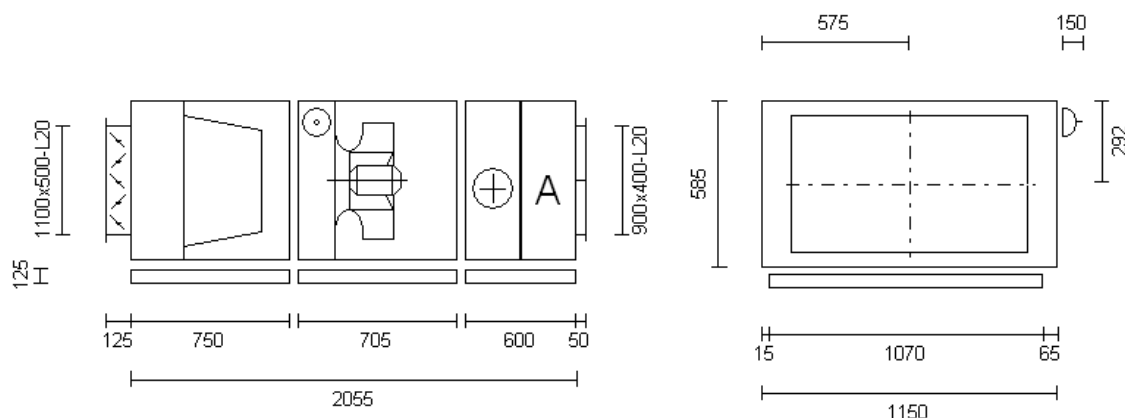


Air handling unit model:

VERSO-S-20-X-H-PM/IE5/1.4/X-F7-HW/4R/2.6-X-R1-C5.1-X


TECHNICAL SPECIFICATION

AHU size	20
Typology	NRVU
	UVU
Type of HRS	none

Air handling unit data

RLT class		A+
Nominal flow rate	[m³/h]	3800
	[m³/s]	1,06
Nominal external pressure	[Pa]	300
Face velocity at design flow rate	[m/s]	1,99
SFPv	[kW/m³/s]	0,94

Calculation data

		Winter	Summer
Design outdoor temperature	[°C]	-23	26
Outdoor relative humidity	[%]	82	50
Indoor temperature	[°C]	20	22
Indoor relative humidity	[%]	55	55
Atmosphere pressure	[Pa]	101325	
Air density	[kg/m³]	1,2	

Electrical data

Number of electrical input	1
----------------------------	---



AHU

Electrical connection ~400V / 50Hz / 3-phase / 5x2,5mm² /3,2A

Control automatics

Type C5.1



COMMISSION REGULATION (EU) No 1253 (ecodesign requirements)

	Value	2018
The fan efficiency, η_{vu} [%]	58,31	42
Internal specific fan power, SFP_{int_limit} [W/m ³ /s]	214	230
Type of drive - variable speed	Installed	Necessary
Warning - filter is clogged	Exist	Necessary
Unit conformity assessment		Complies

Int. pressure drop of ventilation components ($P_{s, int}$) [Pa] 125

Int. pressure drop of non-ventilation components ($P_{s, add}$) [Pa] 165

Effective electric power input of the fans (clean filter) [kW] 0,99

Basic construction STANDART

Panels from two galvanized steel sheets, filled with thermal and sound insulation

fire-resistant min. wool ($\lambda = 0,036$ W/mK).

AHU painted C3 class, RAL 7035.

Indoor unit.

When filters get 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

Verso manual version: V2-C5.1-18-09

Casing air leakage (Model Box, EN 1886)

-400 Pa [dm³/(s·m²)] 0,05

+700 Pa [dm³/(s·m²)] 0,09

Maximum external leakage rate at - 400 Pa [%] < 1

Maximum external leakage rate at + 400 Pa [%] < 1

AHU configuration

Separate sections with base frame connected to each section

Panels thickness [mm] 45

Unit weight

Weight (netto) [kg] 263

Pallets

VKA	[mm]	750x1300(93kg)
V	[mm]	950x1300(170kg)

Accessories

Adjustable feet (RegKoj)

ACOUSTIC DATA

Sound power level Lw	to the air ducts		to surrounding
	Supply air volume [dB]		[dB]
F[Hz]	Inlet	Outlet	
63	62,2	67,8	61,0
125	67,5	67,3	64,6
250	75,4	79,4	69,4
500	69,0	77,7	51,2
1000	57,7	82,2	50,9
2000	54,6	76,7	44,2
4000	51,6	72,5	34,5
8000	44,7	67,9	28,3
dB(A)	70	85	62

SUPPLY AIR VOLUME
Damper with actuator

Aluminium profile air damper		
Actuator type	ON/OFF with spring return (AC/DC 24V)	
Torque	[Nm]	4
Pressure drop	[Pa]	7

Air filter

Filter correction (F), (EU 1253)		0
Type	Bag filter	
Energy efficiency class		
Air velocity class (EN13053)		V3
Filter class (EN 779:2012)		F7
Filter class (EN ISO 16890)		ePM1 60%
Dimensions bxxhxl	[mm]	490x490x500
Energy performance	[kWh/a]	1009
Quantity of bags		6
Quantity of filters		2
Pressure drop (clean filter)	[Pa]	67
Pressure drop	[Pa]	108

VERSO-S-20-X-H-PM/IE5/1.4/X-F7-HW/4R/2.6-X-R1-C5.1-X

Date: 2020-06-17

Recomended max. pressure drop (EN 137792007)	[Pa]	150
Velocity in the AHU filter section	[m/s]	1,99

Water air heater

HW-G10-04R-0927-0360-130-1x06C-26F-M1-C40-IS1-XX-1xR¾/1xR¾		
Capacity	[kW]	54,8
Standard air volume	[m³/h]	3800
Velocity	[m/s]	2,69
Pressure drop	[Pa]	118
Inlet temperature	[°C]	-23,0
Inlet rel. humidity	[%]	82
Safety on surface	[%]	0
Safety on capacity	[%]	20
Outlet air temperature	[°C]	20,0
Outlet rel. humidity	[%]	3
Absolute humidity	[g/kg]	0,39
Fluid		Water
Inlet temperature	[°C]	70
Outlet temperature	[°C]	50
Flow rate	[dm³/h]	2410
Pressure drop	[kPa]	53,14
Etilenglycol by volume	[%]	0

Technical specification

Tubes		Copper
Plates		Aluminium
Volume	[m³]	0,0038
Useful space	[m²]	26,81
Fin pitch	[mm]	2,6
Rows		4
Circuits		6
Connection in	["]	1xR¾
Connection out	["]	1xR¾
L	[mm]	130
B	[mm]	1050
H	[mm]	440
Restrictions		
Max hidraulic pressure	[bar]	15
Max fluid temperature	[°C]	100

Impeller

Type		RH31C.CR
Wheel diameter	[mm]	315
Air volume	[m³/h]	3800
Built-in loss	[Pa]	58
Static pressure	[Pa]	590
Total pressure	[Pa]	662
Efficiency	[%]	68,9
Shaft power	[kW]	0,9
Shaft power (clean filters)	[kW]	0,84
Speed	[1/min]	2780
Max. speed	[1/min]	4245
K-value		95

Motor PM

Motor efficiency class		IE5 (Ultra Premium)
Motor power	[kW]	1,4
Speed	[1/min]	3400
Efficiency	[%]	90
Input current at 400V 50 Hz	[A]	3
FOP	[Hz]	232
Frequency converter	[kW]	1.4

Fan

SFPv	[kW/m³/s]	0,94
SFP class (EN16798-3)		SFP 3
Electric power to motor (Pm)	[kW]	1,07
Electric power to motor (clean filters)	[kW]	0,99
Electric power to motor class (EN13053)		P1
Pm ref (EN13053)	[kW]	1,32
Total fan efficiency	[%]	65,39
Static fan efficiency	[%]	58,31
Overall efficiency ErP	[%]	63,74

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 - 3 months

VERSO-S-20-X-H-PM/IE5/1.4/X-F7-HW/4R/2.6-X-R1-C5.1-X

Date: 2020-06-17

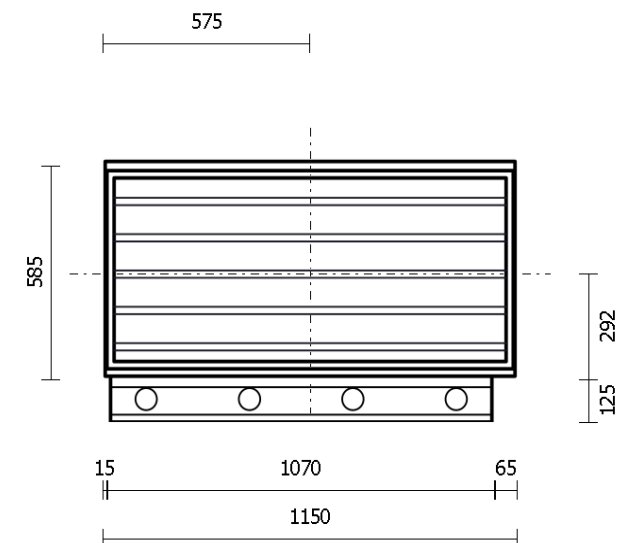
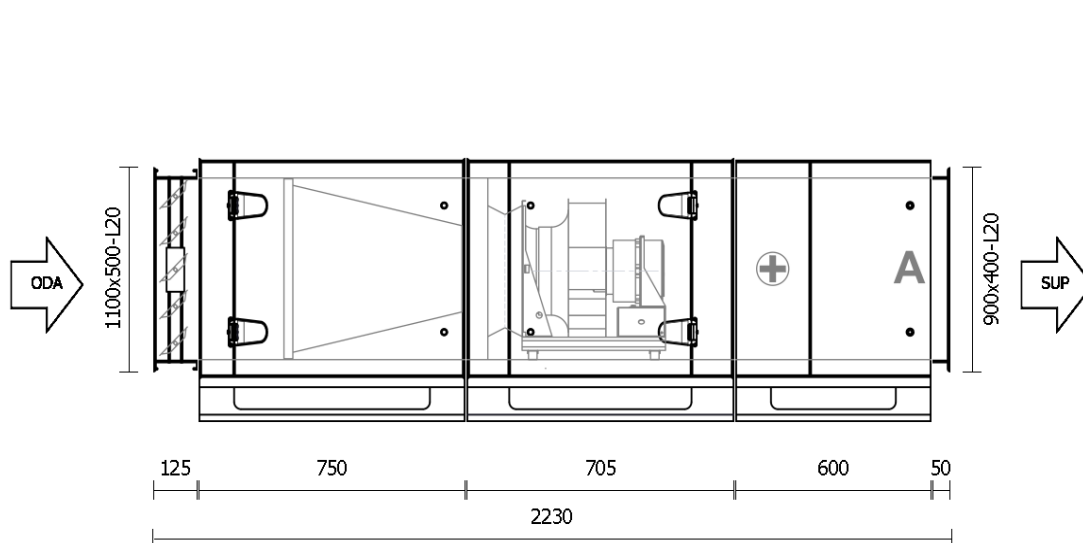
Ventilation equipment installation specification 2020-06-17

Ventilation device model VERSO-S-20-X-H-PM/IE5/1.4/X-F7-HW/4R/2.6-X-R1-C5.1-X

Notes

Worked-out:

Nr.	Code: Name	Description	Quantity	Units	Notes
1		Control automatics	1	Unit	
Supply air volume					
2	Air filter:				
	F7 490x490x500/6		2	Unit	
3	760100824		1	Unit	
	Air heater				
	HW-G10-04R-0927-0360-130-1x06C-26F-M1-C40-IS1-XX-1xR¾/1xR¾				
4	Motor PM		1	Unit	
	1,4 [kW]				



ODA - Outdoor intake;

SUP - Supply air;

Note: Due to the tolerances of the individual parts and the sealing gaskets used, the actual dimensions may vary slightly.