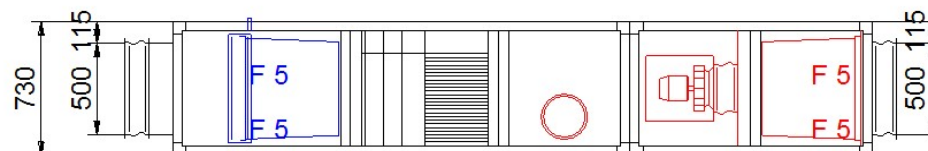
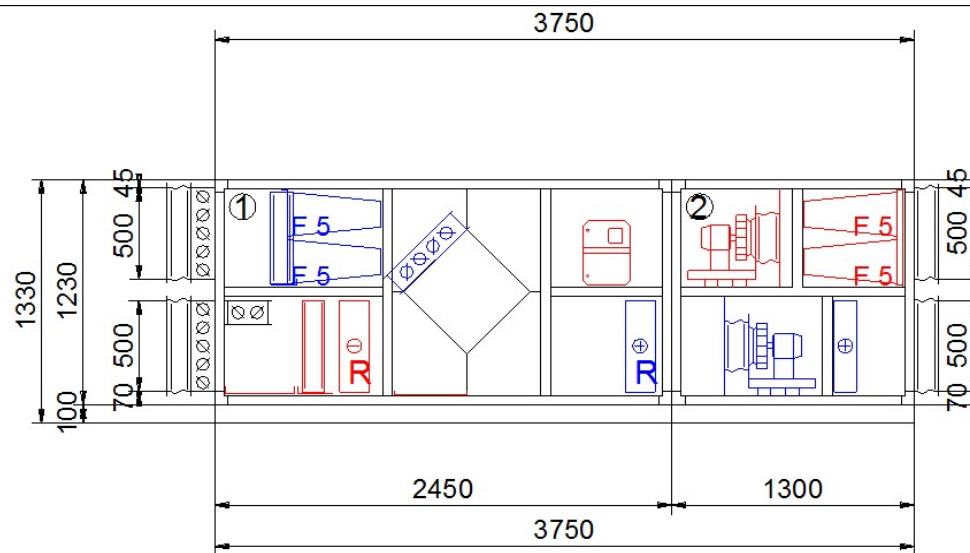


	S-supply	E-exhaust
type	BS-1 (50)	BS-1 (50)
Execution	Right	Left
Insulation thickness [mm]	50	50
Output [m ³ /h]	1755	1752
Avail.pres. [Pa]	250	188
enclosure type	frame-supported	



For:	Offer No.:	Object:	Mark: PN1
VBW 81-571 Gdynia, ul. Chwaszczyńska 133 D tel:(0 58)629 91 89 Fax:(0 58) 629 92 02 http://vbw.pl info@vbw.pl FQ 0109; ISO 9001; ISO 14001 Wydanie 1		Elaborated by:	Page: 1/1
		Date 2018-06-12	

Notice

Okeanos BS-RP-RHP-1-SW

v 4.9. 294

AHU selection technical data

For:	Offer No.:
Object:	Symbol: PN1
Elaborated by:	Date 2018-06-12

	AHU type	Size	Insulation	Service	Output [m3/h]	Avail.pres. [Pa]	Int. resistance [Pa]
Supply:	BS	1	50	Right	1755	250	308
Exhaust:	BS	1	50	Left	1752	188	361

Supply	ODK	Drop eliminator
Air flow speed	2 m/s	Air flow resistance 10 Pa

Supply	FB-5	Pocket filter F5
Class	F 5	Air flow speed 1,7 m/s
Air flow resistance	114 Pa	Filter set FK-592x490x360-F5/1pc

Supply	RP	Crossflow heat exchanger
Air flow	1755 m3/h	Inlet air temperature 7,8 °C
Air humidity in	100 %	Exchanger type X.1.1.N
Drop eliminator	NO	Air flow resistance 132 Pa
Outlet air temperature	26,3 °C	Air humidity out 31 %
Power	10,8 kW	Effective power 6,7 kW
Efficiency	83,3 %	Air speed in AHU window 1 m/s

Supply	WPC	Cooling system exchanger
Inlet air temperature	21,3 °C	Air humidity 31 %
Medium type	R407c	Refrigerant Condensation temperature 57 °C
Exchanger type	2R	Power 6,64 kW
Outlet air temperature	32,5 °C	Air humidity 16 %
Air flow resistance	32 Pa	Air flow speed 2,4 m/s
Medium pressure drop	11,7 kPa	Connections 1pc

Notis: The amount of outdoor air is dependent on the current need for draining the pool hall.
 Selection of a heat pump installed in the unit was carried out according to the following principles:
 For winter:
 - Recirculation => 1230 m3 / h (70% of the nominal flow rate),
 - External air => 525 m3 / h.
 - Outdoor air parameters -24 C / 80%
 - Parameters of air after mixing +7,8 C / 100%
 - Efficiency for the above-described dehumidifying mode
 W.nom = 19,4 kg / h
 - Maximum efficiency drying of unit W.max = 32 kg / h

Supply	WOP	Plug fan section
Air flow	1755 m3/h	Available pressure 250 Pa
Inverter	1-do regulacji sieci	well-matched fan ER25C-2DN.B7.CR
Air flow resistance	37 Pa	Fan efficiency 77,1 %
Power consumption	0,4 kW	Fan speed 3034 rpm
Motor type	BG 80M/B3	Motor rated power 0,75 kW
Current intensity/voltage	1,68 / 400 A; V	supply voltage frequency 52,8 Hz
SFP for clean filters	0,71 kW/m3/s	

Supply	HW	Water heating coil
Inlet air temperature	21,3 °C	Air humidity 31 %
Medium type	ethylene glykol	

Non-freezing agent participation	40	%	Inlet medium temperature	80	°C
Outlet medium temperature	60	°C	Exchanger type	W.1.01.1	
Power	5,2	kW	Outlet air temperature	30	°C
Air humidity	19	%	Air flow resistance	20	Pa
Air flow speed	2,4	m/s	Medium resistance of flow	0,53	kPa
Medium flow	0,07	l/s	Media speed in exchanger's pipe	0,27	m/s
Connections	20/20				
Exhaust	FB-5	Pocket filter F5			
Class	F 5			Air flow speed	1,7 m/s
Air flow resistance	114	Pa	Filter set	FK-592x490x360-F5/1pc	
Exhaust	WOP	Plug fan section			
Air flow	1752	m3/h	Available pressure	188	Pa
Inverter	1-do regulacji sieci			ER25C-2DN.B7.CR	
Air flow resistance	37	Pa	Fan efficiency	77,3	%
Power consumption	0,4	kW	Fan speed	3018	rpm
Motor type	BG 80M/B3			Motor rated power	0,75 kW
Current intensity/voltage	1,68 / 400	A; V	supply voltage frequency	52,5	Hz
SFP for clean filters	0,71 kW/m3/s				
Exhaust	SPC	compressor section			
WINTER					
Number of compressors	1		Cooling capacity	4,83	kW
Electric power	1,81	kW	COP	2,67	
Initial filling with medium	4	kg			
Exhaust	RP	Crossflow heat exchanger			
Air flow	1752	m3/h	Inlet air temperature	30	°C
Air humidity in	60	%	Air flow resistance	142	Pa
Outlet air temperature	18,6	°C	Air humidity out	100	%
Amount of condensate	5,66	kg/h	Condensation temperature	21,4	°C
Efficiency	51,5	%	Air speed in AHU window	1,1	m/s
Exhaust	WPC	Cooling system exchanger			
Inlet air temperature	18,6	°C	Air humidity	100	%
Medium type	R407c			Refrigerant evaporation temperature	7 °C
Exchanger type	3R			Power	4,7 kW
Outlet air temperature	16	°C	Air humidity	100	%
Air flow resistance	52	Pa	Air flow speed	2,6	m/s
Medium pressure drop	7,4	kPa	Connections	1pc	
Exhaust	ODK	Drop eliminator			
Air flow speed	2,6	m/s	Air flow resistance	18	Pa
Exhaust	DM-1	Mixing box			
Air flow	1752	m3/h	Inlet air temperature	16	°C
Air humidity	100	%	Recirculation	1-floating	
Recirculation damper	PW-530 x 212			Air flow speed	1,9 m/s
Air humidity	100	%	Outlet air temperature	16	°C
Air flow resistance	30	Pa			

Acoustic power distribution within particular frequencies

	dB(A)								dB(A)
Hz	63	125	250	500	1000	2000	4000	8000	Total
Supply suction	34	41,3	51,5	57	55,8	49,5	45,2	38,4	60,7
Supply pumping	39,5	48,3	61,9	67,6	73,6	72,3	67,5	58,6	77,3
Supply surroundings * (1 m)	20	21,3	28,5	31	27,8	26,5	26,2	5,4	35,6



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Exhaust suction	37,9	45,2	56,6	61,9	61,7	58,3	57,1	50,3	66,8
Exhaust pumping	36,3	45,1	57,8	64,5	69,5	65,2	59,5	50,5	72,2
Exhaust surroundings * (1 m)	19,9	21,2	28,6	30,9	27,7	26,3	26,1	5,3	35,6

* The sound pressure level

Dimensions

Block	Width [mm]	Height [mm]	length [mm]	frame[mm]	Weight [kg]
1	730	1230	2450	100	401,76
2	730	1230	1300	100	210,15
Total					612



ID 0000039605

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