise, duct connections and vibrations can influence the sound pressure in dependence. In practice, therefore measured values on site May be different from the calculated ones.

(410)	1 set	Weatherproof roof, flat	Peraluman
(3169)	1 Pcs	Panel insulation mineral wool	
(2023)	1 set	Base frame cover and insulation upper sections, not mounted	
(407)	1 set	Base frame ZHK GR-LP80 galvanized steel	
(3125)	1	Plug in profiles in PVC	
(3166)	1	Truck - Transport	
(318)	1 Pcs	Nylon Wrapping	
(1000)	1 set	Unit feet Std 170 mm fixed height, Galvanized steel	
(3159)	1	Connection of delivery sections from AHU outside with EASY CONNECTION	
(904)	1 Pcs	Front side covering White	
(3134)	1 set	UV-Protected electrical components mounted outside (f.ex. Light switch, cabling, repair switch...)	

For compact delivery dimensions and to avoid transport damage, protruding AHU accessories may be supplied loose for on-site assembly

EUROVENT Datas

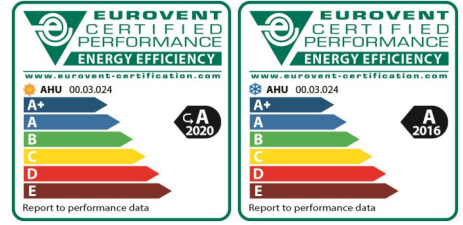
Range / Casing MB	ZHK / ZHK INOVA	t _{ODA} EEC	-23,00 [°C]
Thermal classes (MB)	T2 - TB2	Mixing Ratio	0 [%]
Casing air leakage (MB)	L1	Size reference velocity S/R	1,59 / 1,59 [m/s]
Mechanical strength (MB)	D1	Total static pressure EEC S/R	645 / 514 [Pa]
Energy efficiency class winter fan design for dry/wet conditions	A (2016) see relating section	Internal Static Pressure S/R	345 / 214 [Pa]
		Power input real S/R	2,05 / 1,75 [kW]
		Pressure drop ERS S/R	128 / 143 [Pa]
Country	Lithuania	Total static pressure EEC S/R	645 / 514 [Pa]
ASHRAE - Install.	VILNIUS INTL	Internal Static Pressure S/R	345 / 214 [Pa]
Design temperature dry bulb	29,10 [°C]	Power input real S/R	2,05 / 1,75 [kW]
Design temperature dew point	14,80 [°C]	Summer Temperature efficiency S/R	0 / 0 [%]
Winter design outdoor temperature	-16 [°C]	Summer wet/humidity efficiency S/R	0 / 0 [%]
Energy efficiency class summer	A (2020)	Pressure drop ERS S/R	0 / 0 [Pa]
		Mixing Ratio	0 [%]

ErP compliance according EU regulation no. 1253/2014

a) Manufacturer	Euroclima	j) Face velocity S/R	1,59 / 1,59 [m/s]
b) Model identifier	22-211-1792 / 112	k) Nominal external pressure S/R	300 / 300 [Pa]
c) Unit type	NRVU - BVU	l) Int press.drop vent. components S/R	187 / 184 [Pa]
d) Type of drive Supply	variable speed	m) int press.drop not vent. components S/R	108 / -3 [Pa]
Type of drive Return	variable speed	n) Static fan efficiency (EU No 327/2011) S/R	65,9 / 65,9 [%]
e) Energy recovery system type	other HRS	o) External leakage -400 / +400 Pa (RU)	0,71 / 0,71 [%]
f) thermal efficiency of HRS	79,5[%]	Internal leakage	on request
g) Nominal air flow rate S/R	1,78 / 1,78 [m³/s]	p) energy classification filters	see filter data
h) effective electric power input	3,8 [kW]	r) Casing sound power level LWA	64 [dB(A)]
i) SFP int	681 [W/(m³/s)]	s) www.euroclima.at	



airCalc++
v. 2.1.20 / Pricelist P10_2008
Update Nr. 10CB2/6.4.22
Name Walder T.
Date 31.08.2022 - 08:29



Order	22-211-1792	Pieces	1
Drawing	112	Rev. Nr.	
Position	112	Rev. date	
Unit	AHU-2		

Euroclima participates in the ECP programme for: Air Handling Units (AHU). Check ongoing validity of certificate: www.eurovent-certification.com