

Stranka: Energetske rešitve

Projekt: TechHUB Ki Pritli je

Kontaktna oseba: Miha

Model:

VERSO-R-2000-F-W/DHCW-R1-F7/M5-C5-SL/A

TEHNI NA SPECIFIKACIJA

Tipologija	NSPE
	DPE
Vrsta HRS	Rotacijski toplotni izmenjevalec

Air handling unit data

		Vtok	Odtok
Nominalna stopnja pretoka	[m³/h]	1280	1280
	[m³/s]	0,36	0,36
Nazivni zunanji tlak	[Pa]	300	300
Hitrost dotoka pri na rtovani stopnji pretoka	[m/s]	1,80	
SFPv	[kW/m³/s]	1,72	
The thermal efficiency of HRS	[%]	82	

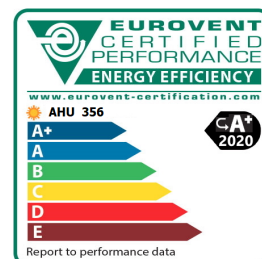
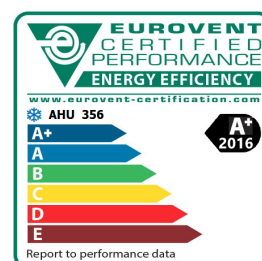
Calculation data

		Zima	Poletje
Design outdoor temperature	[°C]	-13	32
Outdoor relative humidity	[%]	90	40
Indoor temperature	[°C]	20	24
Indoor relative humidity	[%]	40	55
Atmosferski tlak	[Pa]	101325	
Gostota zraka	[kg/m³]	1,2	
Air handling unit location		Ljubljana, Slovenia	
Dry-bulb temperature (TdryS)	[°C]	31,9	
Wet-bulb temperature (TwetS)	[°C]	20,9	
Dew-point temperature (Tdw-pS)	[°C]	15,5	
Dry-bulb temperature (TdryW)	[°C]	-6,8	

Electrical data

Number of electrical input	1
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AHU



Electrical connection ~230V / 50Hz / 1-phase / 3x1,5mm² /6,3A

Avtomatsko krmiljenje

Tip	C5
Control panel	C5.1

COMMISSION REGULATION (EU) No 1253 (ecodesign requirements)

	Value	2018
The thermal efficiency of HRS, η_{nrvu} (EN308)	82	73
Internal specific fan power, SFPint	648	1319
Type of drive - variable speed	Installed	Necessary
Thermal by-pass facility	Exist	Necessary
Warning - filter is clogged	Exist	Necessary
Unit conformity assessment		Complies

Notranji padec tlaka prezra evalnih elementov (P_s , int)	[Pa]	364
Notranji padec tlaka neprezra evalnih elementov (P_s , add)	[Pa]	19
Effective electric power input of the fans (clean filter)	[kW]	0,61

Osnovna sestava STANDART4

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

 požarno odporna miner. volna ($\lambda=0,036$ 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.

 Instructions: www.komfovent.com/en/downloads

Thermal insulation class	T2
Thermal bridging class	TB2
Casing strength	D1 (M)
Filter bypass leakage	F9 (M)
Casing air leakage	L1(R)

Casing air leakage (Model Box, EN 1886)

-400 Pa (L1)	[dm ³ /(s·m ²)]	0,02
+700 Pa (L1)	[dm ³ /(s·m ²)]	0,21

Najveja stopnja zunanjega pušanja - 400 Pa (R)	[%]	< 1
Najveja stopnja zunanjega pušanja + 400 Pa (R)	[%]	< 1
Najveja stopnja notranjega pušanja ali prenos	[%]	2,5

AHU configuration

VERSO-R-2000-F-W/DHCW-R1-F7/M5-C5-SL/A

Datum: 15.09.2024

Debelina panela	[mm]	50
Teža klimata		
Teža (neto)	[kg]	280

GLASNOST

Nivo zvo nega tlaka Lw	na kanale				v okolico	
	Pretok vto nega zraka [dB]		Pretok odto nega zraka [dB]		[dB]	
F[Hz]	Zajem	Izpuh	Zajem	Izpuh	Lw	Lp 3m
63	68,9	75,5	67,8	75,1	53,4	45,3
125	67,9	76,8	66,3	76,0	54,0	45,9
250	68,8	76,1	66,5	75,4	57,3	44,0
500	65,9	73,0	64,1	72,8	51,2	39,2
1000	60,5	68,9	58,9	68,8	41,4	31,9
2000	57,7	64,6	56,1	65,1	24,8	13,4
4000	53,1	60,4	51,5	61,4	20,9	10,6
8000	45,8	53,2	44,2	55,8	18,6	8,3
dB(A)	67	75	65	75	52	40

Rotacijski toplotni izmenjevalec

RR-AL-1000×120-SL-O-SN(1100×1100×420)-PN-A1-Z

Frekven nik	[kW]	0,096
Kondenzacija		
Designed for dry conditions		
The velocity is too low, the result may be unreliable.		

Preme	[mm]	1000×120
Višina vala	[mm]	1,4
Gostota	[kg/m³]	1,2
Heat recovery class (EN13053)		H1
Efficiency bonus (E), (EU 1253)		272

		Zima		Poletje	
		Vtok	Odtok	Vtok	Odtok
Izkoristek temperature	[%]	82,1		82,1	
Izkoristek vlage	[%]	44,5		0	
Tla ni padec	[Pa]	43	43	43	43
Hitrost	[m/s]	0,92	0,92	0,92	0,92
Standardni zra ni pretok	[m³/h]	1280	1280	1280	1280

Zajem

Temperatura	[°C]	-13	20	32	24
Relativna vlaga	[%]	90	40	40	55

VERSO-R-2000-F-W/DHCW-R1-F7/M5-C5-SL/A

Datum: 15.09.2024

Absolutna vlaga	[g/kg]	1,10	5,82	11,96	10,29
Enthalpy	[kJ/kg]	-10,34	34,89	62,81	50,32

Izpuh

Temperatura	[°C]	14,1	-7,1	25,4	30,6
Relativna vlaga	[%]	32	95	58	37
Absolutna vlaga	[g/kg]	3,20	1,97	11,96	10,29
Enthalpy	[kJ/kg]	22,26	-2,22	56,06	57,06

Povratek energije

Sensible heat	[kW]	11,7		-2,9	
Latent heat	[kW]	2,2		0,0	
Total heat	[kW]	13,9		-2,9	
Recovery of moisture	[g/kg]	2,1	-3,8	0,0	0,0
OACF		1,07		1,07	

PRETOK VTO NEGA ZRAKA
Filter zraka

Filter correction (F), (EU 1253)		0
Tip	Panel air filter	
Energy efficiency class		
Air velocity class (EN13053)		V2
Razred filtra:		F7
Razred filtra (EN ISO 16890)		ePM1 60%
Dimenzije bxhxl	[mm]	560x420x96
Število filtrov		1
Tla ni padec (nov filter)	[Pa]	42
Priporo eni max tla ni padec (EN 13779 2007)	[Pa]	190
Velocity in the AHU filter section	[m/s]	1,80

Vodni grelec zraka DHCW-355

HW-G10-03R-0473-0510-150-1x05C-24F-M1-C40-IS1-XX-1xR½/1xR½-150			
		Zima	Poletje
Kapaciteta	[kW]	8,6	2,5
Standardni zra ni pretok	[m³/h]	1280	1280
Hitrost	[m/s]	1,37	1,51
Tla ni padec	[Pa]	19	20
Temperatura zajema	[°C]	0,0	25,4
Rel. vlaga zajema	[%]	32	59
Outlet air temperature	[°C]	20,0	20,0

Rel. vlaga izpuha	[%]	0	81
Absolutna vlaga	[g/kg]	0,00	11,90

Medij		Voda	
Temperatura zajema	[°C]	45	9
Temperatura izpuha	[°C]	40	14
Notranji volumen	[dm³/h]	1602	464
Tla ni padec	[kPa]	35,12	3,84
Etilenglikol volumen	[%]	30	30

Tehni na specifikacija

Cevi		Baker
Plates		Aluminij
Volumen	[m³]	0,0024
Koristni prostor	[m²]	15,69
Razdalja med lamelami	[mm]	2,4
Rows		3
Circuits		5
Povezava vtoka	["]	1×R½
Povezava iztoka	["]	1×R½
L	[mm]	150
B	[mm]	590
H	[mm]	590
Omejitve		
Max hidravli ni tlak	[bar]	21
Max temperatura medija	[°C]	130

Ventilator EC

Premier kolesa	[mm]	280
Zra ni pretok	[m³/h]	1280
Built-in loss	[Pa]	127
Stati ni tlak	[Pa]	512
Hitrost	[1/min]	2298
Max. speed	[1/min]	2900

Motor efficiency class		IE4 (Super Premium)
Motor power	[kW]	0,66
Input current	[A]	1,4

Electric power to motor (clean filters)	[kW]	0,32
SFPv	[kW/m³/s]	0,91
Total fan efficiency	[%]	57,58
Static fan efficiency	[%]	56,89

PRETOK ODTO NEGA ZRAKA

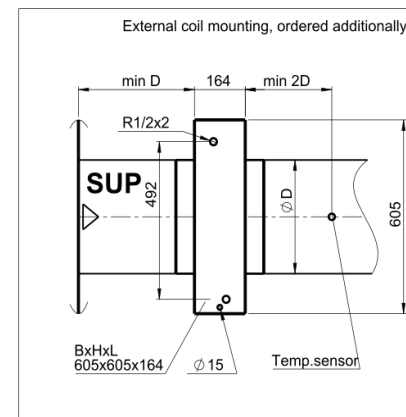
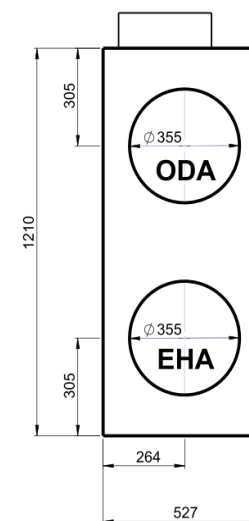
Filter zraka

Filter correction (F), (EU 1253)		0
Tip	Panel air filter	
Energy efficiency class		
Air velocity class (EN13053)		V2
Razred filtra:		M5
Razred filtra (EN ISO 16890)		ePM10 50%
Dimenzije bxhxl	[mm]	560×420×96
Število filtrov		1
Tla ni padec (nov filter)	[Pa]	28
Priporo eni max tla ni padec (EN 13779 2007)	[Pa]	170
Velocity in the AHU filter section	[m/s]	1,80

Ventilator EC

Premier kolesa	[mm]	280
Zra ni pretok	[m³/h]	1280
Built-in loss	[Pa]	82
Stati ni tlak	[Pa]	452
Hitrost	[1/min]	2182
Max. speed	[1/min]	2900
Motor efficiency class		IE4 (Super Premium)
Motor power	[kW]	0,66
Input current	[A]	1,3
Electric power to motor (clean filters)	[kW]	0,29
SFPv	[kW/m³/s]	0,8
Total fan efficiency	[%]	57,97
Static fan efficiency	[%]	55,42

We reserve the rights to change technical data of the products in the process of their improvement without advance notice. Validity period of presented data - 1 month



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