

Unit feet supplied loose

Supply air		Exhaust air		Unit feet supplied loose		Client: UAB "NIT"		Order: 22-211-1792		Drawing nr. 114		
Airflow	m ³ /h	Airflow	m ³ /h	a		Project:	ZHK Inova DG	Model:	ZHK Inova DG	Pieces:	1	
Ext. pressure	Pa	Ext. pressure	Pa	b		Access side:	See drawing	Position Nr.	174			
Tot. pressure	Pa	Tot. pressure	Pa	c		Connection side:	See drawing	Unit:	AVD-4			
Motor power	kW	Motor power	kW	d		Delivery sections:	5	Date:	30.08.2022			
Power supply	kW	Power supply	kW	e		Total weight ca.:	537 kg	Name:	Valder T.			
PHW-heating	kW	PHW-heating	kW	f				checked:				
PCW-cooling	kW	PCW-cooling	kW	g				scale:	1:32			
				No.	Modif.	Date	Name					 euroclima®



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We care for better air



Name Walder T. Date 31.08.2022 - 08:29

Order 22-211-1792
Position 114
AHU-4
Project Terminalo g. 14, Vilnius

Drawing 114 [Pcs] 1
Date 30.08.2022

Client UAB "NIT"
Street Vilnius - LIT
23328

Revision	Execution	External unit
	Weight [kg]	539
TECHNICAL DATA	specific fan power [W/(m ³ /s)]	1444
ZHK Inova DG	EU 1253/2014 compliance	2018 OK

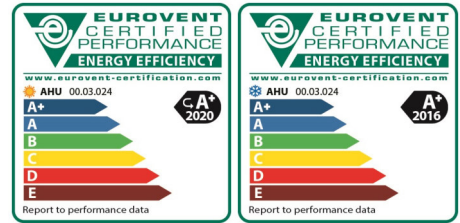
Supply air	Size:9/4,5	Weight:385 [kg]	Surface: 7,7 [m ²]	Velocity: 1,08 [m/s]
design	L-TF-RT-VF-H-FR-K		Dimensions [mm]	L: 2.592,5 W: 1.015 H: 588
Air volume [m ³ /h]	1.623		Panel inside	50 [mm] galvanized steel 1,00 mm
external pressure drop [Pa]	200		Panel inside bottom	galvanized steel
total pressure drop [Pa]	480		Guides	galvanized steel
Specific fan power [W/(m ³ /s)]	801		Panel outside	White A47SME 0,70 mm

Exhaust air	Size:9/4,5	Weight:154 [kg]	Surface: 4,2 [m ²]	Velocity: 1,08 [m/s]
design	TF-RT-VF-L		Dimensions [mm]	L: 1.982,5 W: 1.015 H: 588
Air volume [m ³ /h]	1.623		Panel inside	50 [mm] galvanized steel 1,00 mm
external pressure drop [Pa]	200		Panel inside bottom	galvanized steel
total pressure drop [Pa]	372		Guides	galvanized steel
Specific fan power [W/(m ³ /s)]	643		Panel outside	White A47SME 0,70 mm

Supply air

L Empty section		305,0 [mm]	0,84 [m²]	35,00 [kg]	1 [Pa]
Opening:	7 Full opening	Dimensions [mm]		855,0 x 397,5	
(23) Damper	Frame	GI	seal lip	No	1 [Pa]
	torque [Nm]	2,1	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]	855,0 x 397,5 x 100,0 [Pa]
(22) 1 Pcs	Equipotential wire 6 mm²				

TF Bag Filter		610,0 [mm]	1,68 [m²]	56,00 [kg]	134 [Pa]
Manufacture	Camfil		Filter surface [m ²]	3,00	
Type	Basic-Flo-F7 tmax.=70°C		Cells pcs x size [mm]	1 x 592,0 x 287,0	vert
Init.-Dim.-Fin. press. drop [Pa]	84-134-184			1 x 287,0 x 287,0	
Class ISO 16890	ePM2.5 70%		Galvanized frames (front removable) clean air side		
Airflow [m ³ /h]	1.623		Final pressure control necessary, not included!		
Bag length [mm]	520,0		Final pressure drop acc. EN 13053		
Filter energy class (EN 779:2012)	D				
Filter media type	Synthetic				
Standard hinged door	ZIS	Access side: right	Dimensions [mm]	457,5 x 457,5 -[L]	
(300) 1 Pcs	Door lock				
(178) 1 set	Pressure test points mounted				



Order 22-211-1792
Drawing 114
Position 114
Unit AHU-4

Pieces 1
Rev. Nr.
Rev. date

H Heating coil	152,5 [mm]	0,42 [m2]	24,00 [kg]	11 [Pa]						
Airflow [m ³ /h] 1,623 Density [kg/m ³] 1,20	Medium	H2O + 35 vol. % propyl. glycol								
Coil face velocity [m/s] 1,61	Med. Flow [l/s] 0,2500	Content 2,0 l								
Air in [°C] 11,00	Med. velocity [m/s] 1,31									
Air out [°C] 20,00	Med. in [°C] 50,00									
Air press. Drop [Pa] 11	Med. out [°C] 45,00									
Capacity [kW] 4,90	Med. pres. drop [kPa] 18,60									
40x34-AC/3pa/1R-9T-776L-1N/V1/CU-GW-1/2"/CU-AL-FeZn/LT906-HT420-C90										
nos. of rows 1 Max press. [bar] 21	Connection side right									
nos. of circuits 1	Fins AL									
Fin spacing [mm] 3,00	Tubes CU									
Connection in 1/2" threaded	Header CU									
Connection out 1/2" threaded	Frames GI									
FR Anti frost frame	152,5 [mm]	0,42 [m2]	13,00 [kg]	0 [Pa]						
(160) 1 Pcs Antifreeze thermostat fitted on the frame (3m)										
(162) 1 Pcs Anti frost frame galvanized										
Removable panel ZIB Access side: right	Dimensions [mm]	152,5 x 457,5								
K Cooling coil	305,0 [mm]	0,84 [m2]	54,00 [kg]	34 [Pa]						
Airflow [m ³ /h] 1,623 Density [kg/m ³] 1,20	Medium	H2O + 35 vol. % propyl. glycol								
Coil face velocity [m/s] 1,68 SHR 0,93	Med. Flow [l/s] 0,3000	Content 5,5 l								
Air in [°C] 32,00 Humidity [%] 45,0	Med. velocity [m/s] 0,78									
Air out [°C] 22,00 Humidity [%] 79,7	Med. in [°C] 7,00									
Capacity [kW] 5,92	Med. out [°C] 12,00									
air-side dry p.d. [Pa] 33	Med. pres. drop [kPa] 12,34									
40x34-AR/2,5pa/3R-9T-746L-2N/V1/CU-GW-3/4"/CU-AL-FeZn/LT906-HT420-C145										
nos. of rows 3 Max press. [bar] 21	Connection side right									
nos. of circuits 2	Fins AL									
Fin spacing [mm] 2,50	Tubes CU									
Connection in 3/4" threaded	Header CU									
Connection out 3/4" threaded	Frames GI									
Opening: 7 Full opening	Dimensions [mm]	855,0 x 397,5								
(25) Flexible canvas GI Temp. [°C] 80,00	Dimensions [mm]	855,0 x 397,5 x 100,0		1 [Pa]						
(22) 1 Pcs Equipotential wire 6 mm²										
Drain pan	GI - H: 35,0 mm - flat	Size	265,0x915,0 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]		57,8	47,4	45,2	42,5	41,9	42,5	37,2	30,4	47,9
2> SWL at air inlet [db]		55,5	61,5	65,0	62,0	58,0	54,0	51,0	42,0	63,7
3> SWL at air outlet [db]		59,8	61,5	66,0	67,0	66,0	66,0	62,0	55,0	71,6
4> Sound press. for 1 [m] distance from AHU		42,8	32,4	30,2	27,5	26,9	27,5	22,2	20,0	32,9
5> Sound press. for 1 [m] distance from air inlet		48,1	54,8	59,0	56,5	52,7	48,8	46,1	37,1	58,3
6> Sound press. for 1 [m] distance from air outlet		52,4	54,8	60,0	61,5	60,7	60,8	57,1	50,1	66,3
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.										

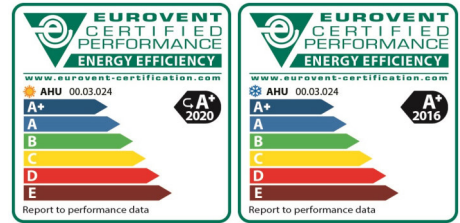
Exhaust air



Order 22-211-1792
Drawing 114
Position 114
Unit AHU-4

Pieces 1
Rev. Nr.
Rev. date

TF	Bag Filter	610,0 [mm]	1,68 [m2]	57,00 [kg]	71 [Pa]
Manufacture Camfil Type Basic-Flo-M5 tmax.=70°C Init.-Dim.-Fin. press. drop [Pa] 35-70-105 Class ISO 16890 ePM10 50% Airflow [m³/h] 1.623 Bag length [mm] 520,0 Filter energy class (EN 779:2012) D Filter media type Synthetic		Filter surface [m2] 3,00 Cells pcs x size [mm] 1 x 592,0 x 287,0 vert 1 x 287,0 x 287,0 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 457,5 -[R]			
(300) 1 Pcs Door lock					
Opening: 7 Full opening		Dimensions [mm] 855,0 x 397,5			
(25) Flexible canvas GI Temp. [°C]		80,00 Dimensions [mm] 855,0 x 397,5 x 100,0 1 [Pa]			
(22) 1 Pcs Equipotential wire 6 mm²					
(178) 1 set Pressure test points mounted					
RT	Heat wheel in casing	457,5 [mm]	1,79 [m2]	135,00 [kg]	82 [Pa]
For values/performances please refer to supply side					
VF	Exhaust air-Plug fan	610,0 [mm]	1,68 [m2]	64,00 [kg]	3 [Pa]
Fan Nicotra/Gebhardt/PFP A3-0280 1.4kW 230V- Air volume [m³/h] (density: [kg/m³] 1,20) 1 x 1.623,00 External press [Pa] 200 ext. press. on intake / outlet [Pa] -150 / 50 dyn.press.drop [Pa] 15 Tot. pressure [Pa] 372 Speed [1/min] 2.026 sound power [db(A)] 75,1 System efficiency [%] 49,0 max. nom. RPM [1/min] 3.350 Calibration faktor K_A [m²s/h] 65 Speed control: variable speed		EC-Motor IME M6F0 Protection IP55 Insulation class F Nominal power [kW] 1,400 Speed +-2% [1/min] 3.350 Current +-5% [A] 5,90 Voltage [V] 1x230 / 50/60 Hz Tension Range [V] 220 ... 240 Electric absorbed power [kW] 0,32 Motor efficiency class analog to IEC60034: IE 4 Control voltage [V] 3,6			
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] 0,60			
Inlet	61 63 69 67 63 60 58 52	No frequency converter needed!			
Outlet	67 63 68 68 69 70 67 60				
(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 457,5 -[R]			
(300) 1 Pcs Door lock					
L	Empty section	305,0 [mm]	0,84 [m2]	33,00 [kg]	1 [Pa]
Opening: 7 Full opening		Dimensions [mm] 855,0 x 397,5			
(23) Damper		Frame GI seal lip No 1 [Pa]			
torque [Nm] 2,1 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] 855,0 x 397,5 x 100,0 [Pa]			
(22) 1 Pcs Equipotential wire 6 mm²					



Order 22-211-1792
Drawing 114
Position 114
Unit AHU-4

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]		55,8	45,4	43,2	40,5	39,9	40,5	35,2	28,4	45,9
2> SWL at air inlet [db]		53,5	59,5	63,0	60,0	56,0	52,0	49,0	40,0	61,7
3> SWL at air outlet [db]		62,8	62,5	68,0	68,0	69,0	70,0	67,0	60,0	75,1
4> Sound press. for 1 [m] distance from AHU		41,2	30,8	28,6	25,9	25,3	25,9	20,6	20,0	31,4
5> Sound press. for 1 [m] distance from air inlet		46,1	52,8	57,0	54,5	50,7	46,8	44,1	35,1	56,3
6> Sound press. for 1 [m] distance from air outlet		55,4	55,8	62,0	62,5	63,7	64,8	62,1	55,1	69,9

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

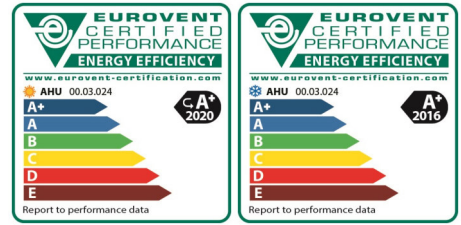
Range / Casing MB	ZHK / ZHK INOVA	t _{ODA} EEC	-23,00 [°C]
Thermal classes (MB)	T2 - TB2	Mixing Ratio	0 [%]
Casing air leakage (MB)	L1	Size reference velocity S/R	1,08 / 1,08 [m/s]
Mechanical strength (MB)	D1	Total static pressure EEC S/R	462 / 354 [Pa]
Energy efficiency class winter fan design for dry/wet conditions	A+ (2016) see relating section	Internal Static Pressure S/R	262 / 154 [Pa]
		Power input real S/R	0,41 / 0,33 [kW]
		Pressure drop ERS S/R	82 / 82 [Pa]
Country	Lithuania	Total static pressure EEC S/R	462 / 354 [Pa]
ASHRAE - Install.	VILNIUS INTL	Internal Static Pressure S/R	262 / 154 [Pa]
Design temperature dry bulb	29,10 [°C]	Power input real S/R	0,41 / 0,33 [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	1,08 / 1,08 [m/s]
b) Model identifier	22-211-1792 / 114	k) Nominal external pressure S/R	200 / 200 [Pa]
c) Unit type	NRVU - BVU	l) Int press.drop vent. components S/R	157 / 113 [Pa]
d) Type of drive Supply	variable speed	m) int press.drop not vent. components S/R	55 / 6 [Pa]
Type of drive Return	variable speed	n) Static fan efficiency (EU No 327/2011) S/R	56,9 / 56,9 [%]
e) Energy recovery system type	other HRS	o) External leakage -400 / +400 Pa (RU)	1,16 / 1,16 [%]
f) thermal efficiency of HRS	80,5[%]	Internal leakage	OACF 0,27
g) Nominal air flow rate S/R	0,45 / 0,45 [m³/s]	p) energy classification filters	see filter data
h) effective electric power input	0,74 [kW]	r) Casing sound power level LWA	50 [dB(A)]
i) SFP int	539 [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	114	Rev. Nr.	
Position	114	Rev. date	
Unit	AHU-4		

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