

Datum: 17.1.2018

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Stranka: Kalavis

Projekt: Vrtec Laporje

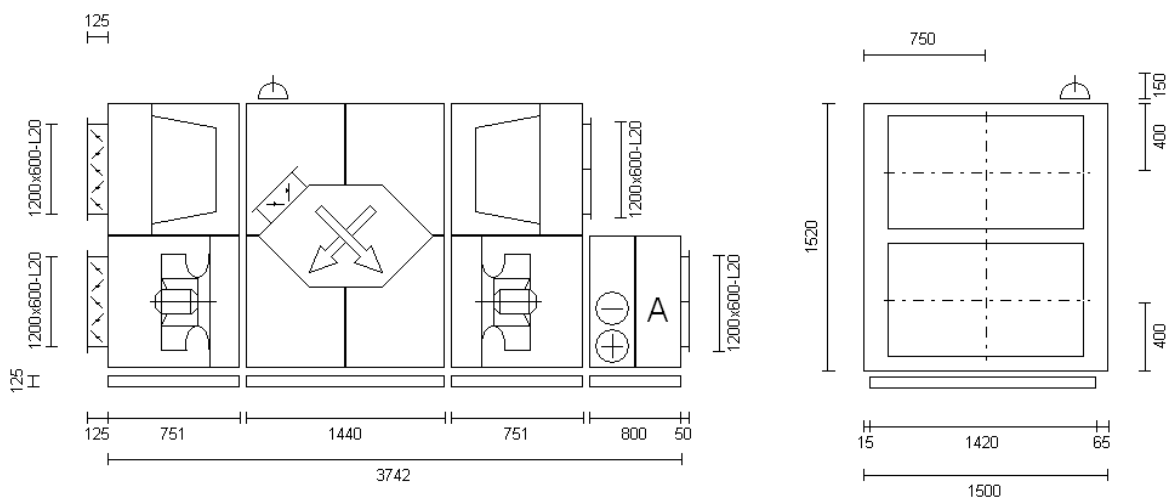
Naslov: KN1

Kontaktna oseba: Rakuš R

Cena: 17216 EUR brez DDV, EXW Vilnius

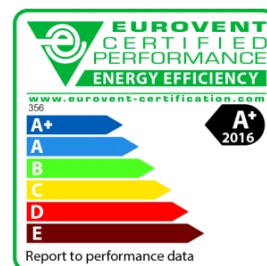
Model:

VERSO-CF-40-X-H-EC/IE4/2.4/2.4-F7-M5-X-HCW/4R/2.6-R1-C5.1-X



TEHNI NA SPECIFIKACIJA

velikost klimata		40
Tipologija	NSPE	
	DPE	
Vrsta HRS	drugo (Ploš ni toplotni izmenjevalec)	
Parametri klimata		
RLT class		A+
Vtok		
Nominalna stopnja pretoka	[m ³ /h] / [m ³ /s]	4800 / 1,33
Nazivni zunanji tlak (Ps, ext)	[Pa]	300
Odtok		
Nominalna stopnja pretoka	[m ³ /h] / [m ³ /s]	4800 / 1,33
Nazivni zunanji tlak (Ps, ext)	[Pa]	350
Notranji padeč tlaka prezra evalnih elementov (Ps, int)	[Pa]	554



Notranji padec tlaka neprezra evalnih elementov (Ps, add) [Pa]		174
Design outdoor temprature winter	[°C]	-13
Hitrost dotoka pri narotovani stopnji pretoka	[m/s]	1,35
SFPv	[kW/m³/s]	1,98
Atmosferski tlak	[Pa]	101325
Gostota zraka	[kg/m³]	1,2
Polna teža I (3x400V)	[A]	8,0
Efektivna elektri na vhodna	[kW]	2,63

COMMISSION REGULATION (EU) No 1253 (ecodesign requirements)

	Value	2018
The thermal efficiency of HRS, η_{nrvu} (EN308)	88	73
Internal specific fan power, SFPint	864	1359
Type of drive - variable speed	Installed	Necessary
Thermal by-pass facility	Exist	Necessary
Warning - filter is clogged		Necessary
Unit conformity assessment		Complies

Osnovna sestava STANDART

Paneli iz dveh pocinkanih ploevin, polnilo iz termo in zvo ne izolacije

požarno odporna miner. volna ($\lambda = 0,037$ W/mK).

AHU painted C3 class, RAL 7035.

Indoor unit.

When filters gets dirty, unit control panel gives notice to change the filters.

Dirty filters cause increased energy consumption, which decreases performance and energy efficiency of the unit, so it is very important to change the filters regularly.

AHU shall operate with variable speed drive.

www.komfovent.com/manuals/verso-manuals

Verso manual version: V2-C5.1-17-07

Casing air leakage (Model Box, EN 1886)

-400 Pa	[dm³/(s·m²)]	0,05
+700 Pa	[dm³/(s·m²)]	0,09
Najveja stopnja zunanjega pušanja	[%]	0,08
Najveja stopnja notranjega pušanja	[%]	< 1

AHU configuration

Separate sections with base frame connected to each section

Debelina panela	[mm]	45
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Teža klimata

Teža (neto)	[kg]	925
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Pallets

AA	[mm]	1000x1750(132kg)
FVS	[mm]	1000x1650(176kg)
FVS	[mm]	1000x1650(176kg)
PCF	[mm]	1650x1650(442kg)

Dodatna oprema

Adjustable feet (RegKoj)

Avtomatsko krmiljenje

Tip C5.1

functions

Humidifying Extract air (HUE)

Air quality control (AQC)

Two flow VAV

accessories

RH/D sensor x 2

VAVsensor x 2


GLASNOST

Nivo zvo nega tlaka Lw	na kanale				v okolico [dB]
	Pretok vto nega zraka [dB]		Pretok odto nega zraka [dB]		
F[Hz]	Zajem	Izpuh	Zajem	Izpuh	
63	59,0	66,7	60,3	66,0	62,6
125	52,5	68,9	54,3	65,3	66,8
250	65,1	77,0	69,8	73,6	70,7
500	59,4	76,7	64,4	71,6	52,9
1000	50,2	75,3	49,5	71,1	50,7
2000	43,2	71,0	47,6	69,4	45,5
4000	42,0	67,6	46,3	66,8	36,3
8000	37,1	64,4	42,1	65,2	31,5
dB(A)	60	79	65	76	63

Ploš ni toplotni izmenjevalec
PCF-K-62-1100

Atmosferski tlak	[Pa]	101325
Plates		Al
Heat recovery class (EN13053)		H1
Efficiency bonus (E), (EU 1253)		639

	[%]	Zima	Poletje		
		Vtok	Odtok	Vtok	Odtok
Temp. efficiency wet		97,7		82,6	

Temp. efficiency dry	[%]	88,3		82,6	
Power wet	[kW]	54,9		8,0	
Power dry	[kW]	49,8		8,0	
Zra ni pretok	[m³/h]	4800	4800	4800	4800
Temperatura zajema	[°C]	-13	22	32	26
Rel. vlaga	[%]	90	45	45	50
Teperatura zunanjega zraka	[°C]	21,2	1,2	27,0	31,1
Rel. vlaga	[%]	7,1	100,0	60,0	37,4
Pressure drop wet	[Pa]	148	177	187	181
Built-in loss	[Pa]	29	25	36	25
Hitrost	[m/s]	1,6	1,8	1,9	1,8
Kondenzacija	[l/h]		-20,7		0,0

Separator kapljic z odvodom kondenza

Tla ni padec	[Pa]	10
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Single level deicing

Tip pogona	Modulating (AC/DC 24V)	
Torque	[Nm]	5

PRETOK VTO NEGA ZRAKA

Žaluzija s pogonom

Zra na žaluzija iz alu profila		
Tip pogona	ON/OFF with spring return (AC/DC 24V)	
Torque	[Nm]	5
Tla ni padec	[Pa]	1

Filter zraka

Filter correction (F), (EU 1253)		0
Tip	Vre ast filter	
Energy efficiency class		
Air velocity class (EN13053)	V1	
Razred filtra	F7	
Dimenzije bxhxl	[mm]	592x592x500
Energijska u inkovitost	[kWh/a]	2287
Število vre	8	
Število filtrov	2	
Tla ni padec (nov filter)	[Pa]	56
Tla ni padec	[Pa]	103
Priporo eni max tla ni padec (EN 137792007)	[Pa]	150
Velocity in the AHU filter section	[m/s]	1,35

Changeover

CW-G10-04R-1260-0540-130-1x12C-26F-M1-C40-IS1-XX-1xR1/1xR1

		Zima	Poletje
Kapaciteta	[kW]	11,3	22,9
Sensible	[kW]	11,3	14,6
Latent	[kW]	0,0	8,3
Standardni zra ni pretok	[m ³ /h]	4800	4800
Hitrost	[m/s]	1,93	2,01
Pressure drop wet	[Pa]	49	56
Pressure drop dry	[Pa]	49	50
Temperatura zajema	[°C]	17,0	27,0
Rel. vlaga zajema	[%]	7	60
Varnost pri površini	[%]	0	0
Varnost pri kapaciteti	[%]	20	20
Temperatura izpuha	[°C]	24,0	18,1
Rel. vlaga izpuha	[%]	5	89
Absolutna vlaga	[g/kg]	0,85	11,53
Medij		Voda	
Temperatura zajema	[°C]	45	10
Temperatura izpuha	[°C]	40	15
Notranji volumen	[dm ³ /h]	1961	3935
Tla ni padec	[kPa]	15,21	56,99
Etilenglikol volumen	[%]	0	0
Kondenzacija	[kg/h]	0,00	11,50

Tehni na specifikacija

Cevi		Baker
Ploš e		Aluminij
Volumen	[m ³]	0,0078
Koristni prostor	[m ²]	54,71
Razdalja med lamelami	[mm]	2,6
Rows		4
Circuits		12
Povezava vtoka	["]	1xR1
Povezava iztoka	["]	1xR1
L	[mm]	130
B	[mm]	1390
H	[mm]	620
Omejttve		
Max hidravli ni tlak	[bar]	15

Max temperatura medija	[°C]	52
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Separator kapljic z odvodom kondenza

Tla ni padec	[Pa]	14
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Ventilator EC

Tip	114512	RH40C-ZID.DC.CR
Premer kolesa	[mm]	400
Zra ni pretok	[m³/h]	4800
Built-in loss	[Pa]	37
Stati ni tlak	[Pa]	688
Skupni tlak	[Pa]	733
Hitrost	[1/min]	2038
Max. speed	[1/min]	2400
K-value		154

Motor efficiency class		IE4 (Super Premium)
Motor power	[kW]	2,4
Nominalna napetost pri 400V 50Hz	[A]	3.9

SFPv	[kW/m³/s]	0,99
SFP class (EN16798-3)		SFP 2
Electric power to motor (Pm)	[kW]	1,42
Electric power to motor (clean filters)	[kW]	1,33
Electric power to motor class (EN13053)		P1
Pm ref (EN13053)	[kW]	1,96
Total fan efficiency	[%]	68,63
Static fan efficiency	[%]	63,84
Overall efficiency ErP	[%]	68,3

PRETOK ODTO NEGA ZRAKA

Žaluzija s pogonom

Zra na žaluzija iz alu profila		
Tip pogona		ON/OFF with spring return (AC/DC 24V)
Torque	[Nm]	5
Tla ni padec	[Pa]	1

Filter zraka

Filter correction (F), (EU 1253)		0
Tip		Vre ast filter
Energy efficiency class		
Air velocity class (EN13053)		V1
Razred filtra		M5
Dimenzije bxhxl	[mm]	592x592x500

Energijska u inkovitost	[kWh/a]	1872
Število vre		8
Število filtrov		2
Tla ni padec (nov filter)	[Pa]	31
Tla ni padec	[Pa]	90
Priporo eni max tla ni padec (EN 137792007)	[Pa]	150
Velocity in the AHU filter section	[m/s]	1,35

Ventilator EC

Designed for wet conditions		
Tip	114512	RH40C-ZID.DC.CR
Premer kolesa	[mm]	400
Zra ni pretok	[m³/h]	4800
Built-in loss	[Pa]	37
Stati ni tlak	[Pa]	690
Skupni tlak	[Pa]	736
Hitrost	[1/min]	2040
Max. speed	[1/min]	2400
K-value		154
Motor efficiency class		IE4 (Super Premium)
Motor power	[kW]	2,4
Nominalna napetost pri 400V 50Hz	[A]	3.9
SFPv	[kW/m³/s]	0,98
SFP class (EN16798-3)		SFP 2
Electric power to motor (Pm)	[kW]	1,43
Electric power to motor (clean filters)	[kW]	1,31
Electric power to motor class (EN13053)		P1
Pm ref (EN13053)	[kW]	1,96
Total fan efficiency	[%]	68,61
Static fan efficiency	[%]	64,34
Overall efficiency ErP	[%]	68,3

Ventilation equipment installation specification 17.1.2018

Ventilation device model VERSO-CF-40-X-H-EC/IE4/2.4/2.4-F7-M5-X-HCW/4R/2.6-R1-C5.1-X

Notes

Kontaktna oseba:

Nr.	Code: Name	Description	Quantity	Units	Notes
1	Avtomatsko krmiljenje		1	Unit	
Pretok vto nega zraka					
PCF-K-62-1100					
2	Ploš ni toplotni izmenjevalec	PCF-K-62-1100	1	Unit	
3	Filter zraka:		2	Unit	
		F7 592x592x500/8/2			
4	0		1	Unit	
	Changeover				
		CW-G10-04R-1260-0540-130-1x12C-26F-M1-C40-IS1-XX-1xR1/1xR1			
5	Ventilator EC/Motor		1	Unit	
		RH40C-ZID.DC.CR			
Pretok odto nega zraka					
6	Filter zraka:		2	Unit	
		M5 592x592x500/8/2			
7	Ventilator EC/Motor		1	Unit	
		RH40C-ZID.DC.CR			