

DUCTED FAN COIL UNITS



Air treatment 42EM



Options/accessories

- Wall-mounted infrared receiver
- Factory-mounted two- or four-way valves

Standard controls

Electronic thermostat

- 2 versions, A + B, with potentiometer
- Automatic or manual three-speed selection
- Automatic or manual change-over
- Electric heat control
- Comfort/economy/frost protection modes



HDB controller

- Digital display or infra-red terminal
- Unit grouping capability
- Adjustable settings and parameters
- Timer and daily scheduling



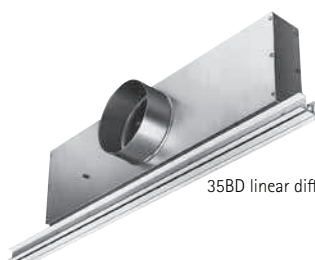
NTC communicating controller

- Network communication
- Aquasmart Evolution compatible
- IAQ and DCV management
- Motorised blinds & lighting control



Features

- Different sizes with two-pipe, two-pipe plus electric heater or four-pipe coils, with an air flow range from 66 to 347 l/s, a cooling capacity range from 0.7 to 9.7 kW and a heating capacity range from 1.1 to 9.9 kW.
- Decentralised compact ducted chilled-water fan coil system, designed for installation in plant rooms. This allows centralised service and maintenance.
- Reliable and economical cooling and heating for light commercial and office applications.
- Low height of 250 mm.
- Installation flexibility with two versions: modular or compact.
- Compatible with the 35BD air diffuser range.
- Air outlet modularity with different spigots.
- Extremely low sound level in the ducting of the air distribution system.
- Six-speed fan motor, offering a choice of several medium comfort speeds.
- Available with low-consumption variable-speed EC motor (LEC).
- High-pressure centrifugal fans, compatible with all main air distribution systems.
- High-efficiency EU3 filter as standard.
- Safe factory-installed electric heater for single or two-stage hot water heating.
- Low water pressure drop with a valve mounted, compatible with all chiller pump kits.
- Quick installation with factory-installed options (controls, valves).
- Atmosphaera sizes 09 and 19 are equipped with the variable-speed low-consumption LEC fan motor assembly, that is controlled by a 0 to 10 V signal, available with the Carrier NTC type electronic control.



35BD linear diffuser (supply and return air)

Physical data

42EM	05			09			10			19			22			29			32			39			
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
Fan speed																									
Air flow	l/s	58	86	90	35	108	133	74	119	132	37	127	151	85	173	199	55	211	237	85	173	199	55	211	237
	m ³ /h	210	309	324	126	396	479	271	438	490	122	456	544	306	623	716	198	760	853	306	623	716	198	760	853
Available static pressure	Pa	23	50	58	1	50	75	19	50	62	4	50	75	12	50	66	3	50	63	12	50	66	3	50	63
Cooling mode, two pipes*																									
Total cooling capacity	kW	1.57	2.18	2.27	0.99	2.65	3.07	1.87	2.76	3	1.01	2.90	3.31	2.32	4.23	4.70	1.56	4.92	5.36	2.84	5.34	6.02	1.82	6.18	6.8
Sensible cooling capacity	kW	1.14	1.61	1.68	0.7	1.99	2.34	1.39	2.11	2.31	0.73	2.23	2.59	1.70	3.21	3.61	1.13	3.80	4.18	1.92	3.73	4.23	1.23	4.34	4.81
Water flow rate	l/h	0.07	0.10	0.11	0.05	0.13	0.14	0.09	0.13	0.14	0.04	0.14	0.16	0.11	0.20	0.22	0.07	0.24	0.26	0.13	0.26	0.29	0.09	0.30	0.32
	l/s	270	374	389	169	457	526	321	475	516	162	499	569	399	726	808	269	845	921	484	918	1034	313	1062	1166
Water pressure drop	kPa	13	24	25	5	32	42	11	23	27	3	25	33	9	30	36	4	39	45	9	32	41	4	42	49
Water content	l	0.35	0.35	0.35	0.35	0.35	0.35	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.7	1.7	1.7	1.7	1.7
Heating mode, two pipes**																									
Heating capacity	kW	1.91	2.69	2.8	1.18	3.3	3.88	2.44	3.75	4.1	1.26	3.97	4.6	2.87	5.44	6.13	1.9	6.43	7.08	3.05	5.94	6.72	1.99	7.07	7.82
Cooling mode, four pipes*																									
Total cooling capacity	kW	1.43	1.98	2.06	0.9	2.41	2.78	1.8	2.6	2.8	0.91	2.67	3.01	2.23	3.96	4.38	1.51	4.57	4.95	2.75	5.18	5.83	1.78	5.99	6.57
Sensible cooling capacity	kW	1.08	1.52	1.58	0.66	1.87	2.19	1.36	2.03	2.21	0.66	2.1	2.4	1.65	3.06	3.43	1.1	3.59	3.94	1.89	3.65	4.14	1.21	4.26	4.7
Water flow rate	l/s	0.07	0.09	0.10	0.04	0.12	0.13	0.09	0.12	0.13	0.04	0.13	0.14	0.11	0.19	0.21	0.07	0.22	0.24	0.13	0.25	0.28	0.09	0.29	0.31
	l/h	247	342	355	157	415	478	310	446	482	155	457	518	382	679	753	260	785	850	472	890	1002	306	1030	1127
Water pressure drop	kPa	9	17	19	4	16	22	14	29	34	4	30	39	10	29	35	4	37	43	12	42	53	5	53	54
Water content	l	0.32	0.32	0.32	0.32	0.32	0.32	0.45	0.45	0.45	0.45	0.45	0.45	0.8	0.8	0.8	0.8	0.8	0.8	1.5	1.5	1.5	1.5	1.5	1.5
Heating mode, four pipes***																									
Heating capacity	kW	1.47	2.00	2.08	0.90	2.41	2.78	2.44	3.46	3.73	1.36	3.63	4.09	2.29	3.98	4.39	1.57	4.57	4.95	2.29	3.98	4.39	1.47	4.09	4.40
Water flow rate	l/h	0.04	0.05	0.05	0.02	0.06	0.07	0.04	0.06	0.06	0.02	0.06	0.07	0.06	0.10	0.11	0.04	0.11	0.12	0.06	0.10	0.11	0.04	0.10	0.11
	l/s	129	175	182	83	212	243	209	298	320	110	311	352	201	349	386	138	402	435	201	349	386	130	360	389
Water pressure drop	kPa	10	17	19	3	25	32	7	14	16	2	16	20	3	9	10	2	11	13	3	9	10	1	9	11
Water content	l	0.11	0.11	0.11	0.11	0.11	0.11	0.15	0.15	0.15	0.15	0.15	0.15	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Eurovent energy class FCEERT†	D/D			B/B			C/C			B/B			D/D			A/A			C/C			C/C			
Eurovent energy class FCCOPT†	D/D			A/B			C/D			A/B			C/D			A/B			C/D			C/D			
Electric heater	230 V ± 15 % - 1 ph - 50 Hz																								
Maximum capacity	W	1000			1000			1000			1000			2000			2000			2000			2000		
Current drawn	A	4.35			4.35			4.35			4.35			8.7			8.7			8.7			8.7		
Sound levels																									
Sound power level (return and radiated)	dB(A)	43	51	53	33	52	56	41	51	53	34	52	57	39	54	57	43	52	55	39	54	57	43	52	55
Sound power level (supply)	dB(A)	42	49	50	29	50	55	38	49	51	32	51	56	37	52	55	43	51	53	37	52	55	43	51	53
Electrical data, motor																									
1 ph - 50 Hz - 230 V ± 15 %																									
Power input	W	45	77	105	4	44	75	44	82	113	6	51	83	62	112	128	4	73	96	62	112	128	4	73	96
Current drawn	A	0.2	0.34	0.45		0.17	0.35	0.48					0.29	0.52	0.62				0.29	0.52	0.62				
Air filter (G3)	mm	230 x 420			230 x 420			230 x 570			230 x 570			230 x 990			230 x 990			230 x 990			230 x 990		
Technical data																									
Connection diameter, cold and hot-water coils: 1/2" gas (unit nut female), spigot connection diameter 200 mm																									
Height x depth x length	mm	250 x 700 x 870			250 x 700 x 870			250 x 850 x 870			250 x 850 x 870			250 x 1270 x 870			250 x 1270 x 870			250 x 1270 x 870			250 x 1270 x 870		
Unit weight	kg	17			22			22			22			41			39			43			41		

Fan speed: L = Low, M = Medium, H = High

* Eurovent conditions: Entering air temperature = 27°C db/47% rh - entering water temperature = 7°C, water temperature difference = 5 K.

** Eurovent conditions: Entering air temperature = 20°C, entering water temperature = 50°C, same water flow rate as in cooling.

*** Eurovent conditions: Entering air temperature = 20°C, entering water temperature = 70°C, water temperature difference = 10 K.

† The first value is for two-pipe coils and the second value is for four-pipe coils.

NOTE: Models 2x include sizes 21, 22, 23 and 29 with different speed arrangements. Models 3x include sizes 31, 32, 33 and 39 with different speed arrangements.

