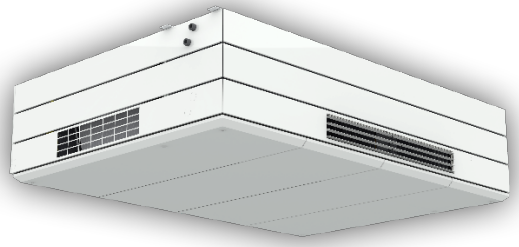
Datasheet AM 1000 RC

AIRMASTER



Technical data

	Filter class	30 dB(A)	33 dB(A)	35 dB(A)	Boost
Maximum capacity[A]	ePM_{10} 50%	905 m^3/h	1020 m^3/h	1035 m^3/h	1035 m^3/h
	ePM_1 55%	880 m^3/h	1010 m^3/h	1030 m^3/h	1030 m^3/h
	ePM_1 80%	840 m^3/h	960 m^3/h	1025 m^3/h	1025 m^3/h
Throw (0.2 m/s)[B]	ePM_{10} 50%	6.5 m	7.5 m	7.6 m	7.6 m
	ePM_1 55%	6.2 m	7.4 m	7.6 m	7.6 m
	ePM_1 80%	5.9 m	7.0 m	7.5 m	7.5 m
Operating range (max. capacity), outside temperature		-20°C – +40°C			
Intake filter		ePM_{10} 50%, ePM_1 55%, ePM_1 80%			
Extract filter		ePM_{10} 50%			
Dimensions (Width x Depth x Height)		2324 x 1658 x 560 mm			
Weight: complete standard unit / center / left / right / front / RC module / bottom plates / panels		392 kg / 131 kg / 61 kg / 36 kg / 19 kg / 72 kg / 55 kg / 18 kg			
Colour: casing / panels		RAL 7024 (grey) / RAL 9010 (white)			
Counterflow heat exchanger		2 x aluminium			
Air leakage classification cf. EN 1886 (external leakage)		Class L2			
Air leakage classification cf. EN 13141-7 (external leakage)		Class A1			
Air leakage classification cf. EN 308 (internal leakage)		Max. 0.5%			
Air leakage classification, filters cf. EN 1886 (internal leakage)		ePM_{10} 50% = 0.5%, ePM_1 55% = 0.5%, ePM_1 80% = 0.5%			
Air leakage classification, main damper, cf. EN 1751		Class 3			
IP code		1xB			
Duct connection (intake/exhaust)		Ø315 mm			
Free area, inlet opening		0.087 m^2			
Free area, extract opening		0.076 m^2			
Condensate pump, RC coil: capacity / lifting head at 10 l/h		20 l/h / 3.5 m			
Condensate pump, Heat exchanger: capacity / lifting head at 5 l/h		10 l/h / 5 m			
Condensate drain hose, RC coil: int. diameter / ext. diameter		Ø6 mm / Ø9 mm			
Condensate drain hose, Heat exchanger: int. diameter / ext. diameter		Ø6 mm / Ø9 mm			
Supply voltage[C]		220-240V/50Hz, ~1N+PE or 220-240V/50Hz, ~3N+PE			
Maximum power		354 W			
Maximum current		2.76 A			
Power factor		0.56			
Leakage current AC / DC		≤4mA			
Maximum fuse[C]		16 A, 1 phase, type B or 16 A, 3 phase, type B.			
Recommended residual current circuit breaker (RCCB)		Type F / Type B			

[A] All measurements were performed in a normal operating mode in a standard installation in a test room, sized 8.0 m x 10.0 m x 2.5 m with room attenuation of 8 dB(A) and a reverberation time, T = 0.6 s.
[B] The throw is measured with a 2-3˚C subcooled intake air in a test room, sized 8.0 m x 10.0 m x 2.5 m. Measured with extract filter ePM_{10} 50%.
[C] A 3-phase connection must be used if the electrical preheating surface is chosen.

Electrical heating surfaces

	Preheating surface	Comfort heating surface
Heat output	2300 W	1500 W
Nominal current	10 A @ 230 V	6.5 A @ 230 V
Thermal circuit breaker, automatic reset	50°C	50°C
Thermal circuit breaker, manual reset	100°C	100°C

Room Conditioning surface (heating-cooling surface)

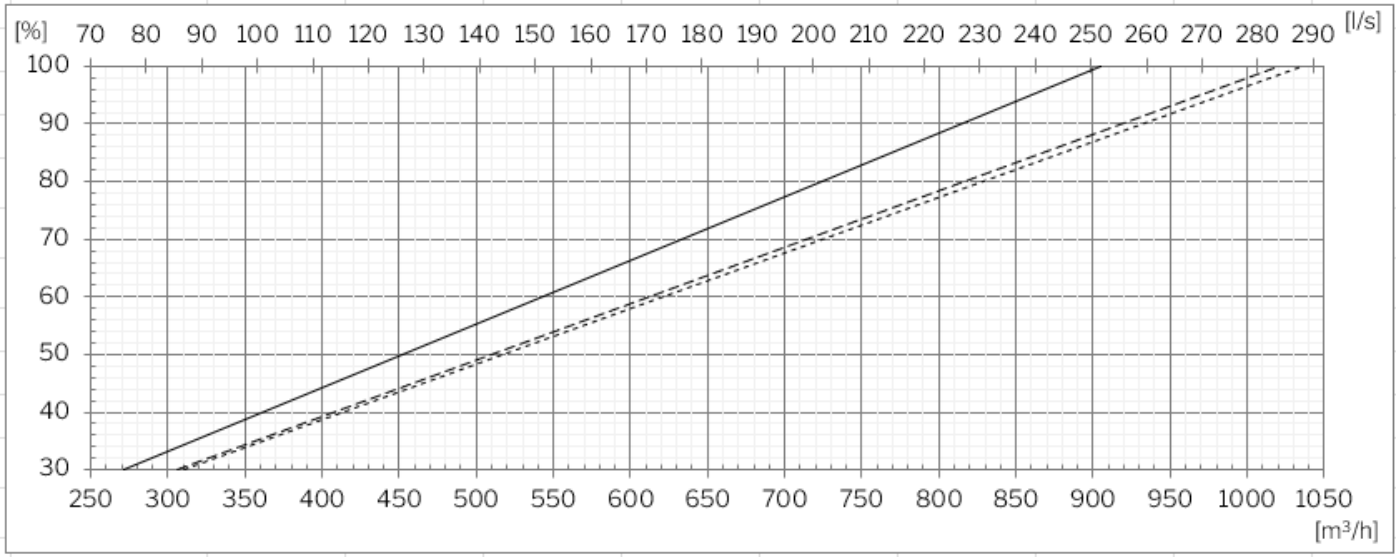
Water connections (side or top of unit)	R1” / DN25
Materials: pipes / fins	Copper / aluminium
Control valve	Kvs = 2.5 m^3/h
Maximum operating temperature	90°C
Maximum operating pressure	5 bar

For heating and cooling capacities, see Annex A and Annex B

When using Annex A and Annex B you choose the temperature set of the fluid and the airflow you want to use in your system. From these parameters you get the pressure loss in the coil and the control valve, and the water flow you need to establish the desired temperature set. To get this water flow you must adjust your balancing valve (not Airmaster delivery) to this flow required.

The RC system is a 2-pipe change-over system. If the RC system is part of a larger system that can deliver both warm and cold water to the RC surface, Airmaster recommends using temperature sets that require equal water flows/pressure losses in the system for both heating and cooling. Otherwise, it can be difficult to adjust the balancing valve to fit both situations.

Capacity with intake filter ePM_{10} 50% + extract filter ePM_{10} 50%[D]

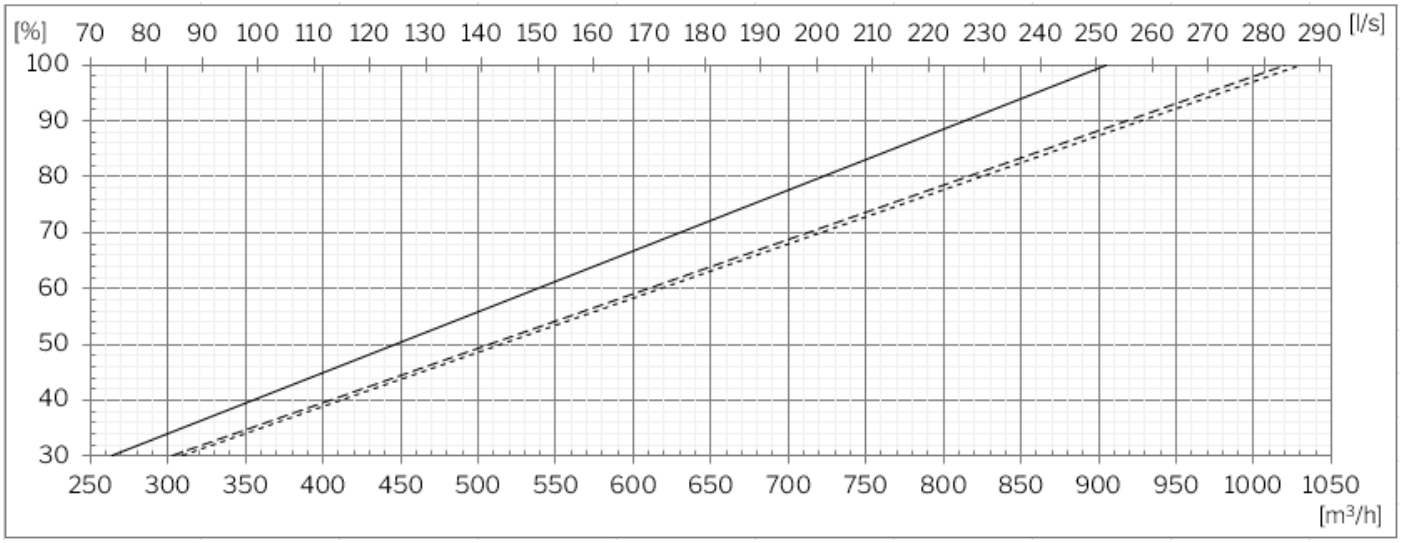


——— 30 dB(A)

– – – – – 33 dB(A)

--------- 35 dB(A)

Capacity with intake filter ePM_1 55% + extract filter ePM_{10} 50%[D]



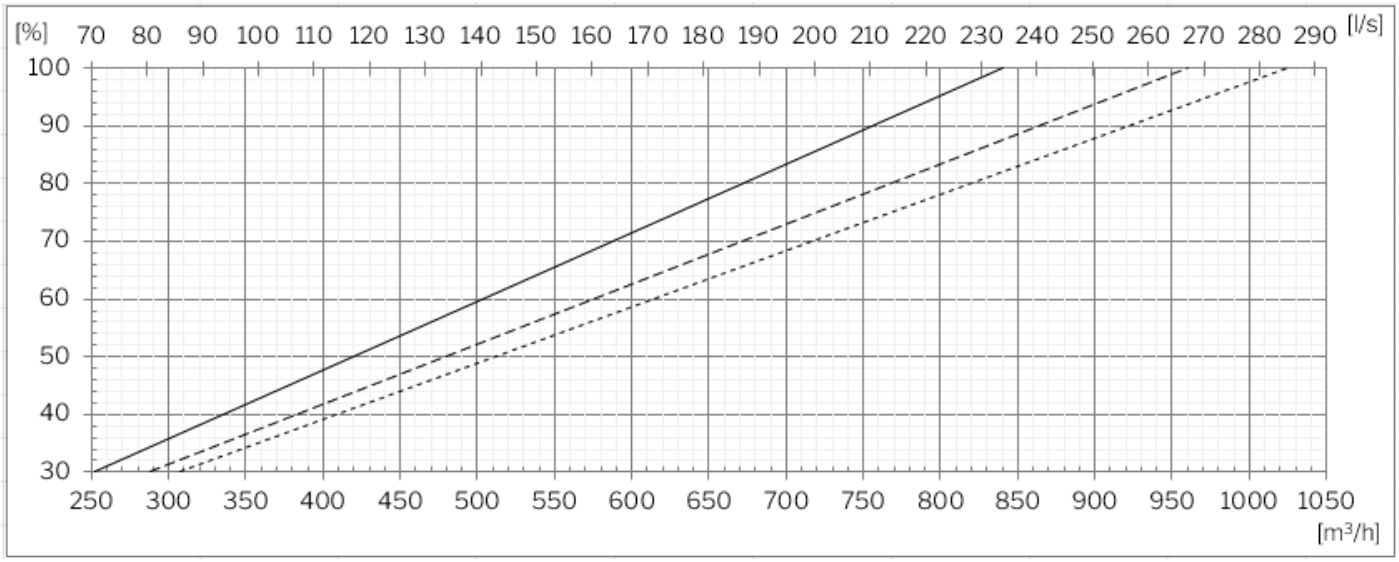
——— 30 dB(A)

– – – – – 33 dB(A)

--------- 35 dB(A)

[D] All measurements were performed in normal operating mode in a standard installation using the Ø315 mm Airmaster Boomerain® façade grilles.

Capacity with intake filter ePM_1 80% + extract filter ePM_{10} 50%[D]

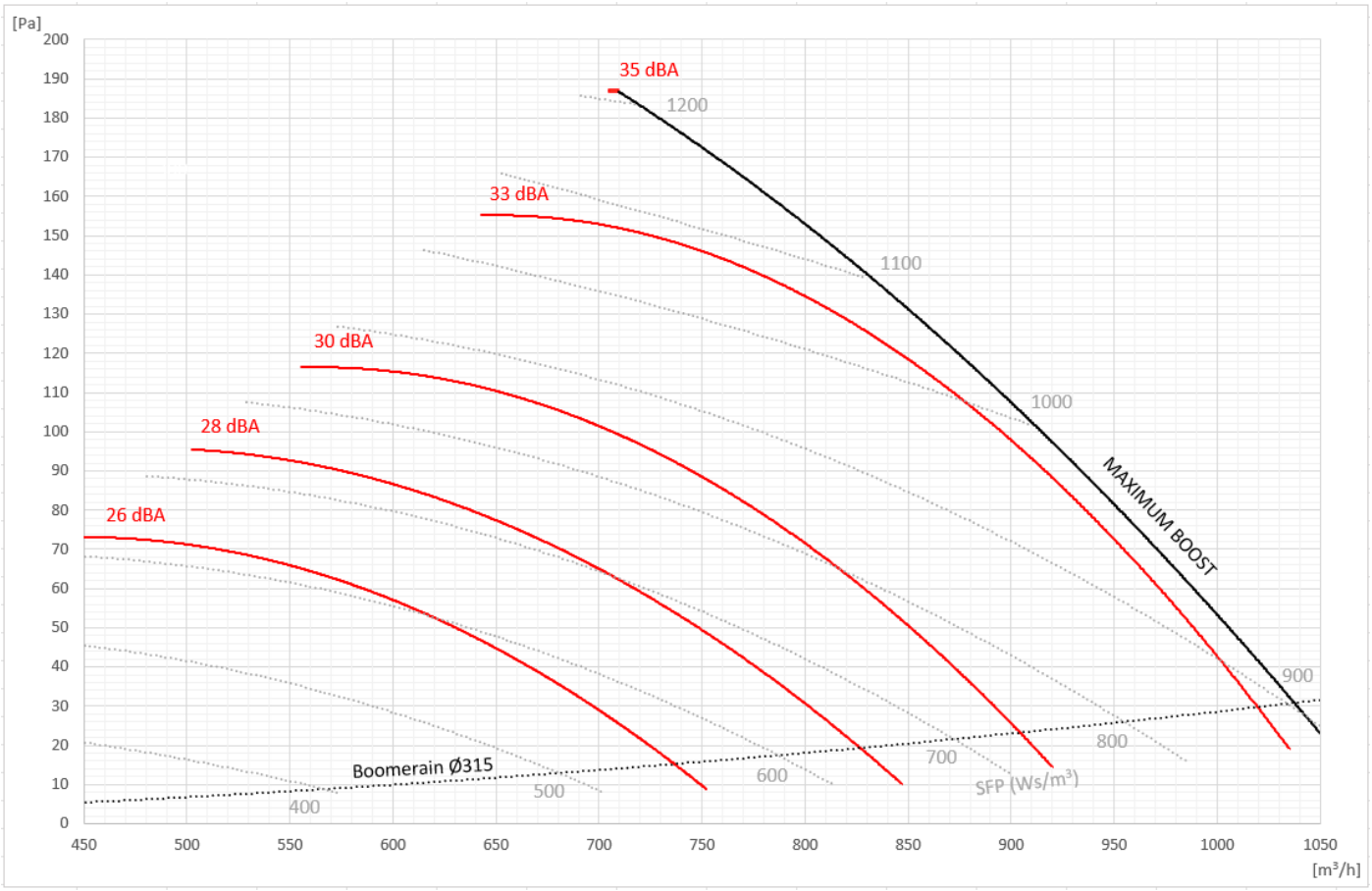


——— 30 dB(A)

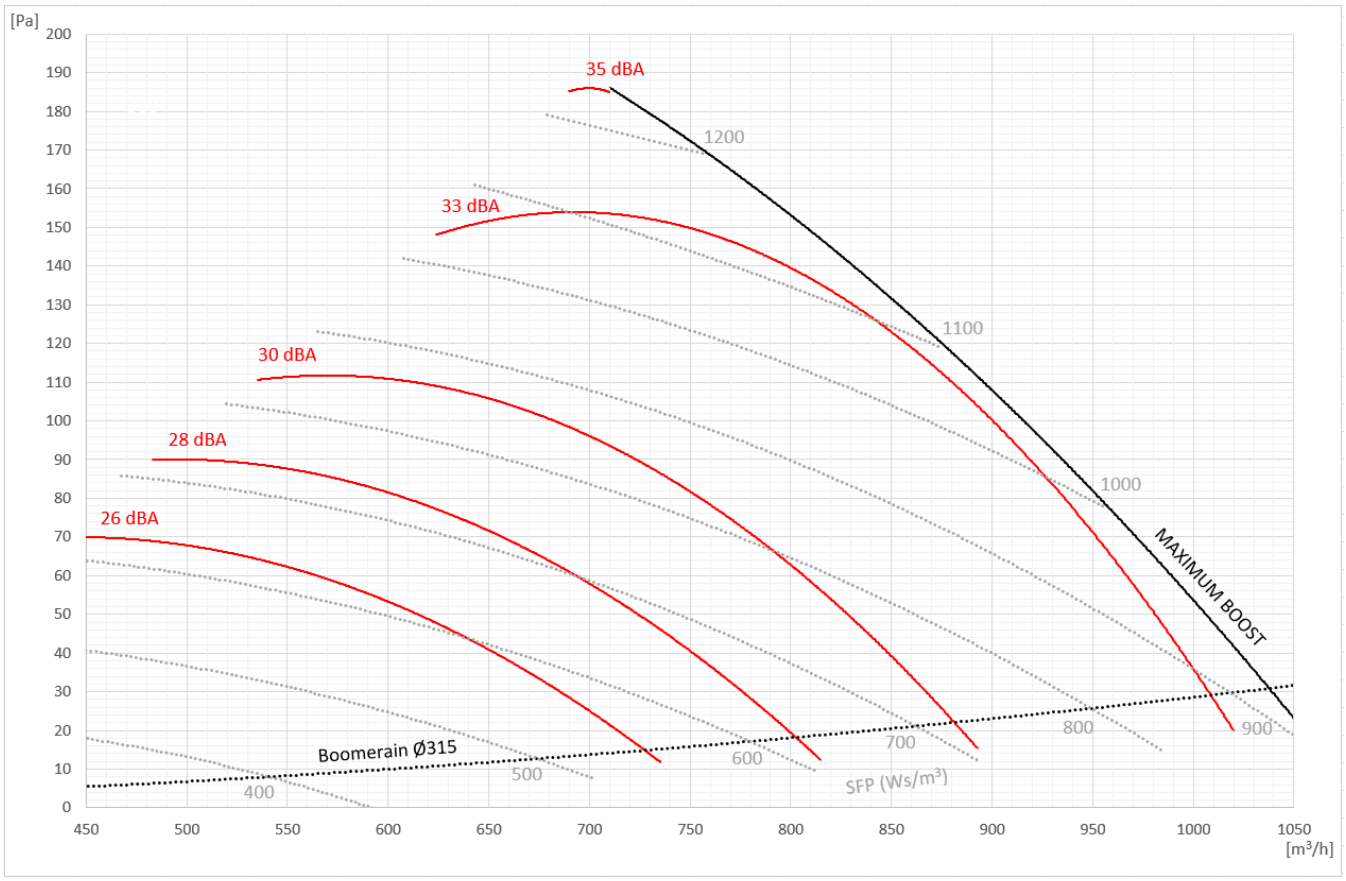
– – – – – 33 dB(A)

--------- 35 dB(A)

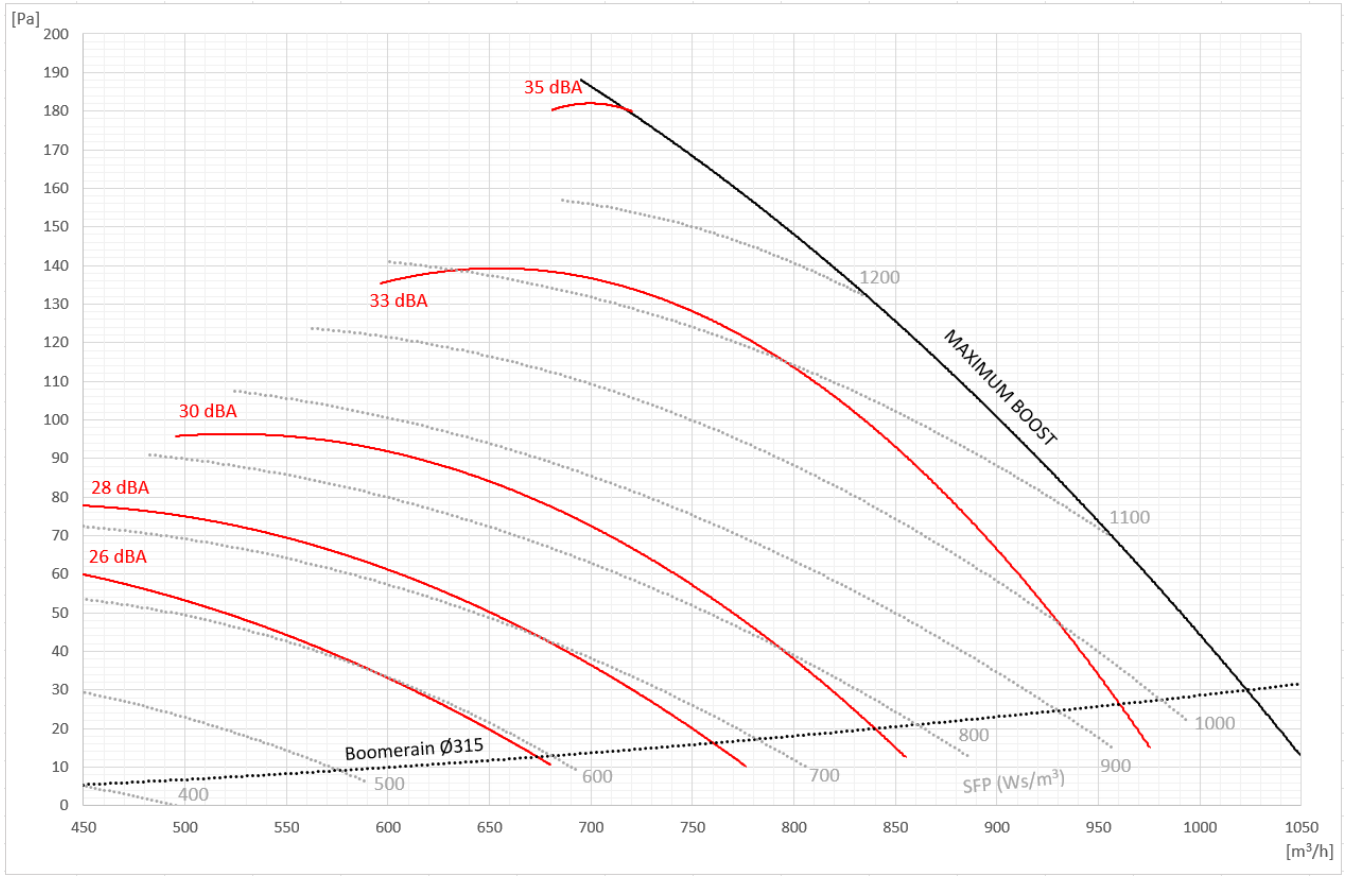
Performance chart with intake filter ePM_{10} 50% + extract filter ePM_{10} 50%



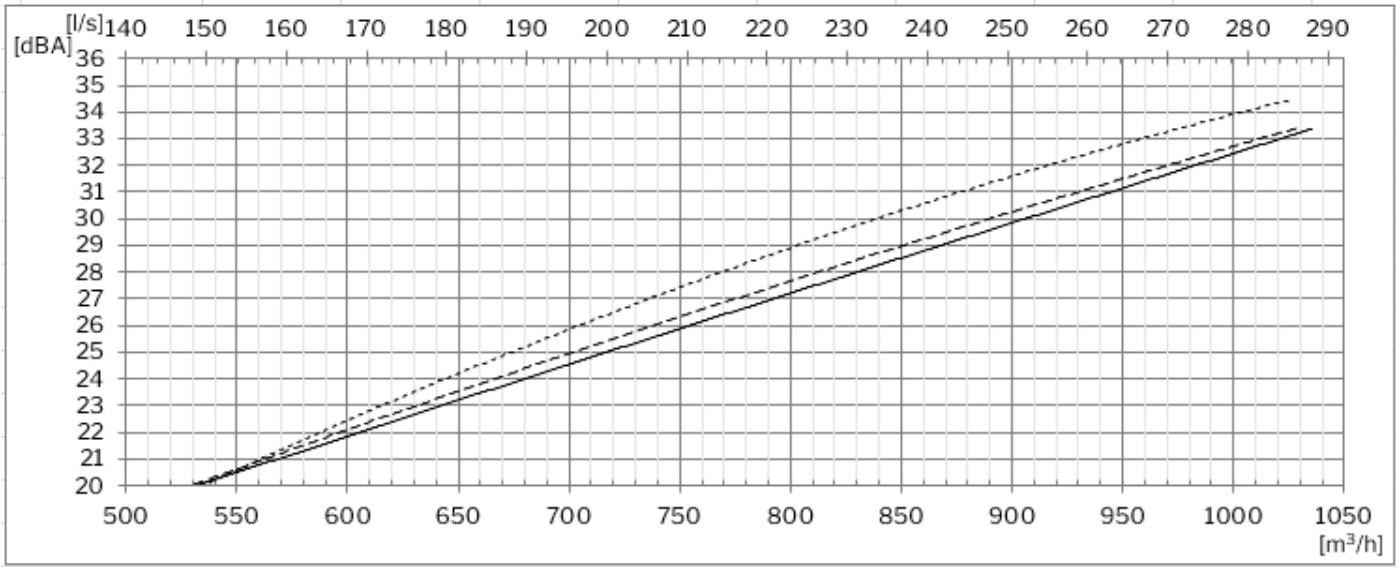
Performance chart with intake filter ePM_1 55% + extract filter ePM_{10} 50%



Performance chart with intake filter ePM_1 80% + extract filter ePM_{10} 50%



A-weighted sound pressure level L_{pA}[E]

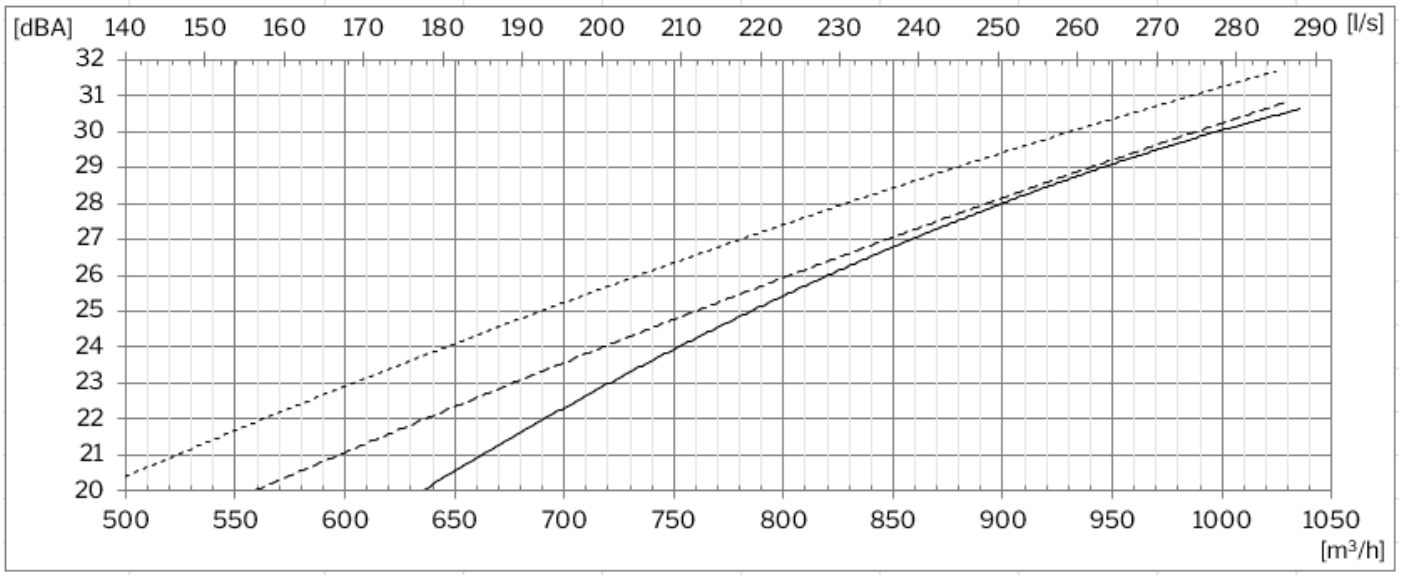


———— Intake filter ePM$_{10}$ 50% + extract filter ePM$_{10}$ 50%

– – – – – Intake filter ePM$_{1}$ 55% + extract filter ePM$_{10}$ 50%

- - - - - - Intake filter ePM$_{1}$ 80% + extract filter ePM$_{10}$ 50%

A-weighted sound pressure level L_{pA}[F]



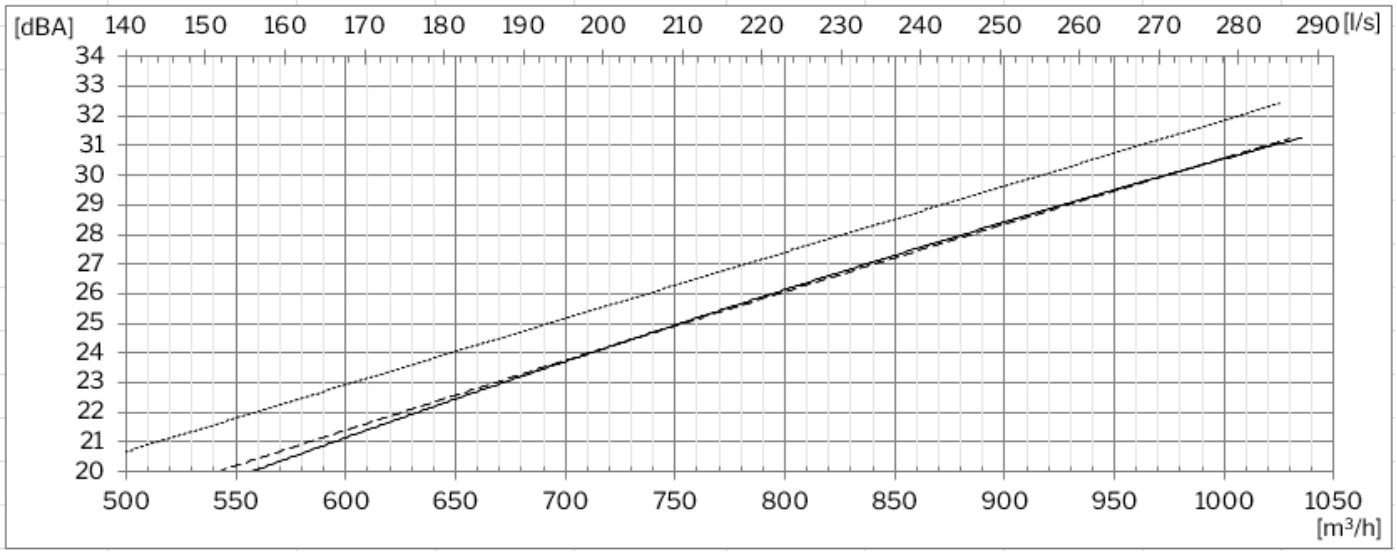
———— Intake filter ePM$_{10}$ 50% + extract filter ePM$_{10}$ 50%

– – – – – Intake filter ePM$_{1}$ 55% + extract filter ePM$_{10}$ 50%

- - - - - - Intake filter ePM$_{1}$ 80% + extract filter ePM$_{10}$ 50%

[E] The sound pressure level is measured at a height of 1.2 m at a horizontal distance of 1 m from the unit according to Airmaster reference situation.
[F] The sound pressure level is measured at a height of 1.5 m at a horizontal distance of 3 m from the unit.

A-weighted sound pressure level L_{pA}[G]



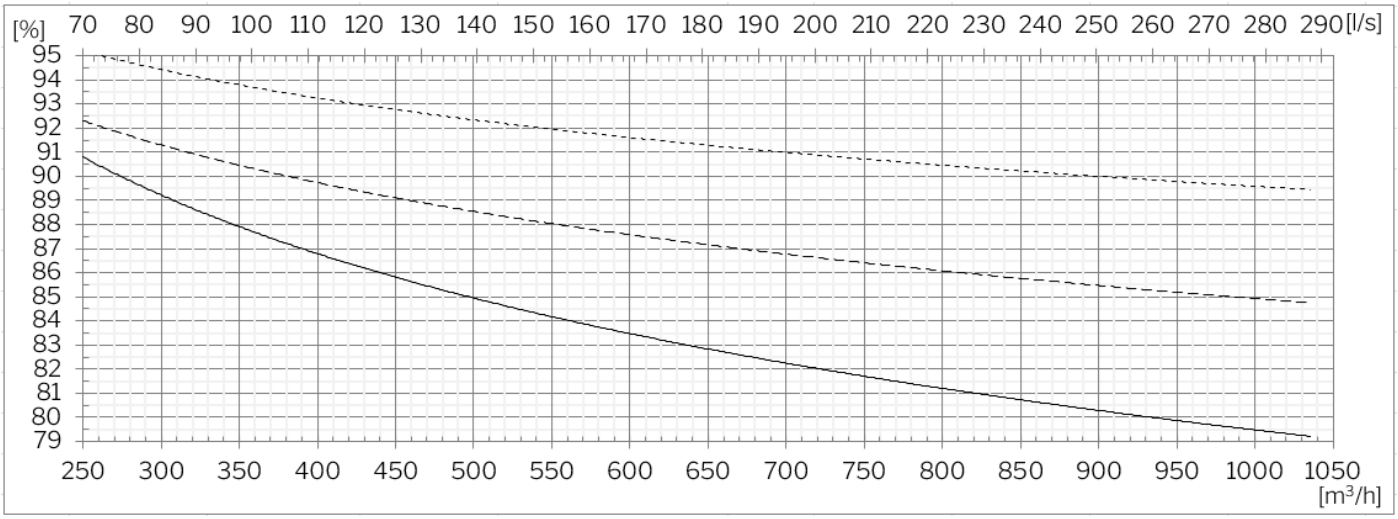
———— Intake filter ePM_{10} 50% + extract filter ePM_{10} 50%

– – – – – Intake filter ePM_1 55% + extract filter ePM_{10} 50%

- - - - - - Intake filter ePM_1 80% + extract filter ePM_{10} 50%

Low-frequency sound:
The sound pressure level measured with C-weighting does not exceed levels measured with A-weighting by more than 20 dB.

Temperature efficiency, heat exchanger



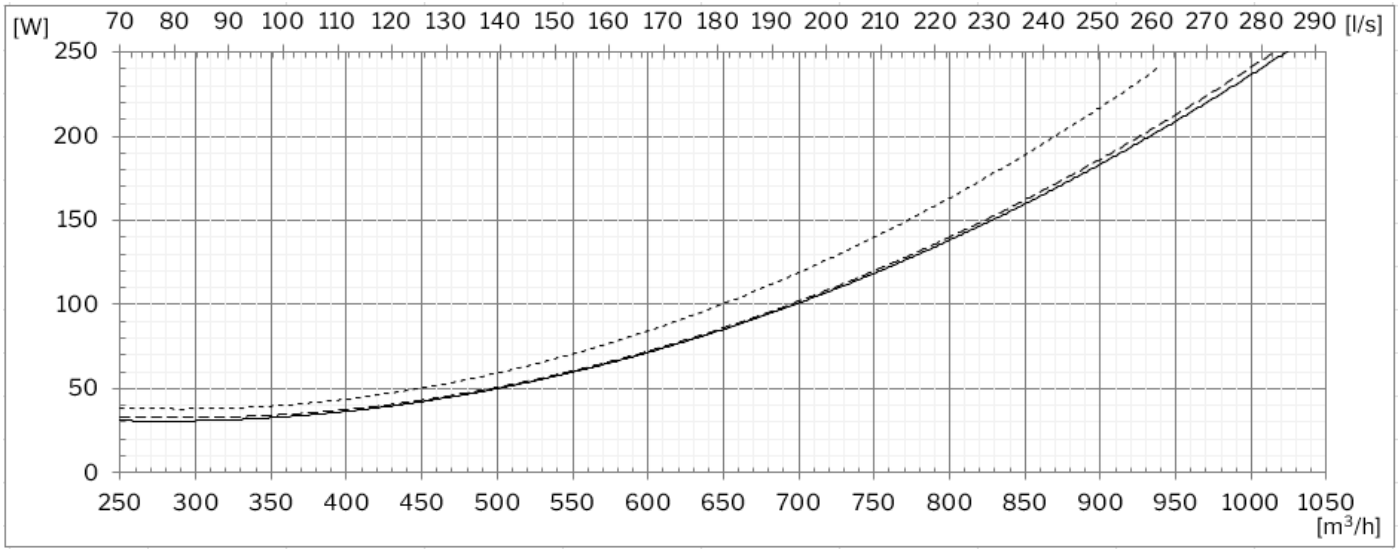
———— Outdoor: 5°C/72% RH ; Room: 25°C/28% RH **(EN308)**

– – – – – Outdoor: 5°C/90% RH ; Room: 25°C/60% RH

- - - - - - Outdoor: -5°C/90% RH ; Room: 25°C/60% RH

[G] The sound pressure level is measured in three positions. The result is based on power average.
Position 1: measured at a height of 1.2 m at a horizontal distance of 1 m from the unit.
Position 2: measured at a height of 1.5 m at a horizontal distance of 3 m from the unit.
Position 3: measured at a height of 1.5 m, far right corner in the test room, 1.5 m from each wall.

Power consumption

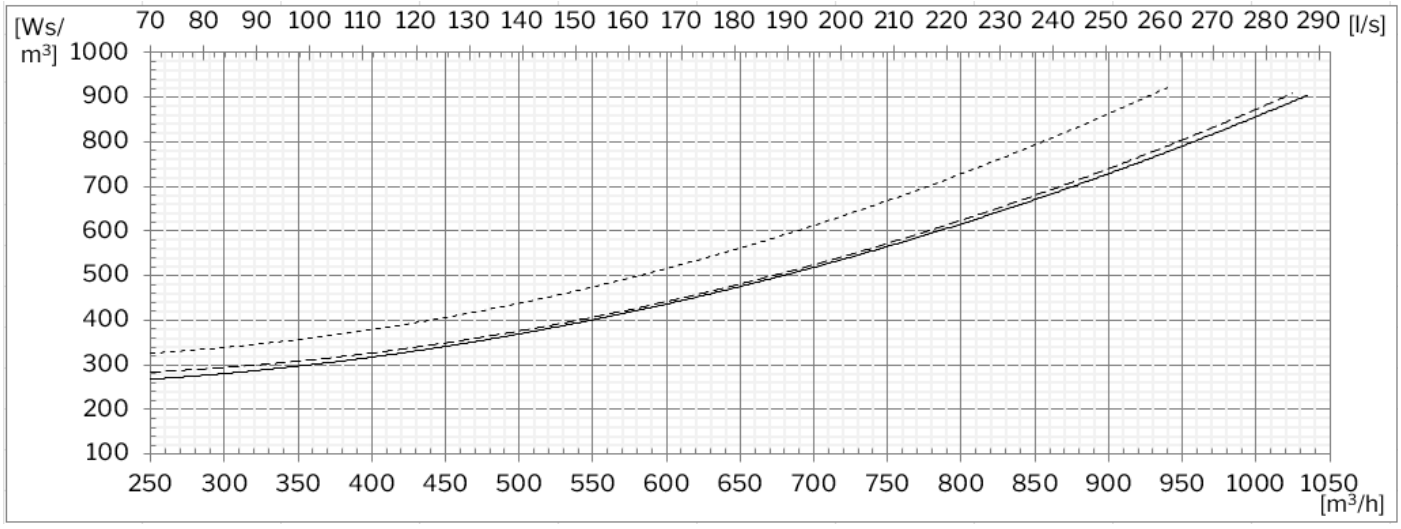


———— Intake filter ePM_{10} 50% + extract filter ePM_{10} 50%

– – – – – Intake filter ePM_{1} 55% + extract filter ePM_{10} 50%

- - - - - - Intake filter ePM_{1} 80% + extract filter ePM_{10} 50%

SFP[H]



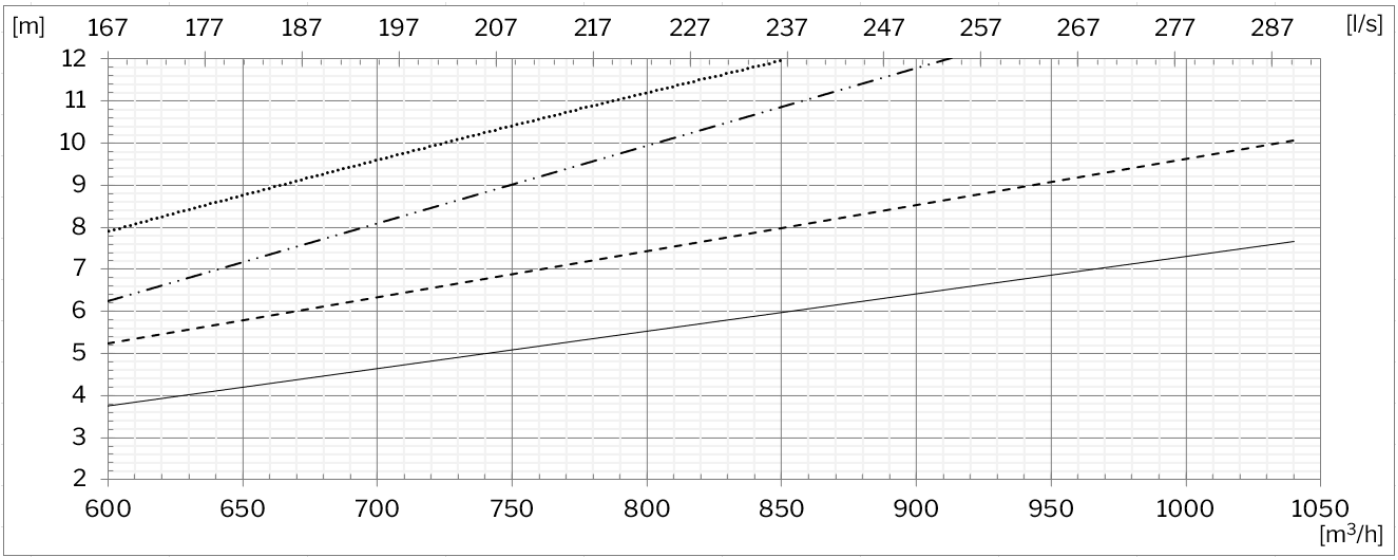
———— Intake filter ePM_{10} 50% + extract filter ePM_{10} 50%

– – – – – Intake filter ePM_{1} 55% + extract filter ePM_{10} 50%

- - - - - - Intake filter ePM_{1} 80% + extract filter ePM_{10} 50%

[H] The SFP calculation includes power consumption for operating fans but not controls, display panels, etc.

Throw (0.2 m/s)

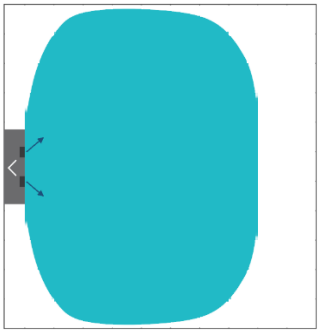
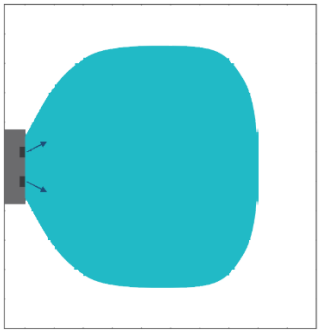
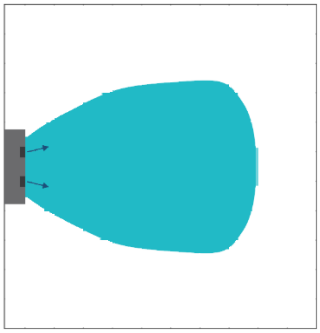
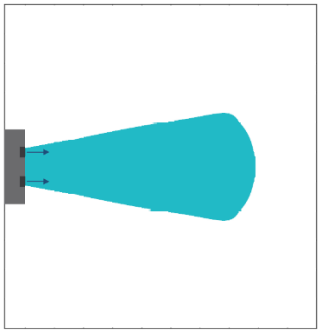


Diffuser standard factory configuration @ 0.2 m/s

Diffuser medium short throw configuration @ 0.2 m/s

Diffuser medium long throw configuration @ 0.2 m/s

Diffuser long throw configuration @ 0.2 m/s

Standard factory throw	Medium short throw	Medium long throw	Long throw
			

Flow pattern principles for the louver settings

Left inlet opening	Center of unit	Right inlet opening



Louver settings (standard factory throw). The dotted lines indicates the louver settings for “Long throw”

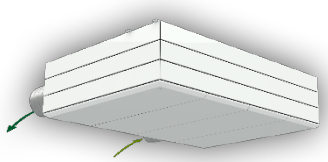
Standard factory throw									Medium short throw									Medium long throw									Long throw								
1	2	3	4	5	6	7	8	9	1	2	**3**	4	5	6	7	8	9	**1**	2	**3**	**4**	**5**	6	**7**	8	9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
20°		40°				55°			20°			40°			55°			0°		20°				40°			0°		20°				40°		

Louver numbers and angles (both inlet openings)

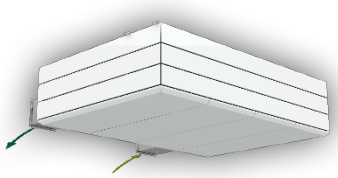
Version overview

Intake and exhaust location

HH



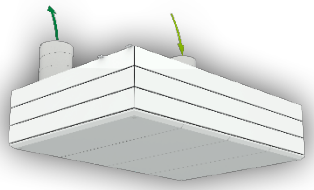
HREHRE



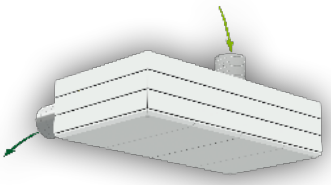
Intake

Exhaust

VV



HV



H: Horizontal

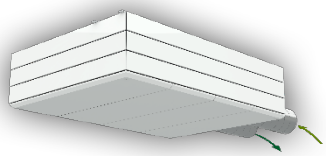
V: Vertical

S1: Side (towards the rear)

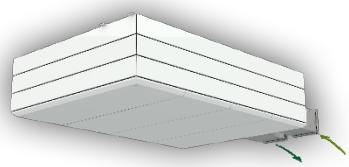
S2: Side (towards the front)

RE: Rectangular

S1S2

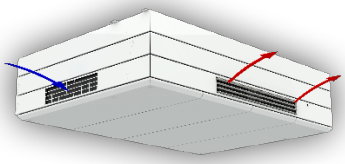


S1RES2RE

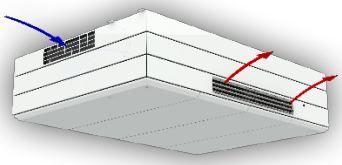


Inlet and extract location

BB



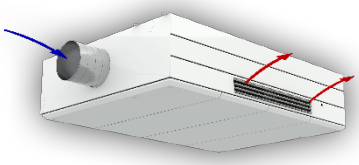
BT



Inlet

Extract

BDE



T: Top

B: Bottom

DE: Ducted Extract

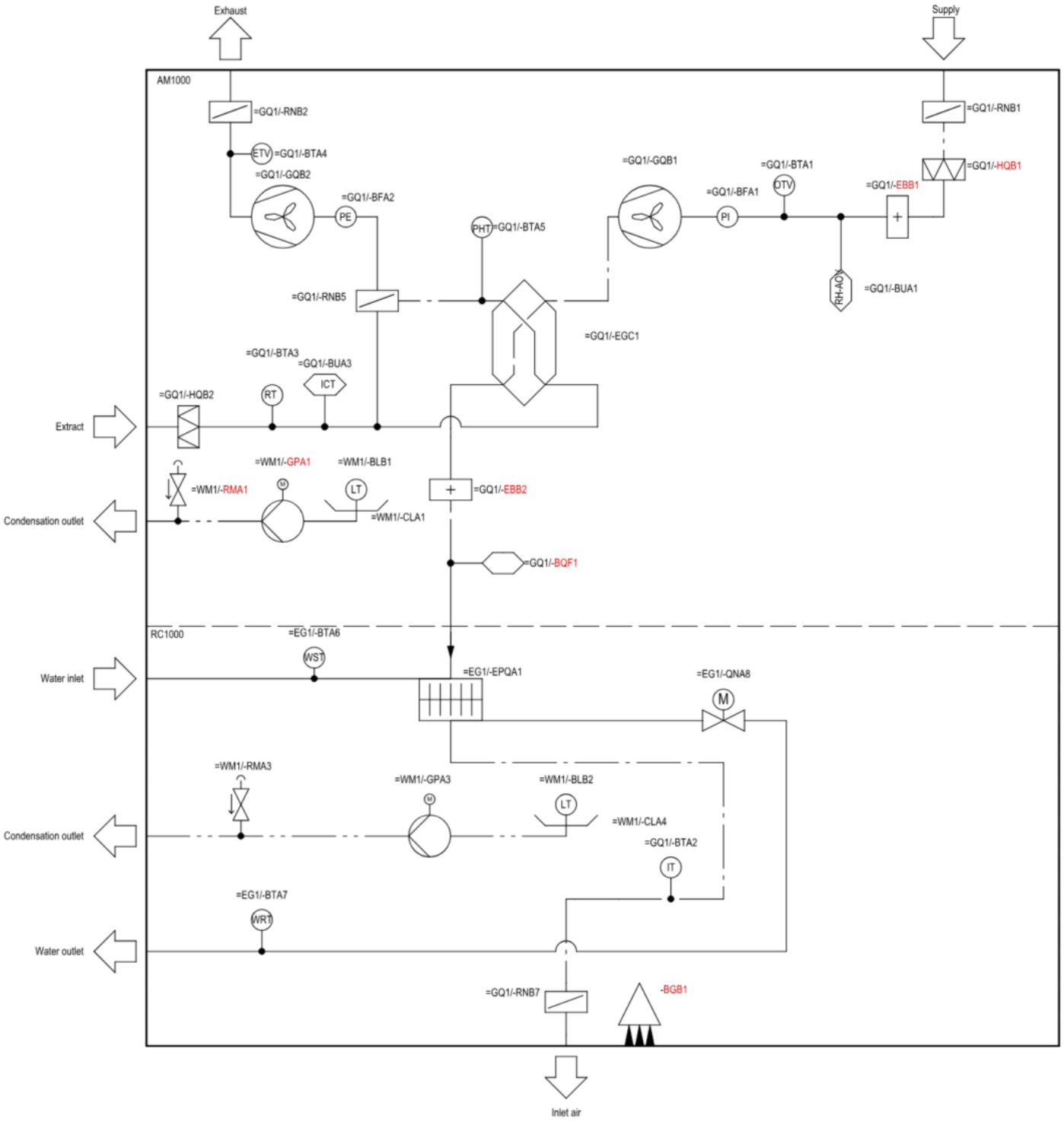
Standard and options

Counterflow heat exchanger	✓
Enthalpy counterflow heat exchanger (polymer membrane)	si
Combination counterflow heat exchanger (polymer membrane)	si
Motor-driven bypass	✓
Motor-driven intake air damper	✓
Motor-driven exhaust air damper	✓
Capacitive return for intake air and exhaust dampers	✓
Thermal Airflow	✓
Electrical preheating surface	opt.
Electrical comfort heating surface	opt.
Condensate pump in AM-unit (heat exchanger)	opt.
Condensate pump in RC module (RC coil)	✓
CO_2 sensor, integrated	opt.
Motion sensor, integrated	opt.
Motion sensor, wall-mounted	opt.
Hygrostat, wall-mounted	si
Smoke detector, integrated	opt.

Energy Meter, single-phase	opt.
Energy Meter, three-phase	opt.
Intake filter ePM_{10} 50%	opt.
Intake filter ePM_1 55%	opt.
Intake filter ePM_1 80%	si
Extract filter ePM_{10} 50%	✓
LED (operating mode indicator)	✓
Airlinq® Viva control panel	opt.
Airlinq® Orbit control panel	opt.
Airlinq® Online Stand-alone	opt.
Airlinq® Online	opt.
Airlinq® Online API	opt.
Airlinq® BMS	opt.
MODBUS® RTU RS485 module	opt.
BACnet™ /IP module	opt.
BACnet™ MS/TP module	opt.

✓: standard opt.: optional si: special item

Schematic diagramme



Component designation

=EG1	Heating-cooling system, water
=GQ1	Ventilation system
=WM1	Condensate system

=BFA	Flow meter	=EBB	Electrical heating surface (optional)	=QNA	Valve (QNA8=control valve)
=BGB	PIR, motion sensor (optional)	=EGC	Heat exchanger	=RMA	Air vent with check valve (RMA1=optional)
=BLB	Level sensor	=EPQA	Heating-cooling surface	=RNB	Damper (RNB7=inlet diffusor)
=BQF	Smoke detector (optional)	=GPA	Condensate pump (GPA1=optional)		
=BTA	Temperature sensor	=GQB	Fan		
=BUA	Humidity sensor	=HQB	Filter (HQB1=optional)		
=CLA	Condensate tray				

Annex A (heating capacity)

Filters	Airflow	Unit	Temperature set (T_f/T_r), water (°C/°C)						
			35/30	40/35	45/35	45/40	50/40	50/45	55/45
ePM_{10} 50% + ePM_{10} 50%	905 m^3/h	**kW**	**3.71**	**5.02**	**5.21**	**6.28**	**6.62**	**7.53**	**7.94**
		l/h	685	925	480	1156	609	1384	729
		m/s	0.47	0.63	0.33	0.79	0.42	0.95	0.50
		Coil, kPa	5.2	8.6	2.7	12.4	4.0	16.6	5.3
		Valve, kPa	7.4	13.6	3.7	21.2	5.9	30.4	8.4
	1020 m^3/h	**kW**	**4.08**	**5.51**	**5.75**	**6.90**	**7.27**	**8.27**	**8.72**
		l/h	754	1016	529	1271	669	1521	801
		m/s	0.52	0.70	0.36	0.87	0.46	1.04	0.55
		Coil, kPa	6.1	10.1	3.2	14.6	4.7	19.6	6.3
		Valve, kPa	9.0	16.4	4.4	25.6	7.1	36.7	10.2
	1035 m^3/h	**kW**	**4.13**	**5.57**	**5.82**	**6.98**	**7.35**	**8.37**	**8.82**
		l/h	762	1028	536	1285	677	1539	810
		m/s	0.52	0.70	0.37	0.88	0.46	1.05	0.56
		Coil, kPa	6.3	10.3	3.2	14.9	4.8	20.0	6.4
		Valve, kPa	9.2	16.8	4.6	26.2	7.3	37.6	10.4
ePM_1 55% + ePM_{10} 50%	880 m^3/h	**kW**	**3.63**	**4.91**	**5.09**	**6.14**	**6.47**	**7.36**	**7.76**
		l/h	670	904	469	1131	595	1354	713
		m/s	0.46	0.62	0.32	0.77	0.41	0.93	0.49
		Coil, kPa	5.0	8.2	2.6	11.9	3.8	16.0	5.1
		Valve, kPa	7.1	13.0	3.5	20.3	5.6	29.1	8.1
	1010 m^3/h	**kW**	**4.05**	**5.47**	**5.70**	**6.85**	**7.22**	**8.21**	**8.65**
		l/h	748	1008	525	1261	664	1510	795
		m/s	0.51	0.69	0.36	0.86	0.45	1.03	0.54
		Coil, kPa	6.1	10.0	3.1	14.4	4.6	19.4	6.2
		Valve, kPa	8.9	16.1	4.4	25.2	7.0	36.2	10.0
	1030 m^3/h	**kW**	**4.11**	**5.55**	**5.79**	**6.95**	**7.33**	**8.34**	**8.78**
		l/h	759	1024	534	1280	674	1533	807
		m/s	0.52	0.70	0.37	0.88	0.46	1.05	0.55
		Coil, kPa	6.2	10.3	3.2	14.8	4.7	19.9	6.4
		Valve, kPa	9.1	16.6	4.5	26.0	7.2	37.3	10.3
ePM_1 80% + ePM_{10} 50%	840 m^3/h	**kW**	**3.49**	**4.73**	**4.90**	**5.92**	**6.23**	**7.09**	**7.48**
		l/h	645	871	451	1089	574	1304	688
		m/s	0.44	0.60	0.31	0.75	0.39	0.89	0.47
		Coil, kPa	4.7	7.7	2.4	11.2	3.6	15.0	4.8
		Valve, kPa	6.6	12.0	3.2	18.8	5.2	27.0	7.5
	960 m^3/h	**kW**	**3.89**	**5.26**	**5.47**	**6.58**	**6.93**	**7.89**	**8.31**
		l/h	718	969	504	1211	638	1451	764
		m/s	0.49	0.66	0.35	0.83	0.44	0.99	0.52
		Coil, kPa	5.7	9.3	2.9	13.4	4.3	18.1	5.8
		Valve, kPa	8.2	14.9	4.0	23.3	6.5	33.4	9.3
	1025 m^3/h	**kW**	**4.10**	**5.53**	**5.77**	**6.93**	**7.30**	**8.31**	**8.75**
		l/h	757	1020	532	1275	672	1527	804
		m/s	0.52	0.70	0.36	0.87	0.46	1.05	0.55
		Coil, kPa	6.2	10.2	3.2	14.7	4.7	19.8	6.3
		Valve, kPa	9.1	16.5	4.5	25.8	7.2	37.0	10.3

Temperature after heat recovery unit = 16°C ; Relative humidity after heat recovery unit = 10% ;
Fluid is water with 30% ethylene glycol

Heating capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]

Annex B (cooling capacity)

Filters	Airflow	Unit	Temperature set (T_f/T_r), water (°C/°C)						
			6/12	7/12	10/15	10/16	13/18	14/18	16/19
ePM_{10} 50% + ePM_{10} 50%	905 m^3/h	**kW***	**7.76**	**8.00**	**6.18**	**4.99**	**3.79**	**4.28**	**3.70**
		kW**	3.53	3.64	2.89	2.38	1.91	2.16	1.98
		l/h	1205	1489	1149	774	706	995	1145
		m/s	0.83	1.02	0.79	0.53	0.48	0.68	0.78
		Coil, kPa	16.6	24.1	14.9	7.4	6.2	11.2	14.2
		Valve, kPa	23.0	35.2	21.0	9.5	7.9	15.7	20.8
	1020 m^3/h	**kW***	**8.50**	**8.74**	**6.77**	**5.60**	**4.29**	**4.68**	**4.03**
		kW**	3.88	3.99	3.18	2.67	2.16	2.37	2.17
		l/h	1321	1628	1261	870	798	1089	1248
		m/s	0.90	1.12	0.86	0.60	0.55	0.75	0.86
		Coil, kPa	19.6	28.2	17.5	9.1	7.6	13.2	16.6
		Valve, kPa	27.7	42.1	25.2	12.0	10.1	18.8	24.7
	1035 m^3/h	**kW***	**8.60**	**8.83**	**6.84**	**5.68**	**4.35**	**4.74**	**4.07**
		kW**	3.92	4.03	3.21	2.71	2.19	2.40	2.19
		l/h	1335	1645	1274	881	809	1100	1261
		m/s	0.91	1.13	0.87	0.60	0.55	0.75	0.86
		Coil, kPa	20.0	28.7	17.8	9.3	7.8	13.4	16.9
		Valve, kPa	28.3	42.9	25.8	12.3	10.4	19.2	25.2
ePM_1 55% + ePM_{10} 50%	880 m^3/h	**kW***	**7.59**	**7.83**	**6.05**	**4.84**	**3.67**	**4.19**	**3.62**
		kW**	3.45	3.57	2.83	2.30	1.85	2.11	1.94
		l/h	1178	1460	1125	750	682	973	1121
		m/s	0.81	1.00	0.77	0.51	0.47	0.67	0.77
		Coil, kPa	16.0	23.3	14.3	7.0	5.8	10.8	13.7
		Valve, kPa	22.0	33.8	20.1	8.9	7.4	15.0	19.9
	1010 m^3/h	**kW***	**8.44**	**8.68**	**6.72**	**5.56**	**4.25**	**4.65**	**4.00**
		kW**	3.85	3.96	3.15	2.65	2.14	2.36	2.15
		l/h	1311	1616	1251	862	791	1081	1239
		m/s	0.90	1.11	0.86	0.59	0.54	0.74	0.85
		Coil, kPa	19.3	27.8	17.3	8.9	7.5	13.0	16.3
		Valve, kPa	27.3	41.4	24.8	11.8	9.9	18.5	24.4
	1030 m^3/h	**kW***	**8.57**	**8.80**	**6.82**	**5.65**	**4.33**	**4.72**	**4.06**
		kW**	3.90	4.02	3.20	2.69	2.18	2.39	2.18
		l/h	1330	1639	1270	877	806	1096	1257
		m/s	0.91	1.12	0.87	0.60	0.55	0.75	0.86
		Coil, kPa	19.8	28.5	17.8	9.2	7.8	13.3	16.8
		Valve, kPa	28.1	42.6	25.6	12.2	10.3	19.1	25.1
ePM_1 80% + ePM_{10} 50%	840 m^3/h	**kW***	**7.31**	**7.56**	**5.83**	**3.49**	**2.62**	**4.04**	**3.50**
		kW**	3.32	3.44	2.73	1.70	1.36	2.03	1.87
		l/h	1135	1409	1084	542	488	938	1083
		m/s	0.78	0.97	0.74	0.37	0.33	0.64	0.74
		Coil, kPa	15.0	21.9	13.4	3.9	3.2	10.1	12.9
		Valve, kPa	20.4	31.5	18.6	4.7	3.8	14.0	18.6
	960 m^3/h	**kW***	**8.12**	**8.36**	**6.46**	**5.29**	**4.04**	**4.48**	**3.86**
		kW**	3.70	3.81	3.03	2.52	2.04	2.26	2.07
		l/h	1260	1557	1202	822	752	1040	1195
		m/s	0.86	1.07	0.82	0.56	0.52	0.71	0.82
		Coil, kPa	18.0	26.0	16.1	8.2	6.9	12.1	15.3
		Valve, kPa	25.2	38.5	22.9	10.7	9.0	17.2	22.7
	1025 m^3/h	**kW***	**8.54**	**8.77**	**6.79**	**5.63**	**4.31**	**4.70**	**4.04**
		kW**	3.89	4.00	3.19	2.68	2.17	2.38	2.18
		l/h	1325	1634	1265	873	801	1093	1253
		m/s	0.91	1.12	0.87	0.60	0.55	0.75	0.86
		Coil, kPa	19.7	28.4	17.6	9.1	7.7	13.2	16.7
		Valve, kPa	27.9	42.4	25.4	12.1	10.2	19.0	24.9

Outdoor temperature = 28°C ; Relative humidity, outdoor = 70% ; Fluid is water with 30% ethylene glycol

* Total cooling capacity [kW] ; ** Sensible cooling capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]

Annex B (cooling capacity) - continued

Filters	Airflow	Unit	Temperature set (T_f/T_r), water (°C/°C)						
			6/12	7/12	10/15	13/17	14/17	14/18	16/19
ePM_{10} 50% + ePM_{10} 50%	905 m³/h	**kW***	**3.56**	**4.83**	**2.36**	**1.90**	**2.01**	**1.71**	**1.47**
		kW**	2.20	2.91	1.63	1.52	1.67	1.48	1.47
		l/h	553	900	439	441	623	397	456
		m/s	0.38	0.62	0.30	0.30	0.43	0.27	0.31
		Coil, kPa	4.2	9.9	2.7	2.7	4.9	2.2	2.8
		Valve, kPa	4.9	12.9	3.1	3.1	6.2	2.5	3.3
	1020 m³/h	**kW***	**3.72**	**5.38**	**2.48**	**2.03**	**2.37**	**1.82**	**1.58**
		kW**	2.32	3.24	1.74	1.64	1.93	1.60	1.58
		l/h	578	1003	461	472	734	424	489
		m/s	0.40	0.69	0.32	0.32	0.50	0.29	0.34
		Coil, kPa	4.6	12.0	3.0	3.0	6.6	2.5	3.2
		Valve, kPa	5.3	16.0	3.4	3.5	8.6	2.9	3.8
	1035 m³/h	**kW***	**3.74**	**5.44**	**2.50**	**2.05**	**2.40**	**1.84**	**1.59**
		kW**	2.33	3.29	1.75	1.66	1.96	1.61	1.59
		l/h	581	1015	465	476	744	427	493
		m/s	0.40	0.70	0.32	0.33	0.51	0.29	0.34
		Coil, kPa	4.6	12.3	3.0	3.1	6.8	2.5	3.2
		Valve, kPa	5.4	16.3	3.4	3.6	8.8	2.9	3.9
ePM_1 55% + ePM_{10} 50%	880 m³/h	**kW***	**3.52**	**4.70**	**2.33**	**1.87**	**1.88**	**1.68**	**1.45**
		kW**	2.17	2.83	1.61	1.49	1.58	1.45	1.45
		l/h	547	876	434	434	584	390	449
		m/s	0.37	0.60	0.30	0.30	0.40	0.27	0.31
		Coil, kPa	4.1	9.5	2.7	2.6	4.4	2.2	2.7
		Valve, kPa	4.7	12.2	3.0	3.0	5.4	2.4	3.2
	1010 m³/h	**kW***	**3.70**	**5.33**	**2.47**	**2.02**	**2.35**	**1.81**	**1.57**
		kW**	2.31	3.22	1.72	1.63	1.91	1.59	1.57
		l/h	576	994	459	469	728	422	486
		m/s	0.39	0.68	0.31	0.32	0.50	0.29	0.33
		Coil, kPa	4.5	11.8	3.0	3.0	6.5	2.5	3.1
		Valve, kPa	5.3	15.7	3.3	3.5	8.4	2.8	3.7
	1030 m³/h	**kW***	**3.73**	**5.42**	**2.49**	**2.04**	**2.39**	**1.83**	**1.59**
		kW**	2.33	3.27	1.75	1.65	1.95	1.61	1.59
		l/h	580	1011	464	475	741	426	491
		m/s	0.40	0.69	0.32	0.33	0.51	0.29	0.34
		Coil, kPa	4.6	12.2	3.0	3.1	6.7	2.5	3.2
		Valve, kPa	5.3	16.2	3.4	3.6	8.7	2.9	3.8
ePM_1 80% + ePM_{10} 50%	840 m³/h	**kW***	**3.46**	**4.47**	**2.30**	**1.82**	**1.78**	**1.63**	**1.41**
		kW**	2.13	2.70	1.58	1.45	1.50	1.41	1.41
		l/h	537	835	428	422	552	380	437
		m/s	0.37	0.57	0.29	0.29	0.38	0.26	0.30
		Coil, kPa	4.0	8.7	2.6	2.5	4.0	2.1	2.6
		Valve, kPa	4.6	11.1	2.9	2.8	4.8	2.3	3.0
	960 m³/h	**kW***	**3.64**	**5.10**	**2.40**	**1.96**	**2.24**	**1.76**	**1.53**
		kW**	2.26	3.07	1.68	1.58	1.83	1.54	1.53
		l/h	565	951	448	456	695	410	472
		m/s	0.39	0.65	0.31	0.31	0.48	0.28	0.32
		Coil, kPa	4.4	10.9	2.8	2.9	6.0	2.4	3.0
		Valve, kPa	5.1	14.4	3.2	3.3	7.7	2.7	3.5
	1025 m³/h	**kW***	**3.72**	**5.40**	**2.49**	**2.04**	**2.38**	**1.83**	**1.58**
		kW**	2.32	3.26	1.74	1.65	1.94	1.60	1.58
		l/h	579	1007	463	473	738	425	490
		m/s	0.40	0.69	0.32	0.32	0.51	0.29	0.34
		Coil, kPa	4.6	12.1	3.0	3.1	6.6	2.5	3.2
		Valve, kPa	5.3	16.1	3.4	3.6	8.6	2.9	3.8

Outdoor temperature = 26°C ; Relative humidity, outdoor = 60% ; Fluid is water with 30% ethylene glycol

* Total cooling capacity [kW] ; ** Sensible cooling capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]

Annex B (cooling capacity) - continued

Filters	Airflow	Unit	Temperature set (T_i/T_r), water (°C/°C)						
			6/11	6/12	7/12	10/15	13/18	14/18	16/19
ePM$_{10}$ 50% + ePM$_{10}$ 50%	905 m^3/h	**kW***	**5.85**	**3.87**	**5.23**	**3.27**	**2.69**	**3.10**	**2.94**
		kW**	4.35	3.11	4.02	3.00	2.69	3.10	2.94
		l/h	1089	602	975	609	501	721	910
		m/s	0.75	0.41	0.67	0.42	0.34	0.49	0.62
		Coil, kPa	14.0	4.9	11.4	4.9	3.4	6.4	9.5
		Valve, kPa	18.8	5.8	15.1	5.9	4.0	8.2	13.1
	1020 m^3/h	**kW***	**6.44**	**4.15**	**5.79**	**4.08**	**2.89**	**3.44**	**3.25**
		kW**	4.81	3.38	4.47	3.62	2.89	3.44	3.25
		l/h	1199	645	1079	760	537	799	1004
		m/s	0.82	0.44	0.74	0.52	0.37	0.55	0.69
		Coil, kPa	16.6	5.5	13.7	7.2	3.8	7.6	11.3
		Valve, kPa	22.8	6.6	18.5	9.2	4.6	10.1	16.0
	1035 m^3/h	**kW***	**6.52**	**4.19**	**5.86**	**4.14**	**2.91**	**3.49**	**3.28**
		kW**	4.87	3.41	4.52	3.66	2.91	3.49	3.28
		l/h	1214	651	1092	771	541	810	1016
		m/s	0.83	0.45	0.75	0.53	0.37	0.55	0.70
		Coil, kPa	17.0	5.6	14.0	7.4	3.9	7.8	11.5
		Valve, kPa	23.4	6.7	18.9	9.4	4.6	10.4	16.4
ePM$_1$ 55% + ePM$_{10}$ 50%	880 m^3/h	**kW***	**5.71**	**3.80**	**5.10**	**3.21**	**2.65**	**3.03**	**2.88**
		kW**	4.24	3.05	3.92	2.94	2.65	3.03	2.88
		l/h	1064	591	951	598	493	703	889
		m/s	0.73	0.41	0.65	0.41	0.34	0.48	0.61
		Coil, kPa	13.4	4.8	10.9	4.7	3.3	6.1	9.1
		Valve, kPa	18.0	5.5	14.4	5.7	3.9	7.8	12.5
	1010 m^3/h	**kW***	**6.39**	**4.13**	**5.74**	**4.05**	**2.87**	**3.42**	**3.22**
		kW**	4.77	3.35	4.43	3.58	2.87	3.42	3.22
		l/h	1191	642	1071	754	534	793	996
		m/s	0.82	0.44	0.73	0.52	0.37	0.54	0.68
		Coil, kPa	16.4	5.5	13.5	7.1	3.8	7.5	11.1
		Valve, kPa	22.5	6.5	18.2	9.0	4.5	10.0	15.7
	1030 m^3/h	**kW***	**6.49**	**4.18**	**5.83**	**4.12**	**2.90**	**3.47**	**3.27**
		kW**	4.85	3.40	4.50	3.65	2.90	3.47	3.27
		l/h	1209	649	1088	767	540	806	1012
		m/s	0.83	0.44	0.75	0.53	0.37	0.55	0.69
		Coil, kPa	16.8	5.6	13.9	7.3	3.8	7.7	11.4
		Valve, kPa	23.2	6.7	18.8	9.3	4.6	10.3	16.3
ePM$_1$ 80% + ePM$_{10}$ 50%	840 m^3/h	**kW***	**5.49**	**3.70**	**4.89**	**3.12**	**2.58**	**2.90**	**2.77**
		kW**	4.07	2.95	3.75	2.85	2.58	2.90	2.77
		l/h	1023	575	911	581	479	674	856
		m/s	0.70	0.39	0.62	0.40	0.33	0.46	0.59
		Coil, kPa	12.5	4.5	10.1	4.5	3.1	5.6	8.5
		Valve, kPa	16.6	5.2	13.2	5.4	3.6	7.2	11.6
	960 m^3/h	**kW***	**6.13**	**4.01**	**5.50**	**3.57**	**2.79**	**3.27**	**3.09**
		kW**	4.57	3.24	4.24	3.24	2.79	3.27	3.09
		l/h	1143	623	1026	664	519	759	956
		m/s	0.78	0.43	0.70	0.46	0.36	0.52	0.65
		Coil, kPa	15.2	5.2	12.5	5.7	3.6	7.0	10.3
		Valve, kPa	20.7	6.2	16.7	7.0	4.3	9.1	14.5
	1025 m^3/h	**kW***	**6.46**	**4.16**	**5.81**	**4.10**	**2.90**	**3.46**	**3.26**
		kW**	4.83	3.39	4.48	3.63	2.90	3.46	3.26
		l/h	1205	647	1084	764	539	803	1008
		m/s	0.83	0.44	0.74	0.52	0.37	0.55	0.69
		Coil, kPa	16.7	5.6	13.8	7.2	3.8	7.7	11.4
		Valve, kPa	23.0	6.6	18.6	9.3	4.6	10.2	16.1

Outdoor temperature = 31°C ; Relative humidity, outdoor = 40% ; Fluid is water with 30% ethylene glycol

* Total cooling capacity [kW] ; ** Sensible cooling capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]

Annex B (cooling capacity) - continued

Filters	Airflow	Unit	Temperature set (T_f/T_r), water (°C/°C)						
			6/11	6/12	7/12	10/15	13/18	14/18	16/19
ePM_{10} 50% + ePM_{10} 50%	905 m^3/h	**kW***	**6.54**	**5.38**	**5.96**	**3.86**	**2.88**	**3.37**	**3.19**
		kW**	4.66	3.97	4.36	3.24	2.88	3.37	3.19
		l/h	1220	836	1110	719	536	783	987
		m/s	0.84	0.57	0.76	0.49	0.37	0.54	0.68
		Coil, kPa	17.1	8.8	14.3	6.5	3.8	7.4	10.9
		Valve, kPa	23.6	11.1	19.6	8.2	4.6	9.7	15.5
	1020 m^3/h	**kW***	**7.18**	**6.07**	**6.55**	**4.39**	**3.43**	**3.73**	**3.52**
		kW**	5.14	4.48	4.82	3.66	3.43	3.73	3.52
		l/h	1338	944	1220	818	638	867	1088
		m/s	0.92	0.65	0.84	0.56	0.44	0.59	0.75
		Coil, kPa	20.1	10.8	16.9	8.2	5.2	8.8	13.0
		Valve, kPa	28.4	14.1	23.6	10.6	6.5	11.9	18.8
	1035 m^3/h	**kW***	**7.26**	**6.15**	**6.62**	**4.45**	**3.63**	**3.78**	**3.56**
		kW**	5.20	4.54	4.87	3.71	3.63	3.78	3.56
		l/h	1353	957	1233	828	675	878	1101
		m/s	0.93	0.66	0.84	0.57	0.46	0.60	0.75
		Coil, kPa	20.5	11.1	17.3	8.4	5.7	9.0	13.3
		Valve, kPa	29.1	14.5	24.1	10.9	7.2	12.2	19.2
ePM_1 55% + ePM_{10} 50%	880 m^3/h	**kW***	**6.40**	**4.06**	**5.82**	**3.58**	**2.84**	**3.29**	**3.12**
		kW**	4.55	3.13	4.26	3.06	2.84	3.29	3.12
		l/h	1193	631	1084	667	527	764	965
		m/s	0.82	0.43	0.74	0.46	0.36	0.52	0.66
		Coil, kPa	16.4	5.3	13.8	5.7	3.7	7.0	10.5
		Valve, kPa	22.6	6.3	18.6	7.1	4.4	9.3	14.8
	1010 m^3/h	**kW***	**7.12**	**6.02**	**6.50**	**4.35**	**3.29**	**3.70**	**3.49**
		kW**	5.09	4.44	4.78	3.63	3.29	3.70	3.49
		l/h	1328	935	1211	811	612	861	1079
		m/s	0.91	0.64	0.83	0.56	0.42	0.59	0.74
		Coil, kPa	19.8	10.7	16.7	8.0	4.8	8.7	12.8
		Valve, kPa	28.0	13.9	23.3	10.4	5.9	11.8	18.5
	1030 m^3/h	**kW***	**7.23**	**6.13**	**6.60**	**4.43**	**3.59**	**3.76**	**3.54**
		kW**	5.18	4.52	4.86	3.70	3.59	3.76	3.54
		l/h	1348	952	1229	825	667	874	1096
		m/s	0.92	0.65	0.84	0.57	0.46	0.60	0.75
		Coil, kPa	20.4	11.0	17.2	8.3	5.6	8.9	13.2
		Valve, kPa	28.8	14.4	24.0	10.8	7.1	12.1	19.1
ePM_1 80% + ePM_{10} 50%	840 m^3/h	**kW***	**6.16**	**3.99**	**5.60**	**3.33**	**2.76**	**3.16**	**3.00**
		kW**	4.37	3.06	4.09	2.87	2.76	3.16	3.00
		l/h	1148	620	1044	620	513	733	928
		m/s	0.79	0.43	0.72	0.43	0.35	0.50	0.64
		Coil, kPa	15.4	5.2	12.9	5.0	3.5	6.6	9.8
		Valve, kPa	20.9	6.1	17.3	6.1	4.2	8.5	13.7
	960 m^3/h	**kW***	**6.85**	**5.73**	**6.24**	**4.16**	**3.00**	**3.55**	**3.35**
		kW**	4.89	4.22	4.58	3.47	3.00	3.55	3.35
		l/h	1276	891	1163	775	558	824	1036
		m/s	0.87	0.61	0.80	0.53	0.38	0.56	0.71
		Coil, kPa	18.5	9.8	15.6	7.4	4.1	8.1	11.9
		Valve, kPa	25.8	12.6	21.5	9.5	4.9	10.8	17.0
	1025 m^3/h	**kW***	**7.20**	**6.10**	**6.57**	**4.41**	**3.51**	**3.75**	**3.53**
		kW**	5.16	4.50	4.84	3.68	3.51	3.75	3.53
		l/h	1343	948	1224	821	653	870	1092
		m/s	0.92	0.65	0.84	0.56	0.45	0.60	0.75
		Coil, kPa	20.2	10.9	17.1	8.2	5.4	8.9	13.1
		Valve, kPa	28.6	14.3	23.8	10.7	6.8	12.0	18.9

Outdoor temperature = 32°C ; Relative humidity, outdoor = 40% ; Fluid is water with 30% ethylene glycol

* Total cooling capacity [kW] ; ** Sensible cooling capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]

Annex B (cooling capacity) - continued

Filters	Airflow	Unit	Temperature set (T_f/T_r), water (°C/°C)						
			6/12	7/12	10/15	10/16	13/18	14/18	16/19
ePM_{10} 50% + ePM_{10} 50%	905 m³/h	**kW***	**7.82**	**8.06**	**6.26**	**5.12**	**4.05**	**4.39**	**3.91**
		kW**	5.05	5.21	4.36	3.70	3.24	3.54	3.47
		l/h	1214	1501	1164	794	753	1019	1210
		m/s	0.83	1.03	0.80	0.54	0.52	0.70	0.83
		Coil, kPa	16.9	24.4	15.2	7.7	6.9	11.7	15.7
		Valve, kPa	23.4	35.8	21.5	10.0	9.0	16.5	23.2
	1020 m³/h	**kW***	**8.57**	**8.80**	**6.85**	**5.73**	**4.49**	**4.80**	**4.31**
		kW**	5.56	5.73	4.81	4.15	3.60	3.89	3.85
		l/h	1331	1639	1275	889	834	1115	1332
		m/s	0.91	1.12	0.87	0.61	0.57	0.76	0.91
		Coil, kPa	19.9	28.5	17.9	9.4	8.3	13.7	18.6
		Valve, kPa	28.1	42.6	25.8	12.5	11.0	19.7	28.2
	1035 m³/h	**kW***	**8.67**	**8.89**	**6.93**	**5.80**	**4.54**	**4.85**	**4.36**
		kW**	5.63	5.79	4.86	4.20	3.64	3.94	3.89
		l/h	1346	1657	1288	901	845	1127	1348
		m/s	0.92	1.13	0.88	0.62	0.58	0.77	0.92
		Coil, kPa	20.2	29.1	18.2	9.6	8.4	14.0	19.0
		Valve, kPa	28.8	43.6	26.3	12.9	11.3	20.2	28.8
ePM_1 55% + ePM_{10} 50%	880 m³/h	**kW***	**7.65**	**7.89**	**6.12**	**4.97**	**3.95**	**4.29**	**3.82**
		kW**	4.94	5.10	4.27	3.60	3.16	3.46	3.39
		l/h	1188	1470	1139	772	734	997	1183
		m/s	0.81	1.01	0.78	0.53	0.50	0.68	0.81
		Coil, kPa	16.2	23.5	14.6	7.3	6.6	11.3	15.1
		Valve, kPa	22.4	34.3	20.6	9.5	8.6	15.8	22.2
	1010 m³/h	**kW***	**8.51**	**8.74**	**6.80**	**5.68**	**4.45**	**4.76**	**4.28**
		kW**	5.52	5.68	4.77	4.11	3.57	3.86	3.81
		l/h	1321	1627	1266	882	827	1107	1323
		m/s	0.91	1.11	0.87	0.60	0.57	0.76	0.91
		Coil, kPa	19.6	28.2	17.6	9.3	8.1	13.6	18.3
		Valve, kPa	27.7	42.0	25.4	12.3	10.9	19.4	27.8
	1030 m³/h	**kW***	**8.64**	**8.86**	**6.90**	**5.78**	**4.52**	**4.83**	**4.34**
		kW**	5.61	5.77	4.84	4.18	3.63	3.92	3.88
		l/h	1341	1651	1284	897	841	1123	1343
		m/s	0.92	1.13	0.88	0.61	0.58	0.77	0.92
		Coil, kPa	20.1	28.9	18.1	9.6	8.4	13.9	18.8
		Valve, kPa	28.5	43.3	26.2	12.8	11.2	20.0	28.6
ePM_1 80% + ePM_{10} 50%	840 m³/h	**kW***	**7.37**	**7.61**	**5.91**	**4.72**	**3.79**	**4.14**	**3.68**
		kW**	4.75	4.91	4.11	3.42	3.03	3.33	3.25
		l/h	1144	1418	1099	732	705	962	1138
		m/s	0.78	0.97	0.75	0.50	0.48	0.66	0.78
		Coil, kPa	15.2	22.1	13.8	6.7	6.1	10.6	14.1
		Valve, kPa	20.8	31.9	19.2	8.5	7.9	14.7	20.6
	960 m³/h	**kW***	**8.19**	**8.42**	**6.55**	**5.42**	**4.26**	**4.59**	**4.10**
		kW**	5.30	5.46	4.58	3.92	3.41	3.71	3.65
		l/h	1270	1567	1219	841	792	1066	1270
		m/s	0.87	1.07	0.84	0.58	0.54	0.73	0.87
		Coil, kPa	18.3	26.4	16.5	8.6	7.5	12.7	17.1
		Valve, kPa	25.6	39.0	23.6	11.2	10.0	18.0	25.6
	1025 m³/h	**kW***	**8.61**	**8.83**	**6.88**	**5.75**	**4.51**	**4.82**	**4.33**
		kW**	5.59	5.75	4.83	4.17	3.61	3.91	3.86
		l/h	1336	1645	1279	893	838	1119	1337
		m/s	0.92	1.13	0.88	0.61	0.57	0.77	0.92
		Coil, kPa	20.0	28.7	18.0	9.5	8.3	13.8	18.7
		Valve, kPa	28.3	42.9	26.0	12.7	11.1	19.9	28.4

Outdoor temperature = 35°C ; Relative humidity, outdoor = 40% ; Fluid is water with 30% ethylene glycol

* Total cooling capacity [kW] ; ** Sensible cooling capacity [kW] ; Flow [l/h] ; Velocity [m/s] ; Pressure loss [kPa]