

Technical specification

Project	Pulitzer Amsterdam	C- : KNL10002	Prod. : 0701-973	P2
	15.814JZ.472	Position AHU 1.		30.9.2015

Customer		Designer	
Customer Name	Vacom Air	Designer Name	
Contact name	Gerard Kuiper	Phone	
Phone	+31 594 63 19 11		

Basic data

Product	AHU	Line	Mandik P
Total dimensions (LxWxH)	mm 2390 x 750 x 400	Size	P2
contour dimensions (LxWxH)	mm 2785 x 900 x 400	Panel thickness	mm 50
Weight	kg 166	Insulation density	kg/m3 50
Weight attached accessories	kg 0		
Unit fastening mode: with suspensions			
Surface treatment outside	galvanised	Surface treatment inside	galvanised
terminal panel surface	galvanised	built-in holder surface	galvanised
holder surface	galvanised		
execution: Indoor			

Test according to EN 1886 (07/2009)

Mechanical strength of casing	D1 (M)							
Casing air leakage	L1 (M)							
Filter bypass leakage	< 0,5% - F9 (M)							
Thermal transmittance	T3							
Thermal bridging of the casing	TB2							
Sound insertion loss in band	Hz	125	250	500	1000	2000	4000	8000
	dB	15.8	23.6	31.3	37.3	39.5	39.7	43.2



according EU Directive No 1253/2014: Non residential ventilation unit (NRVU)

ErP 2016, 2018 comply

Unit type:	unidirectional ventilation unit (UVU)
Type of drive:	variable speed drive
type of heat recovery system:	
Supply: fan static efficiency:	fan / fan_limit 2018 % 45.7 / 37.0
internal SFP of ventilation components:	SFP int / SFP_int_limit 2018 W/(m3/s) 181 / 230
Internal pressure drop of vent.components: supply	Ps int sup Pa 83
AHU is to operate with variable speed drive controller only !	



Supply part	cross-section air velocity	m/s	2.3
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Compact block A

Terminal panel	air flow	m3/h	1600	pressure loss	Pa	4
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Damper, tightness class 2 EN1751:2003 outside 3 Nm Ending flexible connection

Service side:

front

Filter	air flow	m3/h	1600	pressure loss	Pa	139
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Filter parts composition: 1 x 640 x 290 mm
 pressure loss reserve Pa 60
 Filter class, length F7 - bag filter 630 mm
 Initial pressure loss Pa 79
 Max.allowed final pressure loss Pa 450
 Max. final pressure loss acc. EN13053 Pa 200

Service side:

down, door with hinges and handles

Compact block B

Water heater	air flow	m3/h	1600	pressure loss	Pa	66
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count of rows 2 heating medium water
 Air inlet temperature °C -7.0 medium temperature °C 90.0/70.0
 air outlet temperature °C 20.0 medium flow rate m3/h 0.64
 Power kW 14.5 waterside pressure drop kPa 3.21
 with frame for capillary thermostat pipe connection DN20

Service side:

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front, removable panel , lock with clamping bolt

Water cooler		air flow	m3/h 1600	pressure loss	Pa 204
with drop eliminator	Pa	41	Condensate drain	DN32	
count of rows		7	Coolant	water	
Air inlet temperature	°C	28.0	medium temperature	°C	6.0/12.0
Air inlet humidity	%	60.0	medium flow rate	m3/h	1.69
air outlet temperature	°C	16.0	waterside pressure drop	kPa	24.20
air outlet humidity	%	92.0	pipe connection	DN20	
Power	kW	11.8			
pressure drop of dry exchanger	Pa	163	pressure drop of wet exchanger	Pa	220

Service side:

front, removable panel , lock with clamping bolt

Accessories:

Condensate syphon with	Condensate syphon with Ball-HL136NGG	1	attached
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Compact block C

Fan		air flow	m3/h 1600	pressure loss	Pa 4				
left: flexible connection				Pa	0				
Fan type, motor with thermistor	ER22C-2DN.A7.1R	Total pressure		Pa	725				
air flow	m3/h 1600	Static pressure loss		Pa	667				
External pressure loss	Pa 250	Dynamic pressure		Pa	58				
SFP class acc. EN13779	SFP4	SFP	W/(m3/s)		1390				
Nominal parameters		Parameters in working point							
voltage	V 400	voltage	V	400					
Frequency	Hz 50	Frequency	Hz	69					
Power	kW 0.55	Power	kW	0.45					
current	A 1.28	current	A	0.99					
RPM	RPM 2790	RPM	RPM	3875					
		fan efficiency	%	72.1					
		aggregate efficiency	%	51.2					
	LwA	Frequency band [Hz] / Lw [dB]							
	dB(A)	63	125	250	500	1000	2000	4000	8000
	Sum								
Sound power level to exhaust	85.3	67.7	65.8	67.8	75.8	80.7	80.6	75.3	71.2
Sound power level to intake	65.0	66.2	60.6	55.9	58.7	59.7	59.5	55.1	53.3
Sound power level to surround	48.2	59.7	49.8	43.8	44.8	43.7	40.6	35.3	28.2

Service side:

down, door with hinges and handles

Accessories:

Frequency inverter M1, 0,75 kW	FC51 0,75 kW 3x380-480V, IP20	1	mounted on unit
FI wire clamp guard, M1, FC51	Nema Type 1 kit, M1 0,37-0,75 kW	1	mounted on unit
FI control panel, FC51 IP20, VLT	Panel LCP 11-without potentiometer	1	mounted on unit
service switch, wired	KEM 310U Y/R, 10A, unlockable	1	mounted on unit

Accessories

description	Type	quantity	Section
Condensate syphon with	Condensate syphon with Ball-HL136NGG	1	Water cooler supply
Frequency inverter M1, 0,75 kW	FC51 0,75 kW 3x380-480V, IP20	1	Fan supply
FI wire clamp guard, M1, FC51	Nema Type 1 kit, M1 0,37-0,75 kW	1	Fan supply

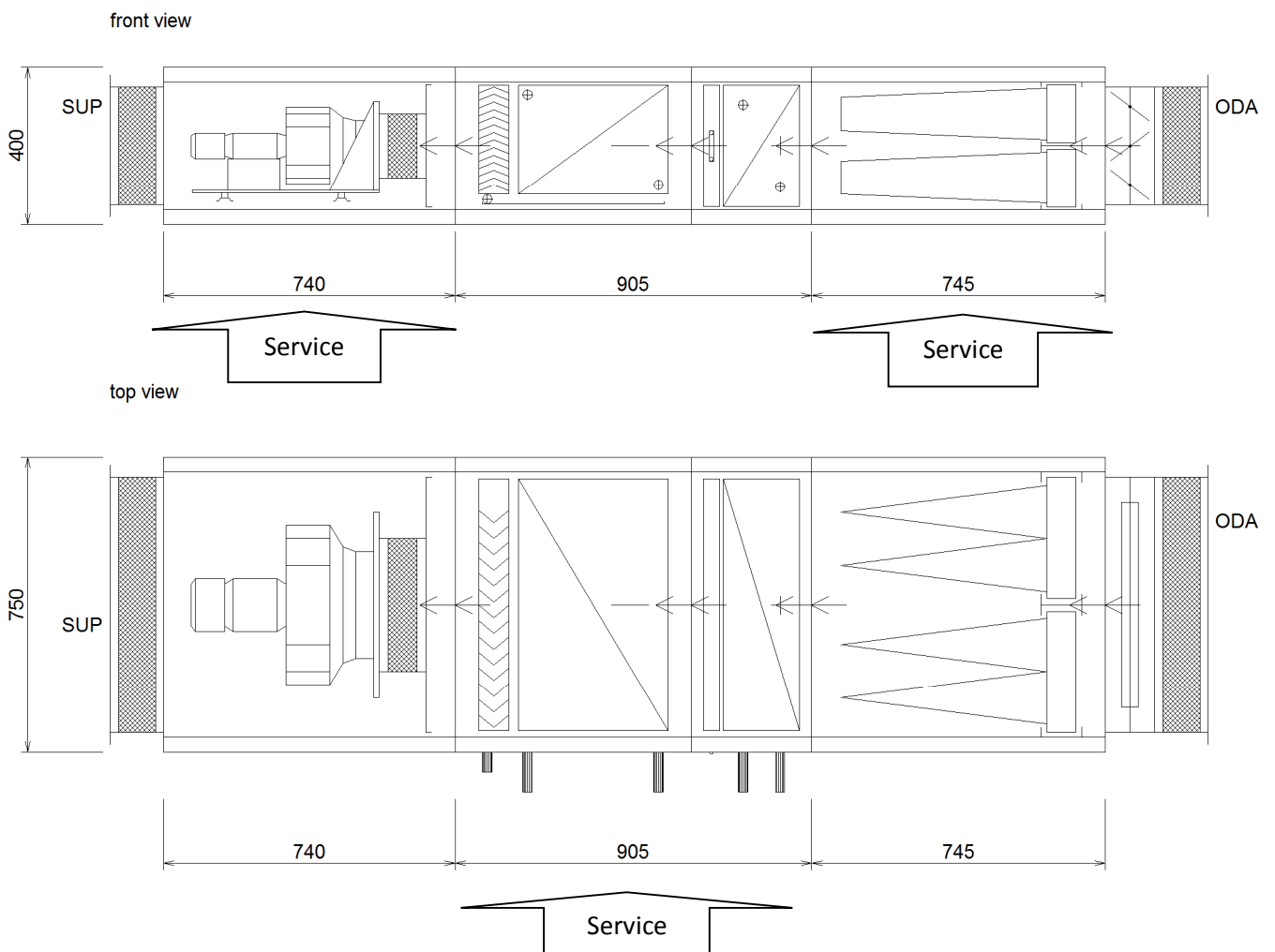
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FI control panel, FC51 IP20, VLT	Panel LCP 11-without potentiometer		1	Fan supply
service switch, wired	KEM 310U Y/R, 10A, unlockable		1	Fan supply



Schematic drawing

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HxW: ODA=300x650 mm, SUP=300x650 mm

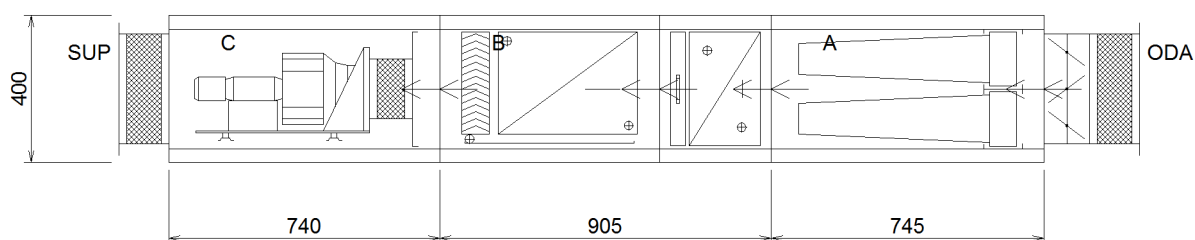
Dim. and weights of production

MANDÍK®

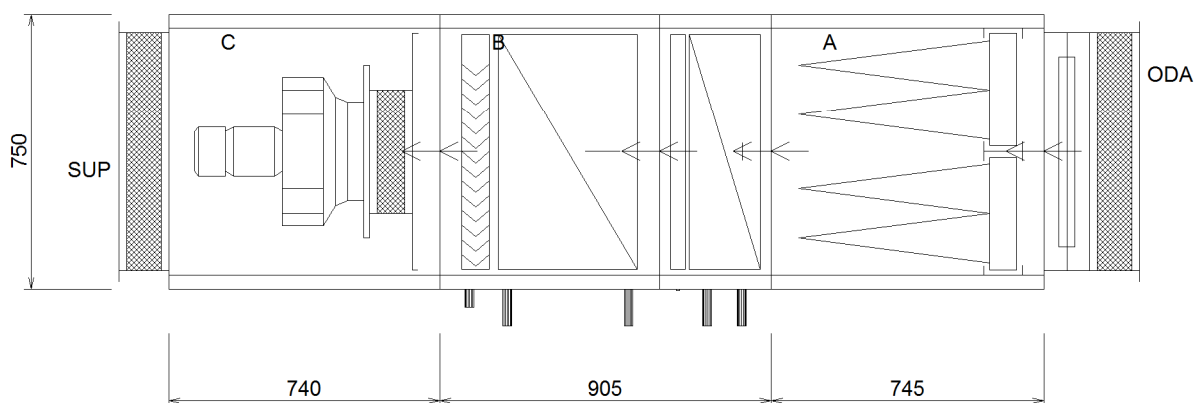
blocks

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front view



top view



HxW: ODA=300x650 mm, SUP=300x650 mm

Compact block	Part	Total dimensions (LxWxH) mm	contour dimensions mm	Weight kg
Compact block A	supply	745 x 750 x 400	1005 x 850 x 400	40
Compact block B	supply	905 x 750 x 400	905 x 850 x 400	69
Compact block C	supply	740 x 750 x 400	875 x 850 x 400	57
accessories attached to AHU				0