

NEW
Low energy
consumption ECM Motors



Air Conditioning
Ceiling Air Conditioning Elegant



ISO 9001 – Cert. n° 0545/5
Unit heaters
Radiant panels
Fan coils
Air handling units
Flues



SABIANA
ENVIRONMENTAL COMFORT

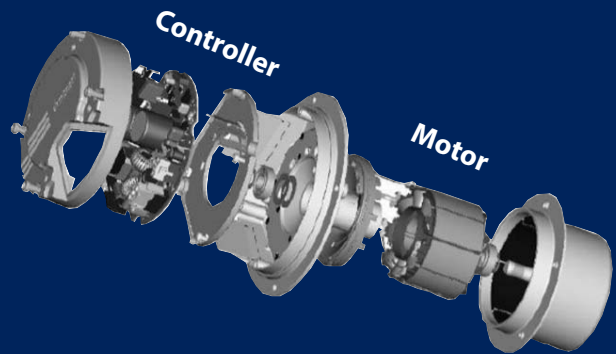
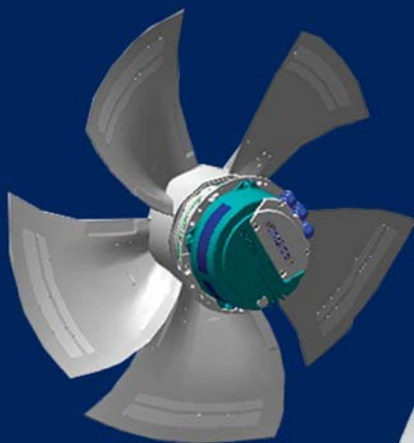


Air Conditioning

SABIANA
ENVIRONMENTAL COMFORT

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The **Elegant Sabiana** air conditioners allow, at **very economical cost**, to heat and cool small and medium size environments, like shops, show rooms, workshops, supermarkets.

The range is made up of 12 models: 8 **RE-ECM** models, for heating only, and 4 **PE-ECM** models, for heating and cooling. All models are for ceiling installation and for hot/chilled water supply.

The Elegant ECM series uses an innovative brushless synchronous permanent magnet electric motor controlled by an inverter card that is directly installed on the unit.

The main advantages are

- compact design
- constant speed characteristic
- high efficiency even at low rotational speeds
- continuously fan speed control
- lower power consumption
- lower noise levels

The intake of the air is from the bottom side of the unit and the air supply is from the 4 lateral grids which have individually controllable louvres for the best distribution of the air.

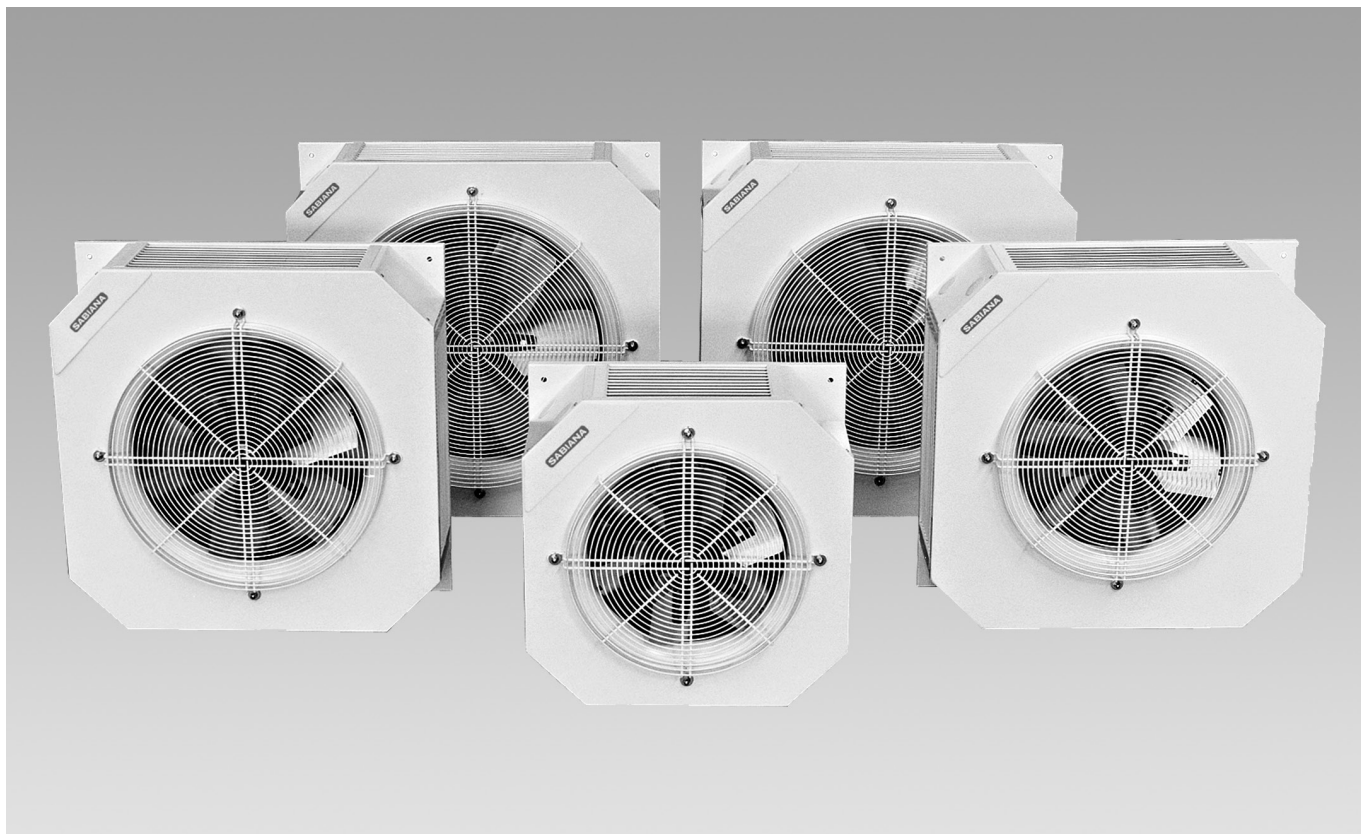
The connection to the battery can be made either from the upper or from the lateral side, in accordance to the installation with or without false ceiling.

The condensate drain is made through an electronically controlled micro-pump, supplied on every standard **PE-ECM** model.

Different remote controls of the air flow and of the room temperature are available and it is possible to control up to 8 units with only 1 remote control.

Beside the **low installation and running cost**, the Elegant air conditioners offer the following advantages:

- they take a low amount of the valuable space in the room, there is not any ducting system and the walls are free.
- they are versatile and provide flexibility of installation: also where there is no false ceiling it is possible to distribute the air evenly.
- they provide easy control and are easily installed.

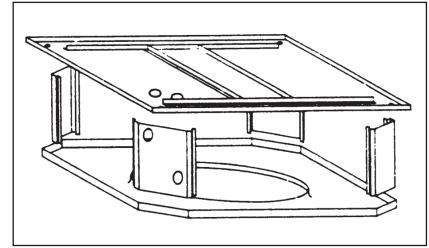


CASING

The casing is made of steel on both top and bottom sections and it is designed to give greater strength and quieter operation. The casing is then phosphatised and finished with an epoxy-polyester powder coating dried at 180°, in white RAL 9010.

The lower casing is also the condensate collection tray.

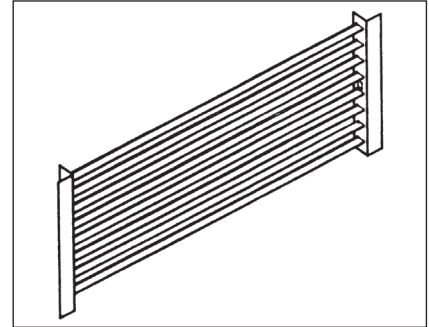
The casing is fitted with galvanized steel screws and so it is possible to quickly dismantle it for inspection when needed.



OUTLET GRIDS

The discharge of the air is obtained through 4 grids on the 4 lateral sides. The grids are made of steel, painted with epoxy-polyester powder.

They are made by a frame in which the louvres are individually adjustable. It is very easy to take off these grids, allowing for easy maintenance of the battery and of the condensate tray.



ELECTRONIC MOTOR

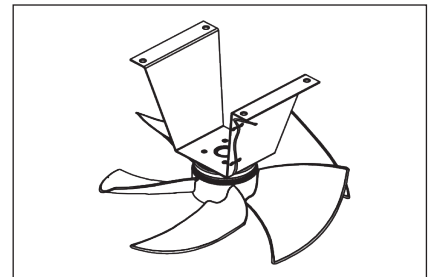
Three phase permanent magnet brushless electronic motor. The inverter board that controls the motor operation is powered by 230 Volt, single-phase and it generates a frequency modulated wave form power supply. The electric power supply required for the machine is therefore single-phase with voltage of 230-240V and frequency of 50-60Hz.

HELICOIDAL FAN

The fan is with aluminium blades statically and dynamically balanced.

Its rational high-capacity profile provides the maximum air volume with the minimum energy consumption.

The fan hub is secured onto the motor shaft and it is protected by a finger proof guard.



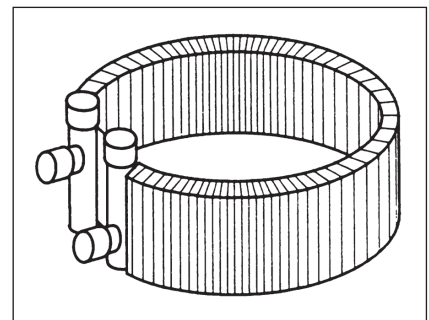
HEAT EXCHANGER

The heat exchanger of the **Elegant Sabiana** has a circular shape and is constructed of copper tubes with aluminium fins and steel headers.

The supply and return connections have a female threading, 1" diameter, and they allow the connection either vertically from above or horizontally from a side.

The battery is supplied in two versions: with 1 row and with 2 rows.

The heat exchanger is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.



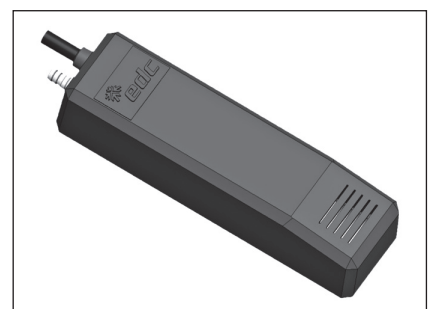
PACKAGING

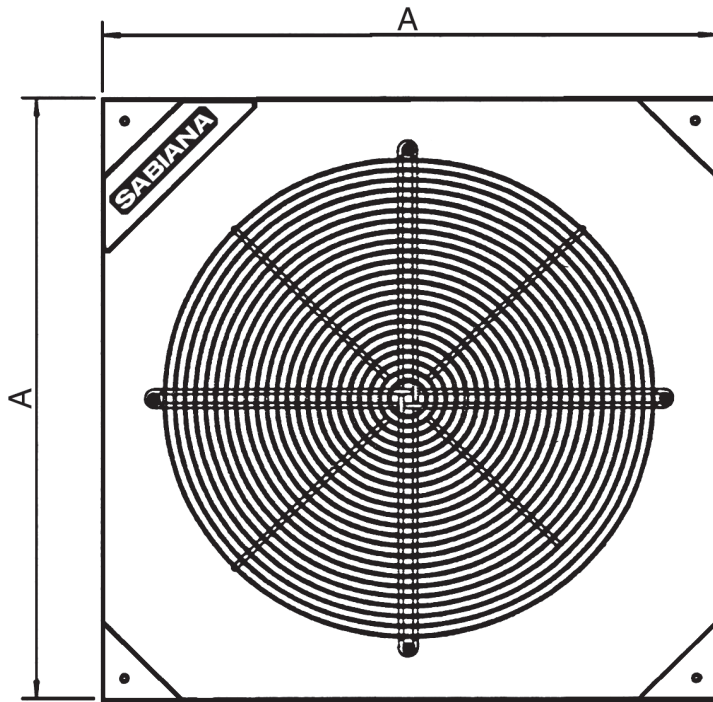
Every Elegant air conditioner is supplied in a robust cardboard box with the relevant installation and maintenance manual. On the cardboard box is indicated the unit model.

CONDENSATE MICRO-PUMP

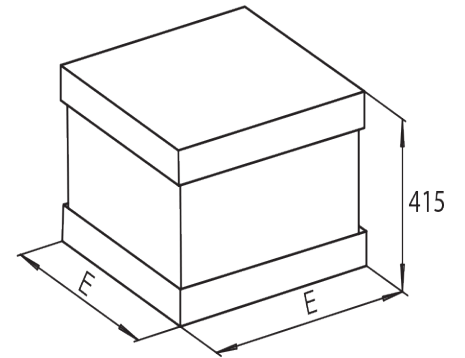
The **PE-ECM** model for cooling is always supplied with an integral micropump (discharge head 3m, water flow 6l/h). The pump is installed in the condensate collected tray. This pump controls the level of the condensate collected in the tray and eliminate it when necessary.

To prevent the pump from blocking and malfunctions in the condensate detection system, check that there are no significant quantities of oil in suspension and/or dust in the room being treated.



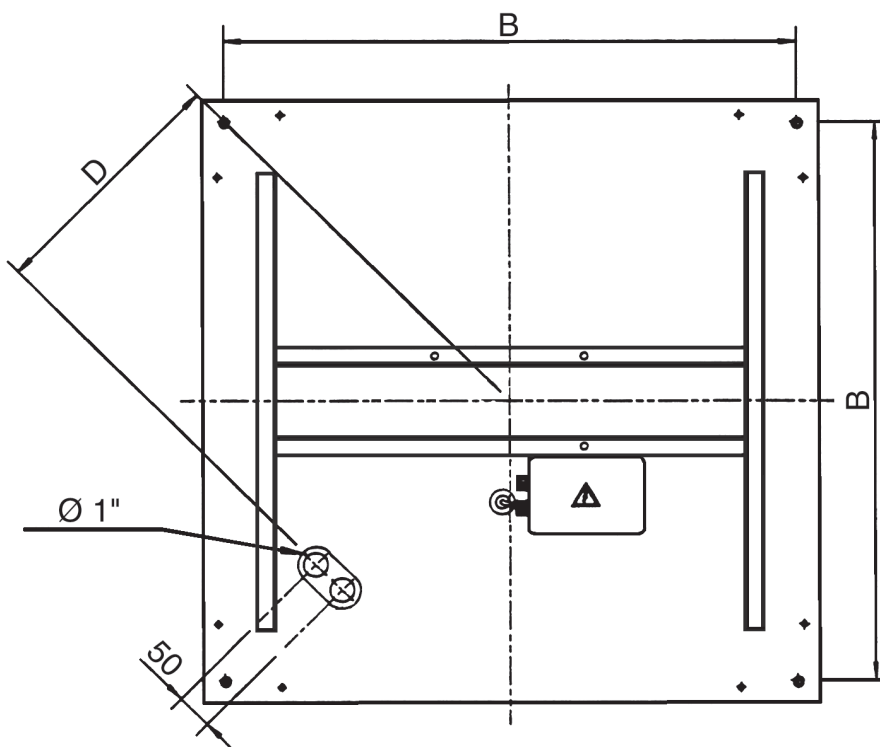
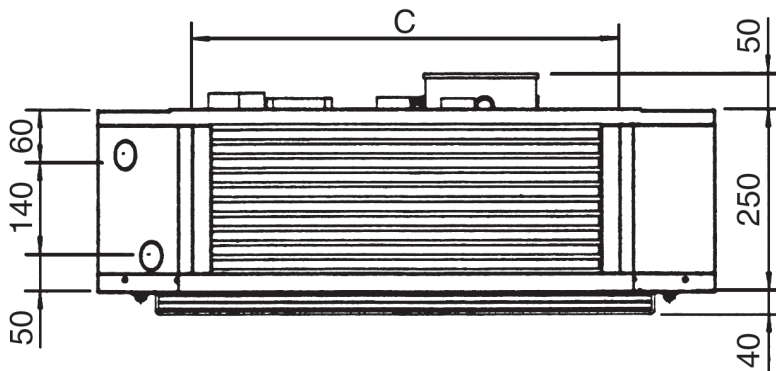


PACKAGING



**1 ROW BATTERY
(only heating)**

MOD.	RE	RE	RE	RE	
	11	21	31	41	
Dimensions (mm)	A	600	750	750	830
	B	540	690	690	770
	C	330	480	480	560
	D	220	287	300	344
	E	650	815	815	900
Weight (kg)	26	31	32	38	
Water content (l)	0.8	1.1	1.1	1.3	



**2 ROW BATTERY
(heating and cooling)**

MOD.	RE	RE	RE	RE	
	12	22	32	42	
	PE	PE	PE	PE	
Dimensions (mm)	A	600	750	750	830
	B	540	690	690	770
	C	330	480	480	560
	D	220	287	300	344
	E	650	815	815	900
Weight (kg)	28	34	35	40	
Water content (l)	1.8	2.4	2.4	2.7	

RE-ECM Main performance and technical characteristics

The following standard rating conditions are used:

HEATING (winter operation)

Air temperature: + 20°C

Water temperature: + 70/60°C

MODEL		RE-ECM 11						RE-ECM 12					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m³/h	1045	1265	1465	1635	1805	1890	1005	1215	1410	1570	1735	1820
Heating	kW	5,88	6,60	7,20	7,67	8,14	8,36	9,56	10,88	12,01	12,88	13,74	14,15
ΔP Heating	kPa	11,2	13,8	16,2	18,1	20,2	21,1	6,9	8,8	10,5	11,9	13,3	14,1
Sound power	Lw dB(A)	44	48	52	54	56	57	44	48	52	54	56	57
Sound pressure (*)	Lp dB(A)	35	39	43	45	47	48	35	39	43	45	47	48
Sound pressure (**)	Lp dB(A)	31	35	39	41	43	44	31	35	39	41	43	44
Fan	W	16	24	37	51	69	81	16	24	37	51	69	81

MODEL		RE-ECM 21						RE-ECM 22					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m³/h	1380	1645	1925	2175	2415	2600	1325	1580	1850	2090	2320	2500
Heating	kW	7,59	8,46	9,32	10,03	10,68	11,18	12,64	14,26	15,81	17,13	18,31	19,20
ΔP Heating	kPa	7,9	9,6	11,4	13,0	14,6	15,9	13,0	16,2	19,5	22,5	25,4	27,7
Sound power	Lw dB(A)	48	51	54	57	60	62	48	51	54	57	60	62
Sound pressure (*)	Lp dB(A)	39	42	45	48	51	53	39	42	45	48	51	53
Sound pressure (**)	Lp dB(A)	35	38	41	44	47	49	35	38	41	44	47	49
Fan	W	23	36	55	75	104	136	23	36	55	75	104	136

MODEL		RE-ECM 31						RE-ECM 32					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m³/h	1880	2245	2560	2890	3140	3180	1810	2160	2460	2780	3020	3060
Heating	kW	8,70	9,71	10,50	11,29	11,85	11,95	14,97	16,80	18,24	19,68	20,71	20,89
ΔP Heating	kPa	10,5	12,7	14,7	16,7	18,2	18,5	14,2	17,5	20,2	23,2	25,4	25,8
Sound power	Lw dB(A)	50	53	56	59	61	61	50	53	56	59	61	61
Sound pressure (*)	Lp dB(A)	41	44	47	50	52	52	41	44	47	50	52	52
Sound pressure (**)	Lp dB(A)	37	40	43	46	48	48	37	40	43	46	48	48
Fan	W	37	59	86	121	162	164	37	59	86	121	162	164

MODEL		RE-ECM 41						RE-ECM 42					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m³/h	2475	3090	3515	3995	4450	4680	2380	2970	3380	3840	4280	4500
Heating	kW	10,40	11,84	12,75	13,72	14,57	14,99	17,49	20,08	21,71	23,44	25,00	25,73
ΔP Heating	kPa	6,4	8,1	9,2	10,5	11,7	12,4	4,8	6,2	7,1	8,2	9,2	9,7
Sound power	Lw dB(A)	47	51	54	57	59	60	47	51	54	57	59	60
Sound pressure (*)	Lp dB(A)	38	42	45	48	50	51	38	42	45	48	50	51
Sound pressure (**)	Lp dB(A)	34	38	41	44	46	47	34	38	41	44	46	47
Fan	W	32	54	77	108	150	174	32	54	77	108	150	174

(*) = Measurement performed at 3 meter from the source, room volume of 500 m³, reverberation period of 2 s, directional factor Q = 2 (hemisphere sound emission)

(**) = Measurement performed at 3 meter from the source, room volume of 1500 m³, reverberation period of 2 s, directional factor Q = 2 (hemisphere sound emission)

PE-ECM Main performance and technical characteristics

The following standard rating conditions are used:

COOLING (summer operation)
Air temperature: + 27°C d.b. / 50% R.H.
Water temperature: +7/12°C

HEATING (winter operation)
Air temperature: + 20°C
Water temperature: + 70/60°C

MODEL		PE-ECM 12						PE-ECM 22					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m ³ /h	1005	1215	1410	1570	1735	1820	1325	1580	1850	2090	2320	2500
Cooling total emission	kW	3,89	4,30	4,65	4,80	5,17	5,20	5,31	5,83	6,33	6,74	7,13	7,38
Cooling sensible emission	kW	3,14	3,58	3,98	4,23	4,61	4,71	4,14	4,68	5,22	5,68	6,12	6,44
Heating	kW	9,56	10,88	12,01	12,88	13,74	14,15	12,64	14,26	15,81	17,13	18,31	19,20
ΔP Cooling	kPa	6,3	7,6	8,8	9,3	10,6	10,7	12,7	15,0	17,4	19,4	21,5	22,9
ΔP Heating	kPa	6,9	8,8	10,5	11,9	13,3	14,1	13,0	16,2	19,5	22,5	25,4	27,7
Sound power	Lw dB(A)	44	48	52	54	56	57	48	51	54	57	60	62
Sound pressure (*)	Lp dB(A)	35	39	43	45	47	48	39	42	45	48	51	53
Sound pressure (**)	Lp dB(A)	31	35	39	41	43	44	35	38	41	44	47	49
Fan	W	16	24	37	51	69	81	23	36	55	75	104	136

MODEL		PE-ECM 32						PE-ECM 42					
Inverter power		5	6	7	8	9	10	5	6	7	8	9	10
Air flow	m ³ /h	1810	2160	2460	2780	3020	3060	2380	2970	3380	3840	4280	4500
Cooling total emission	kW	6,43	7,01	7,51	7,99	8,41	8,52	7,19	8,09	8,84	9,32	9,83	10,07
Cooling sensible emission	kW	5,21	5,87	6,44	7,02	7,50	7,60	6,40	7,53	8,40	9,15	9,83	10,07
Heating	kW	14,97	16,80	18,24	19,68	20,71	20,89	17,49	20,08	21,71	23,44	25,00	25,73
ΔP Cooling	kPa	16,3	19,0	21,5	24,1	26,4	27,0	7,6	9,4	11,0	12,1	13,4	14,0
ΔP Heating	kPa	14,2	17,5	20,2	23,2	25,4	25,8	4,8	6,2	7,1	8,2	9,2	9,7
Sound power	Lw dB(A)	50	53	56	59	61	61	47	51	54	57	59	60
Sound pressure (*)	Lp dB(A)	41	44	47	50	52	52	38	42	45	48	50	51
Sound pressure (**)	Lp dB(A)	37	40	43	46	48	48	34	38	41	44	46	47
Fan	W	37	59	86	121	162	164	32	54	77	108	150	174

(*) = Measurement performed at 3 meter from the source, room volume of 500 m³, reverberation period of 2 s, directional factor Q = 2 (hemisphere sound emission)

(**) = Measurement performed at 3 meter from the source, room volume of 1500 m³, reverberation period of 2 s, directional factor Q = 2 (hemisphere sound emission)

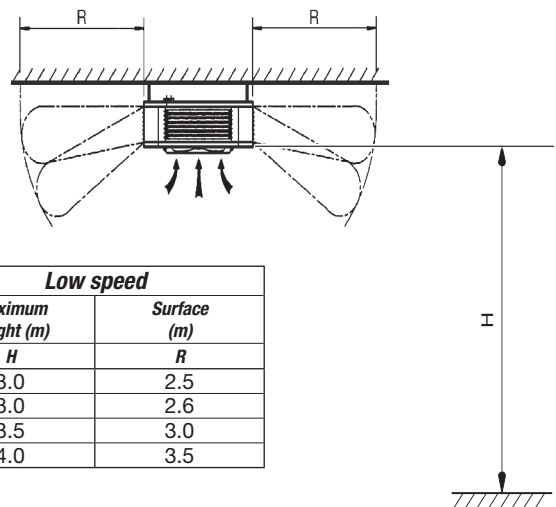
WORKING CONDITIONS

Max. entering water temperature = 85°C

Min. entering water temperature = 6°C

Max. working pressure = 10 bar

Battery test pressure = 22 bar



Installation height (m)

MODEL	High speed		Low speed	
	Maximum Height (m)	Surface (m)	Maximum Height (m)	Surface (m)
	H	R	H	R
1	3.5	3.5	3.0	2.5
2	3.5	3.8	3.0	2.6
3	4.0	4.0	3.5	3.0
4	4.5	4.5	4.0	3.5

Motor electrical data (max. absorption)

MODEL		1	2	3	4
230/1 50Hz	W	81	136	164	174
	A	0,74	1,11	1,37	1,2

Cooling emission

Entering air temperature: +28°C - Relative Humidity: 55%

Model	Vdc	WT: 7/12 °C					WT: 8/13 °C				WT: 10/15 °C				WT: 12/17 °C			
		Qv m³/h	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa
PE-ECM 12	10	1820	6,55	4,61	1126	16,2	5,91	4,39	1017	13,4	4,67	4,15	803	8,7	3,81	3,81	655	6,0
	9	1735	6,41	4,48	1103	15,6	5,79	4,26	996	12,9	4,61	4,03	792	8,5	3,71	3,71	638	5,7
	8	1570	6,11	4,21	1051	14,3	5,52	4,00	950	11,9	4,42	3,78	761	7,9	3,52	3,52	605	5,2
	7	1410	5,80	3,94	997	13,0	5,25	3,74	902	10,8	4,20	3,51	723	7,2	3,32	3,32	571	4,7
	6	1215	5,57	3,69	957	12,1	4,86	3,40	837	9,5	3,90	3,16	672	6,3	3,06	3,06	526	4,0
5	1005	4,86	3,17	835	9,5	4,41	3,01	759	7,9	3,61	2,80	620	5,5	2,75	2,65	473	3,3	
PE-ECM 22	10	2500	9,11	6,32	1567	33,4	8,27	6,02	1422	27,9	6,65	5,67	1144	18,7	5,33	5,33	917	12,5
	9	2320	8,80	6,05	1514	31,4	7,99	5,75	1374	26,2	6,41	5,38	1103	17,5	5,13	5,13	882	11,6
	8	2090	8,36	5,66	1438	28,6	7,60	5,39	1307	24,0	6,10	5,00	1049	16,0	4,85	4,85	834	10,5
	7	1850	7,87	5,25	1354	25,7	7,15	4,99	1230	21,5	6,14	4,82	1056	16,2	4,57	4,51	787	9,4
	6	1580	7,26	4,76	1248	22,2	6,61	4,52	1137	18,7	5,29	4,11	910	12,4	4,15	3,98	714	7,9
5	1325	6,61	4,25	1137	18,8	6,04	4,04	1038	15,9	4,82	3,64	829	10,5	3,77	3,49	649	6,7	
PE-ECM 32	10	3060	10,29	7,29	1770	38,0	9,34	6,96	1607	31,7	7,89	6,83	1358	23,2	6,09	6,09	1048	14,4
	9	3020	10,22	7,22	1757	37,5	9,27	6,89	1594	31,3	7,56	6,60	1301	21,5	6,05	6,05	1041	14,3
	8	2780	9,85	6,88	1694	35,1	8,92	6,55	1535	29,2	7,23	6,20	1244	19,8	5,79	5,79	995	13,2
	7	2460	9,34	6,40	1606	31,9	8,44	6,07	1451	26,4	6,78	5,67	1166	17,6	5,43	5,43	933	11,7
	6	2160	8,73	5,89	1502	28,3	7,93	5,60	1364	23,6	6,36	5,18	1094	15,7	5,07	5,07	871	10,4
5	1810	8,00	5,28	1375	24,1	7,27	5,02	1251	20,2	5,82	4,58	1001	13,4	4,61	4,47	793	8,7	
PE-ECM 42	10	4500	12,13	9,33	2087	19,5	10,92	8,91	1878	16,1	9,02	9,02	1552	11,3	7,37	7,37	1267	7,8
	9	4280	11,90	9,06	2047	18,9	10,68	8,64	1837	15,4	8,81	8,73	1516	10,8	7,17	7,17	1234	7,4
	8	3840	11,34	8,48	1950	17,3	10,22	8,10	1758	14,3	8,30	8,03	1428	9,7	6,78	6,78	1167	6,7
	7	3380	10,78	7,88	1854	15,8	9,66	7,48	1661	12,9	7,86	7,36	1352	8,8	6,34	6,34	1090	5,9
	6	2970	10,10	7,25	1738	14,0	9,11	6,90	1568	11,6	7,37	6,70	1267	7,8	5,91	5,91	1017	5,2
5	2380	9,11	6,33	1567	11,6	8,24	6,02	1417	9,7	6,62	5,73	1139	6,5	5,25	5,25	903	4,2	

Entering air temperature: +27°C - Relative Humidity: 55%

Model	Vdc	WT: 7/12 °C					WT: 8/13 °C				WT: 10/15 °C				WT: 12/17 °C			
		Qv m³/h	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa
PE-ECM 12	10	1820	5,86	4,38	1008	13,3	5,27	4,21	907	10,9	4,25	4,16	731	7,4	3,38	3,38	581	4,8
	9	1735	5,74	4,26	987	12,8	5,14	4,07	884	10,4	4,14	4,01	713	7,0	3,29	3,29	566	4,6
	8	1570	5,44	3,98	936	11,6	4,87	3,79	837	9,5	3,94	3,73	679	6,4	3,11	3,11	535	4,2
	7	1410	5,20	3,74	894	10,7	4,65	3,54	800	8,7	3,77	3,48	649	5,9	2,93	2,93	504	3,7
	6	1215	4,82	3,40	829	9,3	4,33	3,23	745	7,7	3,44	3,09	591	5,0	2,68	2,68	462	3,2
5	1005	4,36	3,01	750	7,8	3,92	2,85	674	6,4	3,10	2,69	533	4,2	2,40	2,40	413	2,6	
PE-ECM 22	10	2500	8,20	6,03	1411	27,7	7,34	5,72	1263	22,6	5,94	5,62	1022	15,3	4,74	4,74	815	10,1
	9	2320	7,91	5,75	1360	25,9	7,14	5,48	1227	21,4	5,72	5,33	984	14,3	4,55	4,55	783	9,4
	8	2090	7,53	5,40	1295	23,7	6,76	5,11	1162	19,4	5,43	4,95	935	13,0	4,29	4,29	738	8,4
	7	1850	7,09	5,00	1219	21,3	6,37	4,73	1096	17,5	5,09	4,52	876	11,6	4,01	4,01	689	7,4
	6	1580	6,54	4,52	1125	18,4	6,02	4,35	1035	15,8	4,68	4,03	804	9,9	3,66	3,66	630	6,3
5	1325	5,96	4,04	1025	15,6	5,37	3,82	924	12,9	4,25	3,55	731	8,4	3,31	3,31	569	5,3	
PE-ECM 32	10	3060	9,26	6,95	1592	31,4	8,33	6,63	1433	25,8	6,76	6,59	1163	17,6	5,43	5,43	934	11,7
	9	3020	9,21	6,90	1583	31,1	8,25	6,55	1419	25,4	6,70	6,52	1153	17,3	5,40	5,40	928	11,6
	8	2780	8,86	6,55	1524	29,0	7,95	6,23	1368	23,8	6,40	6,12	1102	15,9	5,16	5,16	887	10,7
	7	2460	8,43	6,12	1451	26,5	7,51	5,77	1292	21,4	6,05	5,62	1041	14,4	4,81	4,81	828	9,5
	6	2160	7,85	5,60	1351	23,3	7,06	5,31	1214	19,2	5,66	5,11	973	12,8	4,48	4,48	770	8,3
5	1810	7,20	5,02	1238	20,0	6,48	4,75	1114	16,4	5,17	4,51	889	10,8	4,06	4,06	698	7,0	
PE-ECM 42	10	4500	10,84	8,90	1864	15,9	9,88	8,94	1699	13,4	8,14	8,14	1399	9,4	6,60	6,60	1135	6,4
	9	4280	10,62	8,63	1827	15,4	9,65	8,63	1660	12,9	7,94	7,94	1365	9,0	6,42	6,42	1105	6,1
	8	3840	10,14	8,08	1745	14,1	9,15	7,98	1575	11,7	7,51	7,51	1292	8,1	6,06	6,06	1042	5,5
	7	3380	9,60	7,48	1650	12,8	8,66	7,32	1489	10,6	7,05	7,05	1213	7,2	5,65	5,65	971	4,8
	6	2970	9,06	6,91	1558	11,5	8,13	6,69	1398	9,4	6,54	6,54	1125	6,3	5,26	5,26	904	4,2
5	2380	8,17	6,02	1405	9,6	7,32	5,75	1259	7,8	5,91	5,66	1017	5,3	4,65	4,65	799	3,4	

Legend

- WT = Water temperature
- Pc = Cooling Total emission
- Ps = Cooling Sensible emission
- Dp(c) = Water side pressure drop
- Vdc = Inverter power
- Qv = Air flow
- Qw = Water flow

Cooling emission

Entering air temperature: +26°C - Relative Humidity: 50%

Model	Vdc	Qv m³/h	WT: 7/12 °C				WT: 8/13 °C				WT: 10/15 °C				WT: 12/17 °C			
			Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa	Pc kW	Ps kW	Qw l/h	Dp(c) kPa
PE-ECM 12	10	1820	5,23	4,20	899	10,8	4,71	4,16	811	8,9	3,79	3,79	652	6,0	2,99	2,99	515	3,9
	9	1735	5,12	4,07	881	10,4	4,60	4,02	791	8,5	3,69	3,69	635	5,7	2,91	2,91	500	3,7
	8	1570	4,86	3,79	836	9,5	4,38	3,76	754	7,8	3,50	3,50	602	5,2	2,75	2,75	473	3,3
	7	1410	4,62	3,55	795	8,7	4,05	3,43	696	6,8	3,30	3,30	567	4,6	2,58	2,58	444	3,0
	6	1215	4,28	3,22	737	7,6	3,91	3,18	673	6,4	3,04	3,02	522	4,0	2,36	2,36	406	2,5
PE-ECM 22	5	1005	3,88	2,85	668	6,3	3,60	2,82	619	5,5	2,73	2,62	469	3,3	2,10	2,10	361	2,0
	10	2500	7,31	5,72	1257	22,5	6,57	5,62	1131	18,5	5,31	5,31	914	12,5	4,20	4,20	723	8,1
	9	2320	7,05	5,46	1213	21,1	6,30	5,31	1083	17,1	5,10	5,10	877	11,6	4,03	4,03	693	7,5
	8	2090	6,72	5,12	1156	19,3	6,05	4,98	1040	15,9	4,82	4,82	829	10,5	3,79	3,79	652	6,7
	7	1850	6,33	4,74	1089	17,4	5,66	4,57	974	14,1	4,52	4,45	777	9,3	3,53	3,53	607	5,9
PE-ECM 32	6	1580	5,98	4,37	1029	15,7	5,28	4,14	909	12,5	4,13	3,95	711	7,9	3,22	3,22	553	5,0
	5	1325	5,32	3,82	915	12,7	4,75	3,63	817	10,3	3,75	3,47	645	6,7	2,89	2,89	497	4,1
	10	3060	8,24	6,60	1418	25,5	7,50	6,58	1290	21,4	6,06	6,06	1042	14,4	4,84	4,84	832	9,5
	9	3020	8,21	6,55	1412	25,3	7,42	6,50	1276	21,0	6,02	6,02	1035	14,2	4,80	4,80	826	9,4
	8	2780	7,90	6,22	1359	23,6	7,13	6,14	1226	19,5	5,76	5,76	991	13,2	4,58	4,58	788	8,6
PE-ECM 42	7	2460	7,47	5,77	1285	21,3	6,70	5,63	1153	17,5	5,39	5,39	927	11,7	4,27	4,27	735	7,6
	6	2160	7,02	5,32	1207	19,1	6,29	5,15	1082	15,6	5,03	5,03	866	10,3	3,96	3,96	681	6,7
	5	1810	6,43	4,76	1107	16,3	5,76	4,57	991	13,3	4,58	4,42	787	8,7	3,57	3,57	614	5,5
	10	4500	9,83	8,90	1691	33,4	8,93	8,93	1537	31,2	7,33	7,33	1260	18,8	5,91	5,91	1017	11,2
	9	4280	9,60	8,59	1652	32,8	8,73	8,63	1502	30,7	7,14	7,14	1227	18,4	5,75	5,75	989	11,0

Legend

WT = Water temperature **Vdc** = Inverter power
Pc = Cooling Total emission **Qv** = Air flow
Ps = Cooling Sensible emission **Qw** = Water flow
Dp(c) = Water side pressure drop

Heating emission of 1 row coil

Entering air temperature: +20°C

Model	Vdc	Qv m³/h	WT: 80/70 °C			WT: 75/65 °C			WT: 70/60 °C		
			Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa
RE-ECM 11	10	1890	10,38	893	30,2	9,36	805	25,5	8,36	719	21,1
	9	1805	10,09	868	28,7	9,12	784	24,3	8,14	700	20,2
	8	1635	9,51	818	25,8	8,60	740	21,9	7,67	660	18,1
	7	1465	8,91	767	23,0	8,06	694	19,5	7,20	619	16,2
	6	1265	8,17	703	19,6	7,39	635	16,6	6,60	568	13,8
	5	1045	7,28	626	16,0	6,58	566	13,5	5,88	506	11,2
RE-ECM 21	10	2600	13,85	1191	22,6	12,51	1075	19,1	11,18	961	15,9
	9	2415	13,24	1139	20,8	11,96	1029	17,6	10,68	918	14,6
	8	2175	12,44	1070	18,6	11,23	966	15,7	10,03	862	13,0
	7	1925	11,54	993	16,3	10,44	898	13,8	9,32	801	11,4
	6	1645	10,49	902	13,7	9,47	814	11,6	8,46	728	9,6
	5	1380	9,39	807	11,2	8,49	730	9,5	7,59	652	7,9
RE-ECM 31	10	3180	14,81	1273	26,4	13,37	1150	22,3	11,95	1028	18,5
	9	3140	14,71	1265	26,1	13,29	1143	22,1	11,85	1019	18,2
	8	2890	14,00	1204	23,8	12,65	1088	20,2	11,29	971	16,7
	7	2560	13,03	1121	21,0	11,76	1011	17,7	10,50	903	14,7
	6	2245	12,02	1034	18,1	10,86	934	15,3	9,71	835	12,7
	5	1880	10,77	926	14,9	9,74	837	12,6	8,70	748	10,5
RE-ECM 41	10	4680	18,71	1609	17,8	16,85	1449	15,0	14,99	1289	12,4
	9	4450	18,18	1564	17,0	16,38	1409	14,3	14,57	1253	11,7
	8	3995	17,11	1471	15,2	15,39	1324	12,8	13,72	1180	10,5
	7	3515	15,88	1366	13,3	14,32	1232	11,2	12,75	1096	9,2
	6	3090	14,75	1269	11,6	13,30	1144	9,8	11,84	1018	8,1
	5	2475	12,94	1113	9,2	11,66	1003	7,7	10,40	894	6,4

Entering air temperature: +20°C

Model	Vdc	Qv m³/h	WT: 65/55 °C			WT: 60/50 °C			WT: 55/45 °C		
			Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa
RE-ECM 11	10	1890	7,35	632	17,1	6,35	546	13,3	5,35	460	10,0
	9	1805	7,16	615	16,3	6,18	532	12,7	5,20	448	9,5
	8	1635	6,76	581	14,7	5,84	502	11,5	4,91	422	8,5
	7	1465	6,34	545	13,1	5,47	470	10,2	4,61	396	7,6
	6	1265	5,81	500	11,2	5,02	432	8,7	4,24	364	6,5
	5	1045	5,18	446	9,1	4,49	386	7,1	3,78	325	5,3
RE-ECM 21	10	2600	9,83	845	12,8	8,48	729	10,0	7,14	614	7,4
	9	2415	9,40	808	11,8	8,12	698	9,2	6,82	587	6,9
	8	2175	8,83	760	10,6	7,62	656	8,2	6,42	552	6,2
	7	1925	8,20	705	9,2	7,09	610	7,2	5,97	513	5,4
	6	1645	7,46	641	7,8	6,45	554	6,1	5,43	467	4,6
	5	1380	6,68	575	6,4	5,78	497	5,0	4,87	419	3,7
RE-ECM 31	10	3180	10,52	905	15,0	9,08	781	11,7	7,63	656	8,7
	9	3140	10,43	897	14,7	9,01	774	11,5	7,57	651	8,6
	8	2890	9,93	854	13,5	8,57	737	10,5	7,22	621	7,9
	7	2560	9,24	795	11,9	7,98	686	9,3	6,72	578	6,9
	6	2245	8,54	734	10,3	7,38	635	8,0	6,21	534	6,0
	5	1880	7,66	659	8,5	6,63	570	6,6	5,58	480	5,0
RE-ECM 41	10	4680	13,13	1129	9,9	11,29	971	7,7	9,43	811	5,7
	9	4450	12,78	1099	9,4	10,98	944	7,3	9,19	790	5,4
	8	3995	12,03	1035	8,5	10,34	890	6,6	8,65	744	4,8
	7	3515	11,19	962	7,4	9,62	827	5,8	8,05	693	4,3
	6	3090	10,38	893	6,5	8,94	769	5,1	7,49	644	3,7
	5	2475	9,12	784	5,1	7,85	675	4,0	6,58	566	3,0

Legend

WT = Water temperature

Ph = Emission

Qw = Water flow

Qv = Air flow

Vdc = Inverter power

Dp(c) = Water side pressure drop

Heating emission of 2 row coil

Entering air temperature: +20°C

Model	Vdc	Qv m³/h	WT: 70/60 °C			WT: 60/50 °C			WT: 55/45 °C		
			Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa
RE-ECM PE-ECM 12	10	1820	14,15	1217	14,1	10,77	927	8,9	9,07	780	6,6
	9	1735	13,74	1181	13,3	10,45	899	8,4	8,81	757	6,3
	8	1570	12,88	1108	11,9	9,81	844	7,5	8,28	712	5,6
	7	1410	12,01	1033	10,5	9,16	788	6,6	7,72	664	5,0
	6	1215	10,88	936	8,8	8,31	715	5,6	7,01	603	4,2
RE-ECM PE-ECM 22	5	1005	9,56	823	6,9	7,31	629	4,4	6,18	532	3,3
	10	2500	19,20	1651	27,7	14,67	1261	17,6	12,40	1067	13,3
	9	2320	18,31	1575	25,4	14,01	1205	16,2	11,84	1019	12,2
	8	2090	17,13	1473	22,5	13,11	1128	14,4	11,09	954	10,9
	7	1850	15,81	1360	19,5	12,12	1042	12,5	10,26	883	9,4
RE-ECM PE-ECM 32	6	1580	14,26	1226	16,2	10,93	940	10,4	9,25	796	7,8
	5	1325	12,64	1087	13,0	9,70	835	8,4	8,23	708	6,3
	10	3060	20,89	1796	25,8	15,95	1371	16,4	13,48	1159	12,4
	9	3020	20,71	1781	25,4	15,82	1360	16,2	13,37	1150	12,2
	8	2780	19,68	1693	23,2	15,03	1293	14,8	12,71	1093	11,1
RE-ECM PE-ECM 42	7	2460	18,24	1569	20,2	13,95	1200	12,9	11,80	1014	9,7
	6	2160	16,80	1445	17,5	12,84	1105	11,1	10,87	934	8,4
	5	1810	14,97	1287	14,2	11,48	987	9,1	9,72	836	6,9
	10	4500	25,73	2213	9,7	19,49	1676	6,1	16,36	1407	4,5
	9	4280	25,00	2150	9,2	18,93	1628	5,8	15,88	1365	4,3
RE-ECM PE-ECM 42	8	3840	23,44	2016	8,2	17,77	1528	5,2	14,93	1284	3,8
	7	3380	21,71	1867	7,1	16,46	1416	4,5	13,84	1190	3,3
	6	2970	20,08	1727	6,2	15,24	1311	3,9	12,81	1102	2,9
	5	2380	17,49	1505	4,8	13,29	1143	3,1	11,19	963	2,3

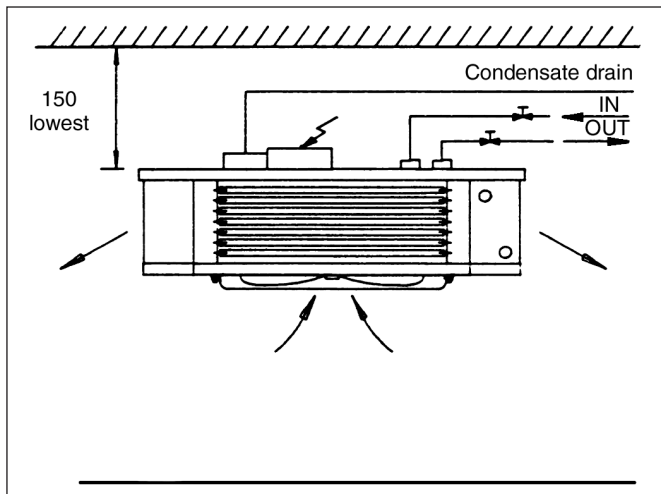
Entering air temperature: +20°C

Model	Vdc	Qv m³/h	WT: 50/40 °C			WT: 50/45 °C		
			Ph kW	Qw l/h	Dp(c) kPa	Ph kW	Qw l/h	Dp(c) kPa
RE-ECM PE-ECM 12	10	1820	7,37	634	4,7	8,64	743	21,4
	9	1735	7,16	615	4,4	8,39	721	20,3
	8	1570	6,72	578	3,9	7,86	676	18,0
	7	1410	6,29	541	3,5	7,33	630	15,9
	6	1215	5,72	492	2,9	6,63	570	13,3
RE-ECM PE-ECM 22	5	1005	5,05	434	2,4	5,83	501	10,5
	10	2500	10,13	871	9,4	11,71	1007	42,1
	9	2320	9,67	832	8,6	11,17	960	38,6
	8	2090	9,06	779	7,7	10,45	899	34,3
	7	1850	8,40	722	6,7	9,65	830	29,7
RE-ECM PE-ECM 32	6	1580	7,58	652	5,6	8,68	746	24,5
	5	1325	6,76	581	4,5	7,70	662	19,8
	10	3060	11,00	946	8,7	12,74	1096	39,3
	9	3020	10,91	938	8,6	12,65	1088	38,8
	8	2780	10,39	893	7,9	12,01	1033	35,3
RE-ECM PE-ECM 42	7	2460	9,64	829	6,9	11,13	957	30,8
	6	2160	8,89	764	6,0	10,24	881	26,5
	5	1810	7,96	685	4,9	9,13	785	21,6
	10	4500	13,22	1137	3,1	15,73	1352	14,8
	9	4280	12,85	1105	3,0	15,27	1314	14,0
RE-ECM PE-ECM 42	8	3840	12,08	1039	2,7	14,33	1232	12,5
	7	3380	11,21	964	2,3	13,28	1142	10,9
	6	2970	10,38	893	2,0	12,25	1054	9,4
	5	2380	9,09	782	1,6	10,67	918	7,4

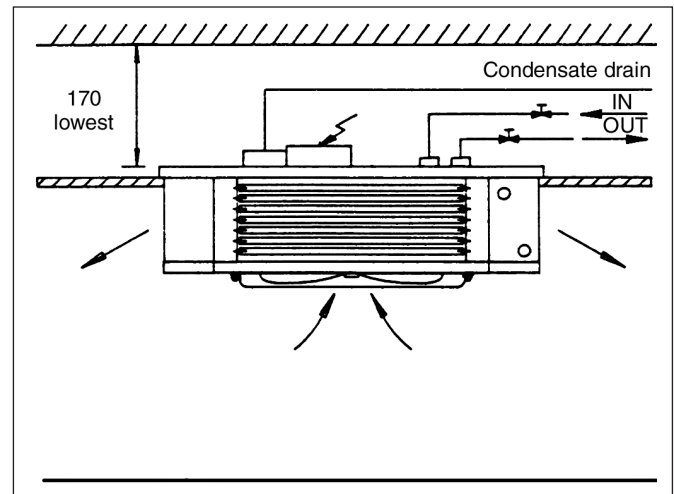
Legend

- WT = Water temperature
- Ph = Emission
- Qw = Water flow
- Qv = Air flow
- Vdc = Inverter power
- Dp(c) = Water side pressure drop

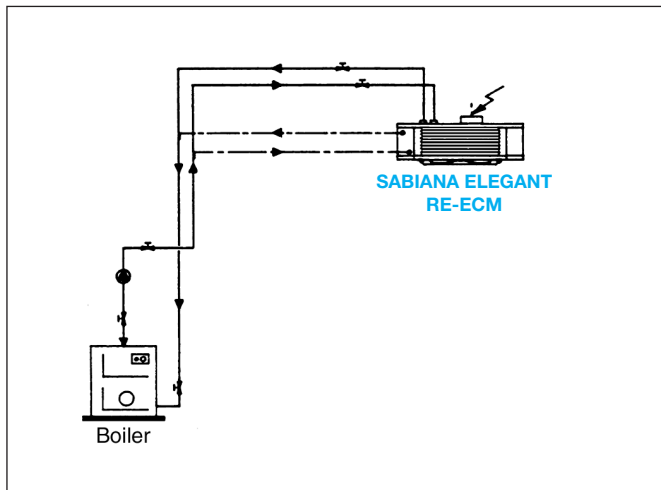
Installation without false ceiling



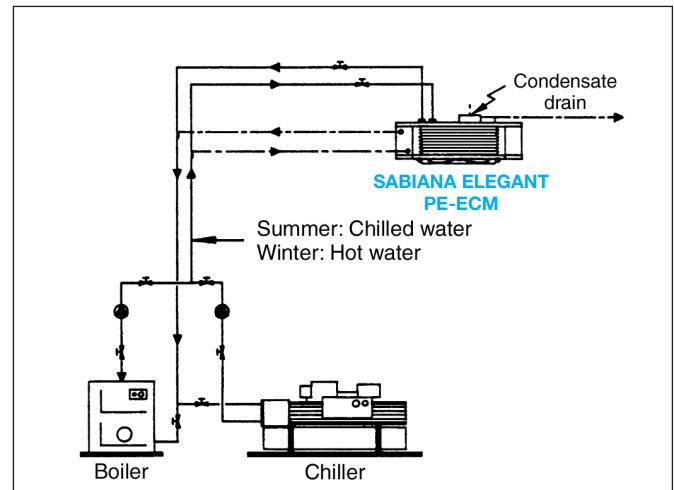
Installation with false ceiling



“RE” Version Only heating



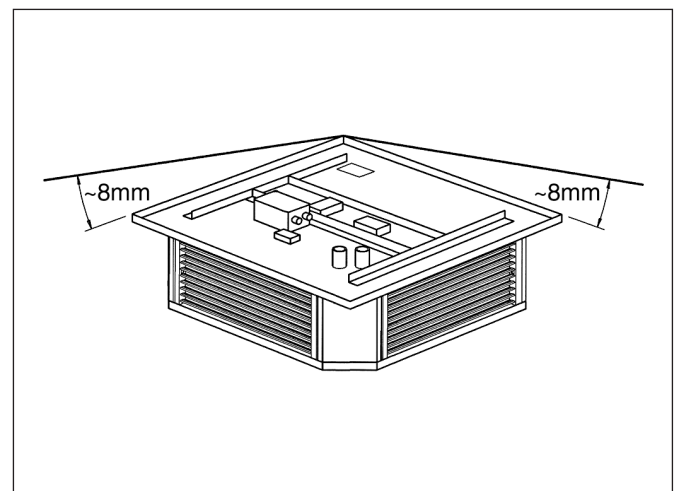
“PE” Version Heating and Cooling



WARNING

In cooling systems

- always install the unit with a small inclination towards the hydraulic connections side, in order to allow a good suction of the condensate micro-pump.
- you are recommended to shut off the water supply to the coil using the 2/3-way valves, electrically connected to the control with thermostat, to avoid condensation forming on the outside of the unit.



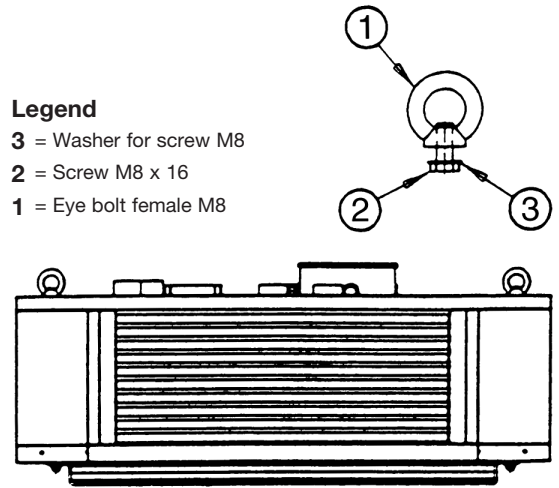
Hanging brackets

Composed by 4 eye bolts and screws.

Size	Code
1 ÷ 4	9041018

Legend

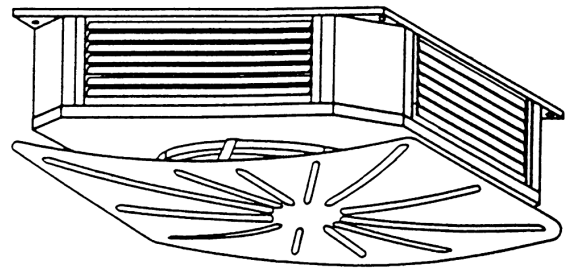
- 3 = Washer for screw M8
- 2 = Screw M8 x 16
- 1 = Eye bolt female M8



Cover panel

To be fitted on the fan guard.

Size	Code
1	9041031
2	9041032
3	9041033
4	9041034

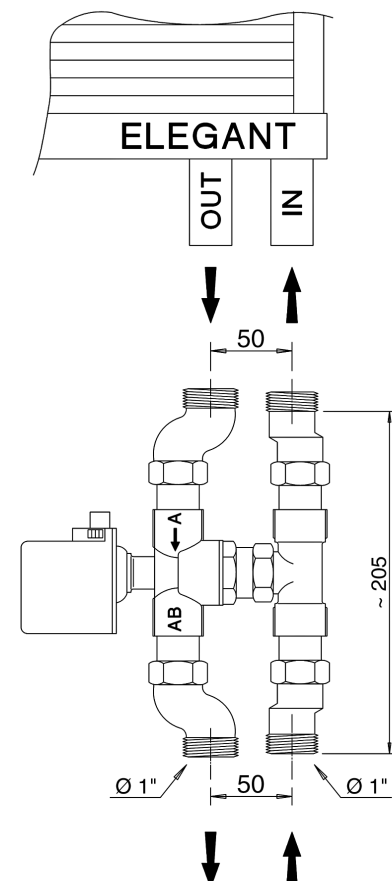


3 way valve + connection kit

Composed by:

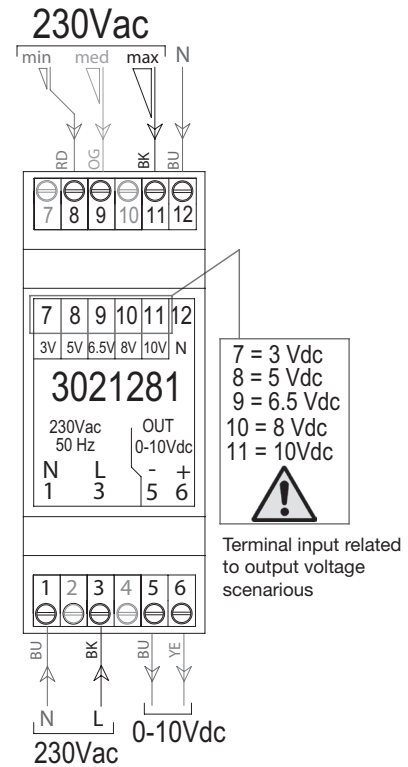
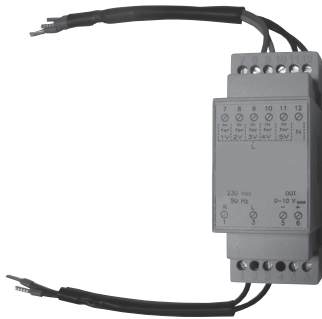
- one 3-way valve 3/4" KVS 4,7
- one actuator
- pipe connections

Size	Code
1 ÷ 4	9041050



Description	ID	Code
ADC signal converter for wall controls fitted on the unit	ADC-M	9041073
ADC signal converter for wall controls supplied with separate packaging	ADC-S	9041072

It is a signal converter that transforms a 230 volt input in 3/10 volt signal.
 This allows the use of 230V wall controls to control the fan speed for inverter motors.
 ADC converter is wired between 3 speeds control 230V outputs and the inverter.
 According to the ADC wiring, the converter will provide different voltage values ranging between 3/10 volt showed in the wiring diagram.



ID	Code
MO-3V	9060160



Dimensions: 133x93x37 mm

- ON-OFF switch and speed switch, without thermostatic control.
- It allows to control the low temperature cut-out thermostat (TMM).
- To be used with ADC only.

ID	Code
TMO-T	9060161



Dimensions: 133x93x37 mm

- Manual speed switch.
- Manual Summer/Winter switch.
- Electronic thermostat for fan control (ON-OFF).
- Electronic thermostat for valve control (ON-OFF).
- It allows to control the low temperature cut-out thermostat (TME).
- It allows to install the Summer/Winter switch centralized and remote, or to control it with an automatic change-over fitted on the water pipe. The latter case needs the adjustment of the jumper on the control board (see the instruction leaflet supplied with the control).
- To be used with ADC only.

ID	Code
T2T	9060174



Dimensions: 128x75x25 mm

- ON-OFF switch.
- 3 speed switch.
- Manual Summer/Winter switch.
- Electronic thermostat for fan control.
- Thermostatic control on the valve and continuous fan operation.
- Simultaneous thermostatic control on the valves and fan.
- Cannot be used with speed switch (master-slave).
- To be used with ADC only.

Electronic control accessories

TME low temperature cut-out thermostat

ID	Code
TME	3021091



To be fitted between the coil fins.

When connecting the control, the TME probe cable must be separated from the power supply wires.

To be used with the following controls: TMO-T.

It stops the fan when the water temperature is lower than 38°C and it starts the fan when is higher than 42°C.

ID	Code
CR-T-ECM	9066342

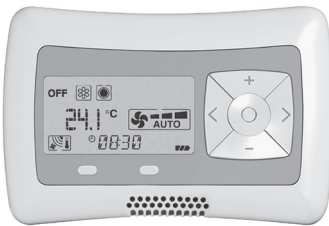


Dimensions: 133x93x37 mm

The control must always be connected with UPM-ECM power unit (fitted on the unit) or with UPS-ECM power unit (not fitted on the unit).

- It allows to control up to 16 units (one power unit for each unit).
- ON-OFF switch.
- Manual 3 speed switch or automatic continuous speed control.
- Manual Summer/Winter switch.
- Continuous speed control based on the difference between ambient temperature and Set temperature (speed switch in Auto position).
- Electronic room thermostat for fan or valves control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).

ID	Codice
CR-DI-ECM	9066316



Dimensions: 135x88x25 mm

The control must always be connected with UPM-ECM power unit (fitted on the unit) or with UPS-ECM power unit (not fitted on the unit).

- It allows to control up to 16 units (one power unit for each unit).
- ON-OFF switch.
- Manual 3 speed switch or automatic continuous speed control.
- Manual Summer/Winter switch.
- Continuous speed control based on the difference between ambient temperature and Set temperature (speed switch in Auto position).
- Electronic room thermostat for fan or valves control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).
- Time setting.
- Weekly ON/OFF program.

Description	ID	Code
Power unit for CR-T-ECM and CR-DI-ECM remote control (fitted on the unit)	UPEM-ECM	9041075
Power unit for CR-T-ECM and CR-DI-ECM remote control (not fitted on the unit)	UPES-ECM	9041074



Control power absorption: 1,5 VA

Power unit to be installed on the fan coil (fan coil interface). It controls the fan and the valves of the fan coil. The power unit is connected to the electric supply. The power unit receives the information required from the control.

NTC low temperature cut-out thermostat

<i>ID</i>	<i>Code</i>
NTC	3021090



To be fitted between the coil fins; when connecting the control, the NTC probe cable must be separated from the power supply wires.

To be used with the following controls: CR-T-ECM and CR-DI-ECM

It stops the fan when the water temperature is lower than 28°C and it starts the fan when is higher than 33°C.

Change-Over CH 15-25

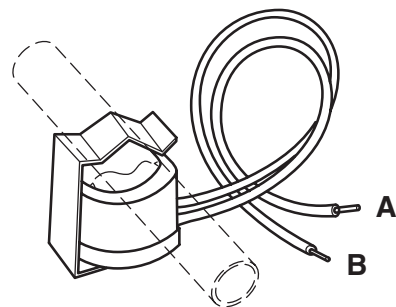
<i>ID</i>	<i>Code</i>
CH 15 -25	9053049

Automatic summer/winter switch to be installed in contact with the water circuit.

For 2-tube installations only (not to be used with 2 way valve).

To be used with the following controls:

CR-T-ECM and CR-DI-ECM



Legend
A = red
B = black

All the **Carisma Coanda** units can be supplied with a wide range of controls, which allows managing one single unit or several units by using the Modbus RTU - RS 485 communication protocol.

Units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory components.

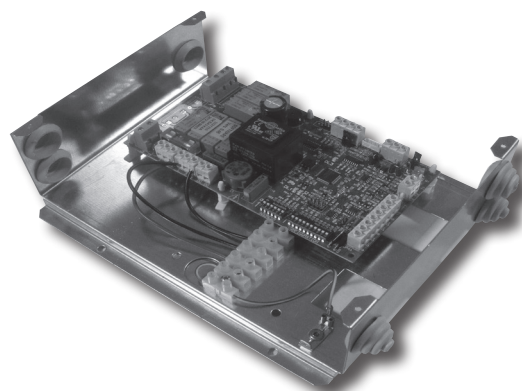
The system consists in a **MBE** board and a series of controls, such as the **T-MB** wall control, the **RT03** infra-red remote control, the **PSM-DI** multifunction control and the **Sabianet** supervisory program.

MBE electronic board

Description	ID	Code
MBE electronic board fitted on the unit	MBE-M	9041071
MBE electronic board supplied with separate packaging	MBE-S	9041070

The **MBE** electronic board, to be mounted on the fan coil internal unit, is set to carry out different functions and adjustment modes, in order to meet the installation requirements. These modes are selected by setting the configuration dip switches on the board.

- Fan ON/OFF thermostatic control.
- Valve ON/OFF thermostatic control and continuous ventilation.
- Valve and simultaneous ventilation ON/OFF thermostatic control.
- Fan operation control depending on the coil temperature (cut-out T3 probe fitted), which can be activated only in heating mode or heating and cooling mode.
- Automatic switch of the operating mode by means of T2 water probe (optional).
- Seasonal switch by means of remote contact.
- ON/OFF of the fan coil by means of the remote contact (window or clock contact).



By activating the cut-out T3 probe function, the fan is stopped in winter when the coil temperature is lower than 32°C and started when the temperature reaches 36°C. In summer mode, the fan stops when the temperature inside the coil exceeds 22°C and starts when it drops below 18°C.

The following connections are located on the power board:

- T-MB wall control.
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network.



T-MB WALL CONTROL



PSM-DI MULTIFUNCTION CONTROL

PC



Sabianet SCREENSHOT

The screenshot shows a web-based control interface for Sabianet. It features a top navigation bar with tabs for 'Amministrazione', 'Gestione impianto', 'Monitoraggio', 'Gestione eventi', and 'Statistiche & Report'. The main area is a grid of control points organized into six groups (gruppo 1 to gruppo 6). Each group contains several control points, each with a unique ID (e.g., C0100001, F0200001) and a status indicator (a circle with a plus or minus sign). On the right side, there is a 'Comandi' (Commands) panel with various settings and controls, including 'Accensione/Spegnimento', 'Moduli', 'Limiti minimo in riscaldamento', 'Limiti massimo riscaldamento', 'Limiti minimo in raffreddamento', and 'Limiti massimo in raffreddamento'. There are also buttons for 'Accendi tutti' and 'Spegni tutti'.

T-MB wall control

Description	ID	Code
Wall control (to be used with MBE board only)	T-MB	9066331E

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:

- Switch the appliance ON and OFF.
- Temperature set.
- Modify the set point (when used as a +/- 3° variation of the set point configured from Sabianet supervisory program).
- Set the fan speed (low, medium, high or autofan).
- Set the operation mode (fan only, cooling, heating).
- Time setting.
- Weekly ON/OFF program.
- Display and change of the fan coil operation parameters.

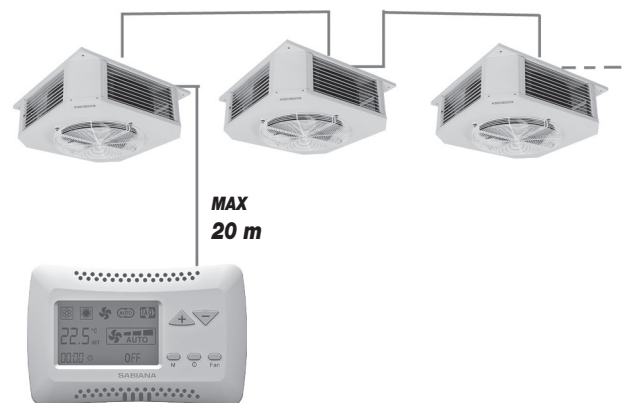


A group of **Elegant ECM** units with **MBE** electronic board can be connected via a serial link and can consequently be managed at the same time by just one **T-MB** wall control or **RT03** infra-red remote control. Using the special jumper present on the MBE board, one unit must be configured as the master, and all the others as slaves.

One control for each unit (MAXIMUM LENGTH OF THE CONNECTION CABLE = 20 m)



One control for more units (20 units max.) (MAXIMUM TOTAL LENGTH OF THE CONNECTION CABLE = 800 m)



T2 accessory for units with MBE electronic board

ID	Code
T2	9025310



The **T2** sensor can be combined with **MBE** boards to be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve). The **T2** sensor must be used as described below:

- Change-Over for 2-pipe system for the automatic switch of the operating mode. If water temperature is lower than 20°C, cooling mode is set; on the other hand, if water temperature exceeds 30°C, heating mode is set.

PSM-DI Multifunction control

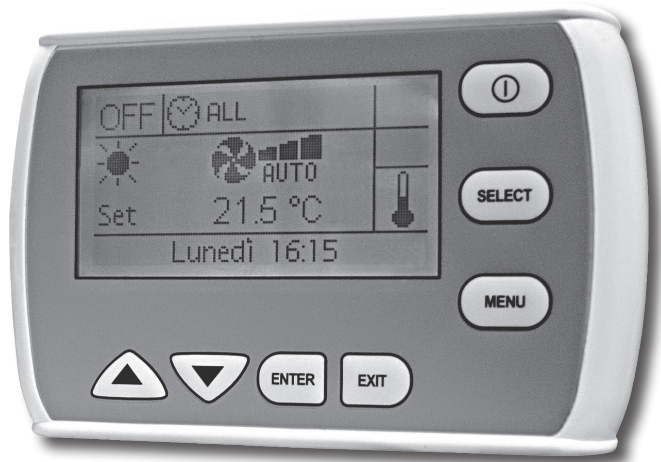
Description	ID	Code
Multifunction control (to be used with MBE board only)	PSM-DI	3021293

Another option available for the serial communication between the units is the possibility to connect up to 60 **Elegant ECM** units in series and manage them with just one wall mounted **PSM-DI** controller.

The wall mounted controller can be used to set the operating mode for each individual unit connected, display the operating conditions of each individual unit, and set the ON/OFF time sets for each day of the week (the program can be set for all the units and for a maximum of two groups of units).

If more than 60 units need to be connected, two or more controllers must be used. Each wall mounted controller only manages the units it is connected to.

The **PSM-DI** control is used to manage a series of fan coils, up to a maximum of 60 units (the maximum length of the RS 485 connection cable must not exceed 800 m), from one single control point.



The **PSM-DI** control communicates via a serial line with all the units connected, with the possibility of controlling them all together or individually. In fact, the unique address of each individual fan coil means that all the units can be called at the same time, or the individual unit called, to perform the following functions:

- display the current operating mode, the fan speed, the set point;
- display the room temperature measured on the individual unit;
- turn all the units ON and OFF at the same time or alternatively each unit individually;
- change the operating mode (fan only, heating, cooling, automatic changeover);
- change the set point;
- modify the values and operation parameters of the fan speed.

Each function can then be sent to all the units connected, or alternatively to each individual unit.

Different set points or operating modes can be set for each individual unit.

The **PSM-DI** panel can also be used for the time management of the units over the week. Four ON times and four OFF times can be set on the units for each day of the week. A different Temperature set that will be considered as Operation set for all connected appliances, can be set for each event. If the Temperature set is not entered for the individual event, it must be set during programming for each individual unit or for the entire network.

Units without receiver or with receiver can be connected within the network: the former can receive instructions only from the **PSM-DI** wall mounted panel; while the latter can receive information from both the wall mounted panel (**PSM-DI**) and infra-red remote control. Use the infra-red remote control to force ON mode of the individual unit, if ON/OFF daily time programming has been set. The unit will regain the settings from the **PSM-DI** panel during execution of successive start-up program.

The PSM-DI panel cannot be used together with the Sabianet management program (see next page).

Note: set the configuration Dip Switches of each fan coil as illustrated in the remote control use manual, based on the required solutions.

Note: the RS 485 network's overall length must not exceed 700/800 metres.

Sabianet program for managing a network of Sabiana MBE fan coils

Description	ID	Code
Hardware/software supervisory system (to be used with MBE board only)	Sabianet	9079118

Sabianet is a centralised control system for networks of Sabiana **MBE** fan coils, based on software that runs on LINUX™.

The **Sabianet** software offers a practical and economical solution for managing the units, with the simple click of the mouse.

The main characteristics include simplicity of use, an extremely complete and functional weekly program, and the possibility to access the historical operating data for each individual appliance connected.



The program can be used to:

- Create uniform groups (groups of units on individual floors, in offices or rooms).
- Save weekly programs configured for different types of operation (summer, winter, mid seasons, closing periods etc.); these can then be recalled and activated with a simple click of the mouse. Weekly on/off cycles can be set for individual units or groups of units.
- Set the operating conditions for each individual unit or groups of units (operating mode, fan speed, temperature setting).
- Set the set point limits for each individual unit or groups of units.
- Switch each individual unit or groups of units ON or OFF.

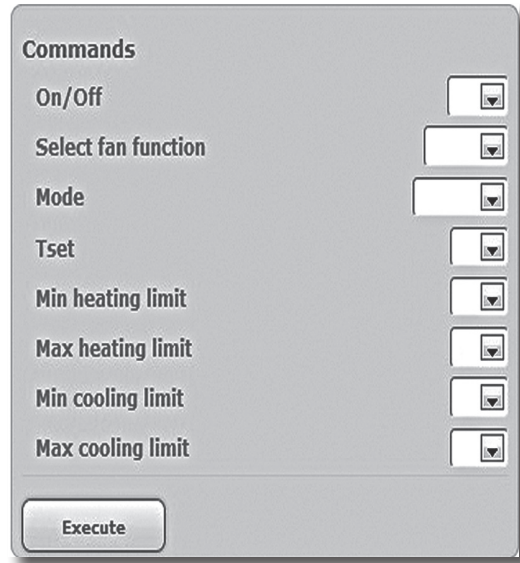
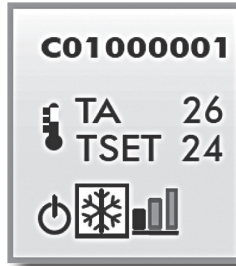
The main program screen can display and interact with the entire network of units. An individual unit, a group of units or the entire network can be called so as to make modifications to the operating mode and the set point. The user can then check the operating status of each individual unit, read the room temperature, the coil temperature and the operating status of the condensate drain pump or any alarms.

“MONITORING” SCREEN

Displaying a unit

The “MONITORING” screen shows the units that are connected to the network and scanned by the program.

The icon of the terminal unit provides the following information:



- Unit name (**C01000001**)

- Set temperature (TSET)

- Room temperature (TA)

- Unit status: ON or OFF

- Mode:

- Summer
- Winter
- Auto
- Fan only

- Fan speed:

- Low
- Medium
- High
- Autofan

The “Weekly Program” can be used to set the unit operating parameters for each day of the week. Up to 20 different weekly programs can be set.

“EVENT MANAGEMENT” SCREEN

The screenshot shows a web browser window with the URL <http://192.168.0.118/GUI/index.php?modulo=events&azione=ModificaProgrammi>. The page title is "Actuator: RUN - Scanner: Caching reading". The navigation bar includes "Administration", "Manage system", "Monitoring", "Manage events", and "Report & Statics".

The main configuration area includes:

- Program name:** summer mode 1
- Start date:** 11/9/2012
- End date:** 22/9/2012
- Set day:** Monday
- Copy by day:** Anyone
- Group:** group 2, group 4, group 1, group 3
- Devices:** room 1, room 2, C01000003, C01000004, C01000005
- State:** On
- Mode:** Fan
- Temperature:** 10°C
- Fan speed:** Auto
- Time start:** 00:00

Below the configuration fields is a table for setting time bands for each day of the week:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
06:00On Cold 20°C Med	06:00On Cold 20°C Med	06:00On Cold 20°C Med	06:00On Cold 20°C Med	06:00On Cold 20°C Med	---	---
06:30Off Cold 20°C Med	06:30Off Cold 20°C Med	06:30Off Cold 20°C Med	06:30Off Cold 20°C Med	06:30Off Cold 20°C Med	---	---
07:00On Cold 20°C Med	07:00On Cold 20°C Med	07:00On Cold 20°C Med	07:00On Cold 20°C Med	07:00On Cold 20°C Med	---	---
07:30Off Cold 20°C Med	07:30Off Cold 20°C Med	07:30Off Cold 20°C Med	07:30Off Cold 20°C Med	07:30Off Cold 20°C Med	---	---
08:00On Cold 20°C Med	08:00On Cold 20°C Med	08:00On Cold 20°C Med	08:00On Cold 20°C Med	08:00On Cold 20°C Med	---	---
08:15Off Cold 20°C Med	08:15Off Cold 20°C Med	08:15Off Cold 20°C Med	08:15Off Cold 20°C Med	08:15Off Cold 20°C Med	---	---
09:00On Cold 20°C Med	09:00On Cold 20°C Med	09:00On Cold 20°C Med	09:00On Cold 20°C Med	09:00On Cold 20°C Med	---	---
09:30Off Cold 20°C Med	09:30Off Cold 20°C Med	09:30Off Cold 20°C Med	09:30Off Cold 20°C Med	09:30Off Cold 20°C Med	---	---

Instructions: Mouse click to select, CTRL + mouse click to undo select, SHIFT + mouse click to multiple select.

Time bands are available for each day of the week. The time and the type of operation to be performed by the unit can be set for each band. The time and the operating parameters can then be displayed before being sent to the unit and implemented.

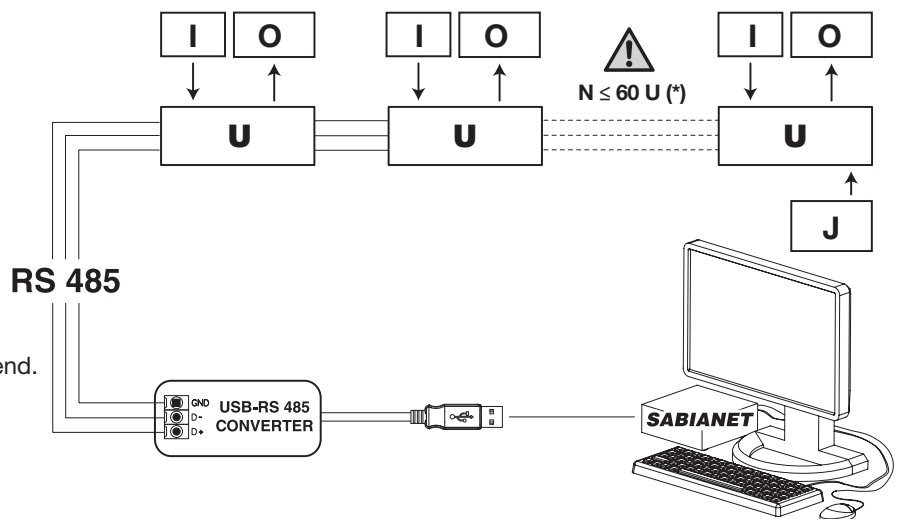
PC Sabianet Software

Connection of a **Elegant ECM network with MBE electronic board**

Legend

- U** = Elegant unit
- I** = power input
- O** = outputs for system
- J** = MC2 jumper to close. Network end.
- N** = 60 units max. (*)

(*) In the event of more than 60 units, add one or more Router-S (see below).



RS 485 serial connection cable

Shielded cable to be used:

Belden 9841, RS-485, 1x2x24 AWG SFTP, 120 Ohm



PSM-DI and Sabianet electronic boards for Elegant units

ID	Code
SIOS	3021092

SIOS is a board equipped with 8 relays with potential free contact to control the activation or deactivation of remote electric utilities. Moreover, the board has 8 digital inlets to display the actuators or external consents, such as motor or other. The SIOS boards can be connected:

- inside a network managed by Sabianet;
- to a PSM-DI panel (one SIOS for each PSM-DI panel).



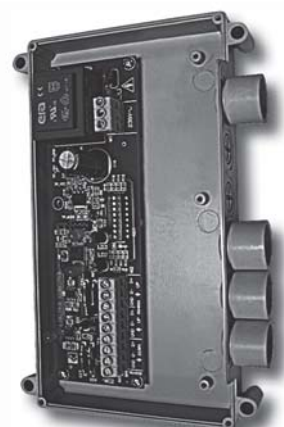
ID	Code
Router-S	3021290

The **Router-S** is an electronic board that:

- allows creating networks with more than 60 units (minimum 2 Router-S are required) or to divide the network (per floor, building, etc.);
- allows creating a Master/Slave sub-network to be controlled as an independent group.

The Router-S can be used only inside a network managed by Sabianet.

- The number of Router-S to be used is:
- up to 60 units: no Router-S
 - from 61 to 120 units: 2 Router-S
 - every 60 subsequent units: 1 additional Router-S



The descriptions and illustrations provided in this publication are not binding: Sabiana reserves the right, whilst maintaining the essential characteristics of the types described and illustrated, to make, at any time, without the requirement to promptly update this piece of literature, any changes that it considers useful for the purpose of improvement or for any other manufacturing or commercial requirements.

Air Conditioning
Ceiling Air Conditioning Elegant



Sabiana s.p.a. • via Piave, 53 • 20011 Corbetta • Milano • Italia • tel. +39.02.97203.1 r.a. / +39.02.97270429 / +39.02.97270576
fax +39.02.9777282 / +39.02.9772820 • www.sabiana.it • info@sabiana.it

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