

CONTENTS

• Construction (CRC)	Page 4
• Models (CRC)	Page 5
• Dimensions, Weight, Water content (CRC)	Page 6
• EUROVENT certification (CRC)	Page 10
• Operation limits (CRC)	Page 13
• Emission tables (CRC)	Page 14
• Correction factors table (CRC)	Page 24
• Water pressure drop (CRC)	Page 25
• Construction (CRR)	Page 26
• Dimensions, Weight, Water content (CRR)	Page 27
• EUROVENT certification (CRR)	Page 28
• Operation limits (CRR)	Page 28
• Emission tables (CRR)	Page 29
• Water pressure drop (CRC)	Page 31
• Accessories for CRC/CRR units	Page 32
• CRYSTALL electrostatic filter (CRC)	Page 45
• Controls for CRC/CRR units	Page 54
• FreeSabiana wireless control system for CRC/CRR units	Page 62
• Controls and units MB version for CRC/CRR units	Page 64
• Management system for a network of CRC/CRR units	Page 69
• PSM-DI and Sabianet electronic boards for CRC/CRR units	Page 71

THE ULTRA QUIET FAN COIL

In line with innovative trends and modern industrial design, the **Carisma** fan coil range meets today's demanding requirements of performance, size, acoustics, low energy, ease of installation and maintenance. The **Carisma** fan coil unit has been designed around a platform of models, versions and accessories, all of which have been independently tested and certified by Eurovent.

Designed around 5 different versions, the extensive range includes wall and ceiling mounted units, exposed or concealed with either tangential or centrifugal fan options, delivering one of the most versatile ranges of fan coils on the market today.

All **CRC** fan coils with centrifugal fans are equipped with electric motors which dramatically reduce electrical consumption of up to 40% comparative to previous models, with 6 speed motors as standard offering greater flexibility in the selection of products.

New market trends have also led to an extension of the four pipe model which now has a two row LTHW battery giving improved outputs at lower flow and return temperatures.

As a special option, the **Carisma** range can be fitted with a patented electronic filter featuring a class D rating according to Standard UNI 11254, with similar performances to the initial ones of a traditional mechanical filter featuring a class F9 rating according to Standard UNI EN 779.

A full range of adjustment and control devices is available including the FREE innovative patented wireless system, for rapidly obtaining correct environmental temperature and with an investment proportional to performances, comfort and desired measurement precision.

The **Carisma** model is complemented with a full range of accessories: various types of adjustment valves, sturdy support feet, rear covering panel for glass installation, additional electric heater, auxiliary condensate pump, fresh air intake louver, air inlet/outlet diffusers for fitted installations.

The **CRR** range with tangential fan combines a reduced dimension (183mm depth) with a modern aesthetic that perfectly suit with any kind of furnishing, while maintaining great performances in terms of sound and consumption.



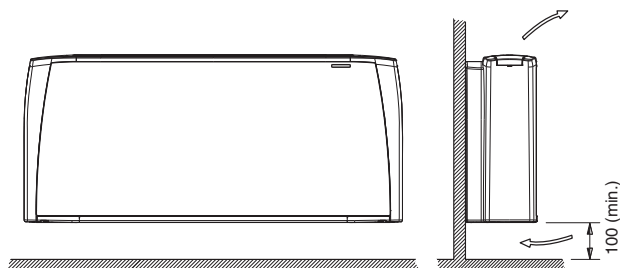
Sabiana take part to the Eurovent program of fan coil performance certification. The official figures are published in the web site www.eurovent-certification.com and in the web site www.certiflash.com. The tested performances are:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Cooling total emission at the following conditions: <ul style="list-style-type: none"> - Water temperature +7°C E.W.T. +12°C L.W.T. - Entering air temperature +27°C dry bulb +19°C wet bulb • Heating emission (2 pipe units) at the following conditions: <ul style="list-style-type: none"> - Entering water temperature +50°C - Entering air temperature +20°C - Water flow rate as for the cooling conditions | <ul style="list-style-type: none"> • Cooling sensible emission at the following conditions: <ul style="list-style-type: none"> - Water temperature +7°C E.W.T. +12°C L.W.T. - Entering air temperature +27°C dry bulb +19°C wet bulb • Heating emission (4 pipe units) at the following conditions: <ul style="list-style-type: none"> - Water temperature +70°C E.W.T. +60°C L.W.T. - Entering air temperature +20°C |
|--|--|
- Fan absorption • Water pressure drop • Sound power

Models

MV

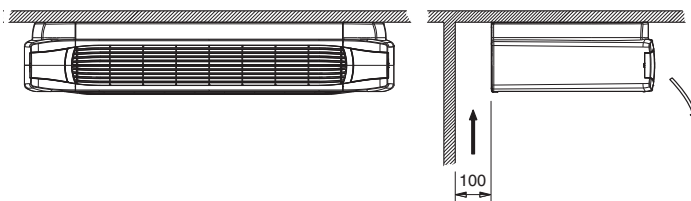
Vertical Casing – Wall Installation



MV

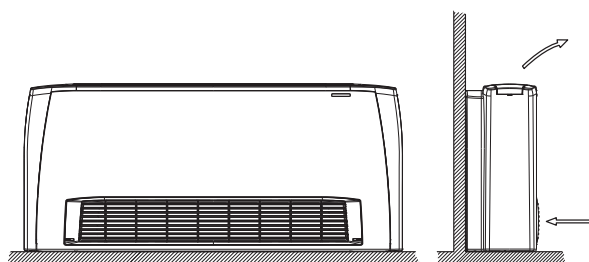
Vertical Casing – Ceiling Installation

NOTE: the MV model can also be installed horizontally leaving behind a 100 mm gap for air intake.



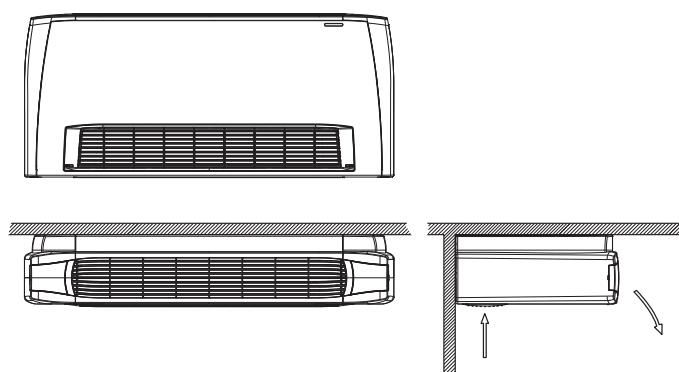
MO-MVB

Vertical Casing – Floor Installation



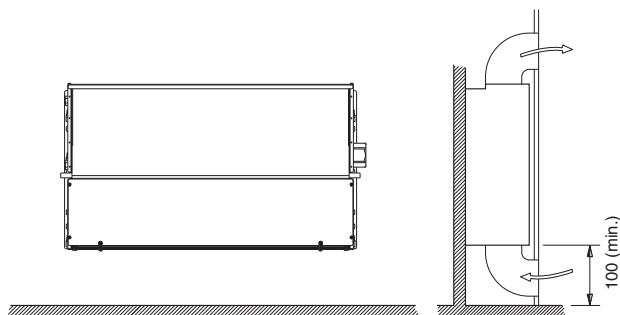
MO-MVB

Horizontal Casing



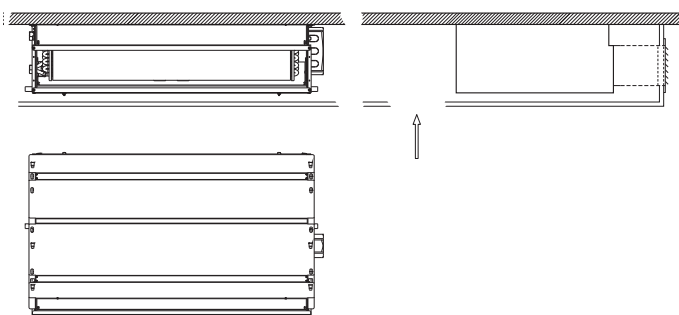
IV-IO

Vertical Concealed

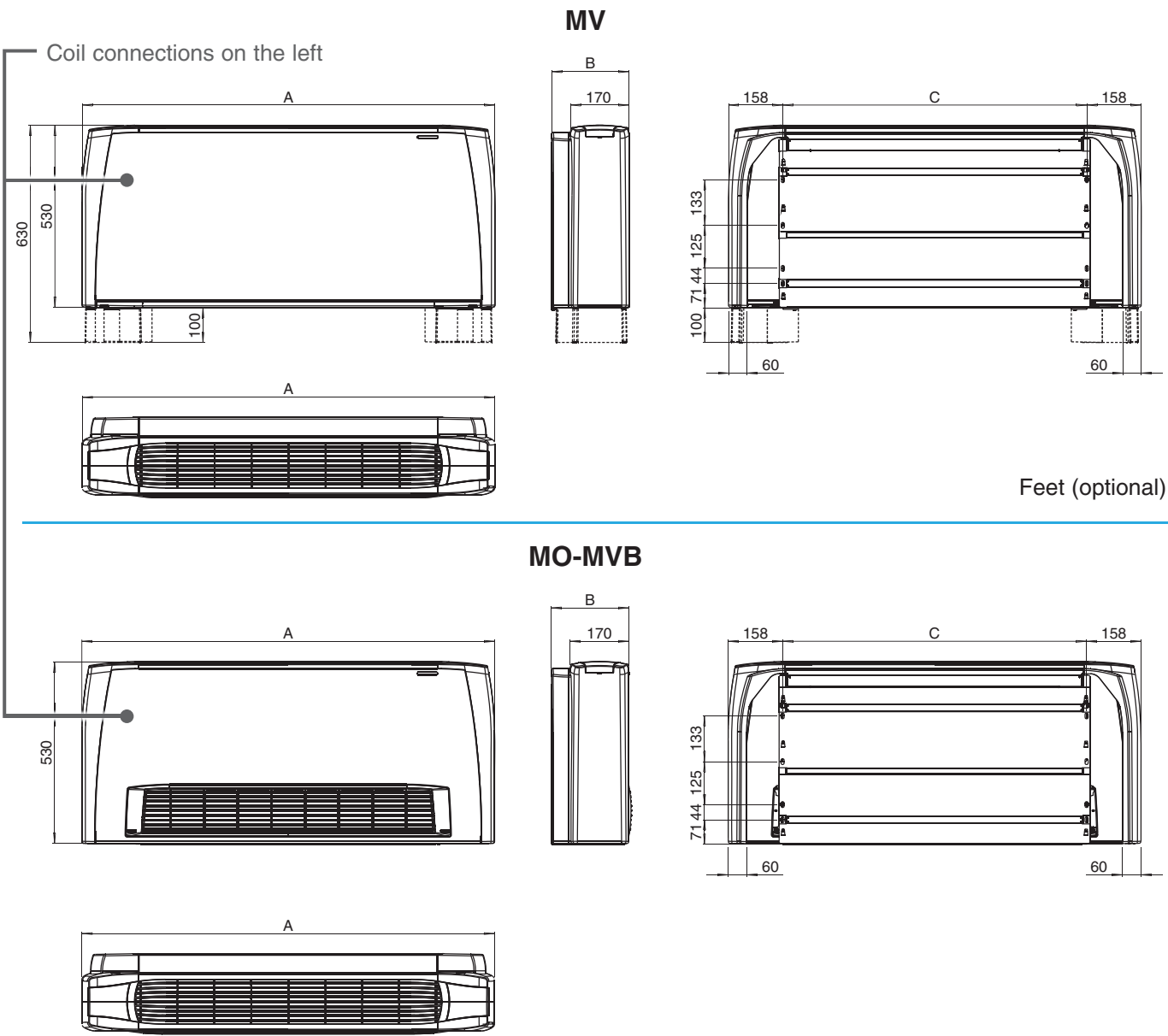


IV-IO

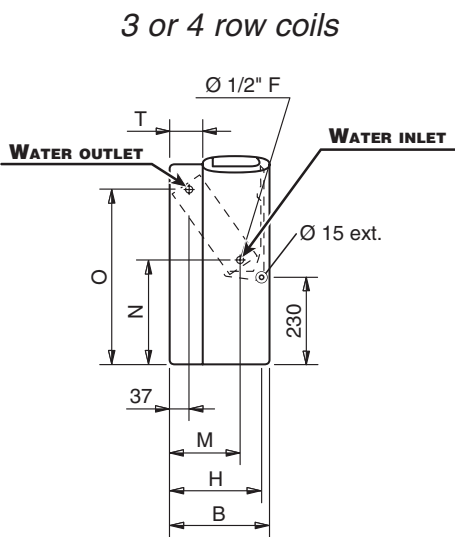
Horizontal Concealed



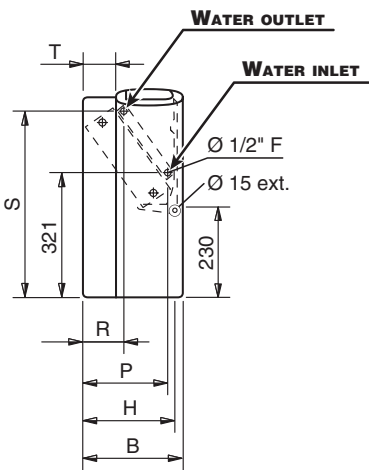
Dimension, Weight, Water content



COIL CONNECTIONS

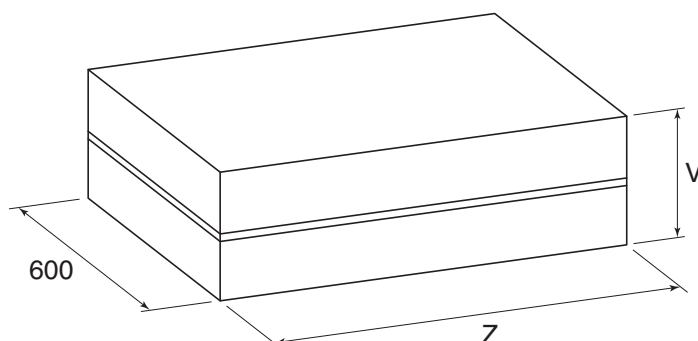


Heating additional coil (1 or 2 rows)



Dimension, Weight, Water content

PACKAGING



Dimension (mm)

MODEL	1	2	3	4	5	6	7	8	9
A	670	770	985	985	1200	1200	1415	1415	1415
B	225	225	225	225	225	225	225	255	255
C	354	454	669	669	884	884	1099	1099	1099
H	205	205	205	205	205	205	205	235	235
M	145	145	145	145	145	145	145	170	170
N	260	260	260	260	260	260	260	270	270
O	460	460	460	460	460	460	460	450	450
P	185	185	185	185	185	185	185	210	210
R	105	105	105	105	105	105	105	110	110
S	475	475	475	475	475	475	475	465	465
T	55	55	55	55	55	55	55	85	85
V	260	260	260	260	260	260	260	290	290
Z	720	820	1035	1035	1250	1250	1465	1465	1465

Weight (kg)

		Weight with packaging									Weight without packaging								
MODEL		1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
Rows	3	15,5	17,2	21,4	22,5	26,9	27,7	32,1	35,7	35,9	13,9	15,4	19,1	20,2	24,1	24,9	28,8	32,0	32,2
	3+1	16,2	18,0	22,6	23,7	28,4	29,2	33,9	37,5	37,7	14,6	16,2	20,3	21,4	25,6	26,4	30,6	33,8	34,0
	3+2	16,7	18,6	23,3	24,4	29,3	30,1	35,0	38,6	38,8	15,1	16,8	21,0	22,1	26,5	27,3	31,7	34,9	35,1
	4	16,0	18,0	22,4	23,5	28,1	29,0	33,6	37,2	37,4	14,4	16,2	20,1	21,2	25,3	26,2	30,3	33,5	33,7
	4+1	16,7	18,8	23,6	24,7	29,6	30,5	35,4	39,0	39,2	15,1	17,0	21,3	22,4	26,8	27,7	32,1	35,3	35,5

Water content (litres)

MODEL	1	2	3	4	5	6	7	8	9
Rows	3	0,5	0,6	0,9	0,9	1,3	1,6	1,7	1,9
	4	0,7	0,8	1,3	1,3	1,7	2,2	2,4	2,8
	+1	0,2	0,2	0,3	0,3	0,4	0,5	0,6	0,6
	+2	0,4	0,4	0,6	0,6	0,8	1,0	1,0	1,2

CRC UNITS WITH 3 ROW COIL

2 pipe units.

The following standard rating conditions are used:

COOLING

Entering air temperature +27°C d.b. +19°C w.b.
 Water temperature +7°C E.W.T. +12°C L.W.T.

HEATING

Entering air temperature +20°C
 Entering water temperature +50°C
 Water flow rate as for the cooling conditions

MODEL		CRC 13						CRC 23						CRC 33					
Speed		1 (E)	2	3	4 (E)	5	6 (E)	1 (E)	2	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN			MED		MAX	MIN		MED		MAX		MIN	MED		MAX		
Air flow	m ³ /h	105	125	150	175	195	220	145	170	220	250	295	340	185	235	270	325	385	440
Cooling total emission (E)	kW	0,59	0,68	0,77	0,86	0,94	1,03	0,91	1,01	1,25	1,38	1,56	1,74	1,28	1,57	1,78	2,07	2,39	2,66
Cooling sensible emission (E)	kW	0,47	0,54	0,62	0,71	0,78	0,86	0,69	0,77	0,97	1,08	1,24	1,40	0,94	1,15	1,32	1,55	1,80	2,02
Heating (E)	kW	0,76	0,90	1,02	1,15	1,26	1,39	1,12	1,27	1,59	1,77	2,02	2,28	1,52	1,87	2,15	2,52	2,92	3,27
Dp Cooling (E)	kPa	0,9	1,1	1,4	1,7	2,0	2,3	2,5	3,0	4,4	5,3	6,5	7,9	6,6	9,4	11,8	15,4	19,7	23,8
Dp Heating (E)	kPa	0,8	0,9	1,2	1,4	1,7	2,0	2,1	2,6	3,7	4,5	5,5	6,7	5,6	8,0	10,0	13,1	16,7	20,2
Fan (E)	W	16	19	21	25	29	33	14	16	22	26	32	40	15	20	25	32	41	49
Sound power (E)	Lw dB(A)	32	34	36	39	42	45	30	33	40	43	47	51	31	36	40	45	49	52
Sound pressure (*)	Lp dB(A)	23	25	27	30	33	36	21	24	31	34	38	42	22	27	31	36	40	43

MODEL		CRC 43						CRC 53						CRC 63					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3	4 (E)	5 (E)	6	1 (E)	2	3 (E)	4	5 (E)	6
			MIN	MED		MAX			MIN		MED		MAX	MIN		MED		MAX	
Air flow	m ³ /h	185	265	335	400	485	570	250	315	420	495	545	650	415	505	590	680	760	830
Cooling total emission (E)	kW	1,27	1,73	2,14	2,46	2,87	3,24	1,68	2,03	2,58	2,94	3,18	3,64	2,54	2,99	3,37	3,77	4,09	4,35
Cooling sensible emission (E)	kW	0,93	1,28	1,60	1,86	2,19	2,51	1,24	1,51	1,94	2,23	2,43	2,82	1,91	2,27	2,59	2,93	3,20	3,44
Heating (E)	kW	1,50	2,09	2,61	3,02	3,56	4,06	1,98	2,42	3,13	3,59	3,89	4,50	3,07	3,66	4,13	4,68	5,09	5,45
Dp Cooling (E)	kPa	6,5	11,2	16,2	20,8	27,2	33,8	4,1	5,8	8,8	11,1	12,7	16,2	8,6	11,4	14,1	17,2	19,8	22,1
Dp Heating (E)	kPa	5,5	9,5	13,8	17,7	23,1	28,7	3,5	4,9	7,5	9,4	10,8	13,8	7,3	9,7	12,0	14,6	16,8	18,8
Fan (E)	W	14	21	28	34	44	57	18	22	32	39	46	61	37	46	55	67	78	88
Sound power (E)	Lw dB(A)	27	33	39	43	47	52	26	31	37	41	43	48	37	42	46	49	52	54
Sound pressure (*)	Lp dB(A)	18	24	30	34	38	43	17	22	28	32	34	39	28	33	37	40	43	45

MODEL		CRC 73						CRC 83						CRC 93					
Speed		1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)
			MIN		MED		MAX		MIN		MED		MAX		MIN		MED		MAX
Air flow	m ³ /h	445	535	630	735	840	925	510	655	815	1020	1100	1200	735	830	980	1210	1365	1500
Cooling total emission (E)	kW	2,87	3,34	3,80	4,29	4,76	5,11	3,06	3,74	4,41	5,19	5,47	5,82	4,08	4,47	5,06	5,87	6,36	6,74
Cooling sensible emission (E)	kW	2,13	2,50	2,87	3,27	3,66	3,95	2,32	2,88	3,44	4,12	4,37	4,68	3,16	3,49	4,00	4,73	5,19	5,55
Heating (E)	kW	3,41	4,01	4,60	5,19	5,80	6,27	3,84	4,80	5,61	6,74	7,15	7,66	5,21	5,71	6,54	7,72	8,47	9,06
Dp Cooling (E)	kPa	12,3	16,2	20,3	25,1	30,1	34,2	7,3	10,3	13,8	18,4	20,2	22,5	11,9	13,8	17,3	22,4	25,9	28,6
Dp Heating (E)	kPa	10,5	13,8	17,3	21,3	25,6	29,1	6,2	8,8	11,8	15,6	17,3	19,2	10,2	12,0	14,9	19,1	22,5	24,6
Fan (E)	W	44	54	66	79	92	103	47	62	81	105	116	130	78	92	108	134	152	176
Sound power (E)	Lw dB(A)	38	42	47	51	54	56	39	45	50	56	58	60	47	50	54	58	62	64
Sound pressure (*)	Lp dB(A)	29	33	38	42	45	47	30	36	41	47	49	51	38	41	45	49	53	55

(E) = Eurovent certified performance. MIN-MED-MAX = Standard connected speeds.

(*) = The sound pressure levels are 9 dB(A) lower than the sound power levels
 and apply to the reverberant field of a 100 m³ room and a reverberation time of 0.5 sec.

EUROVENT Certification

www.eurovent-certification.com
www.certiflash.com

CRC UNITS WITH 4 ROW COIL

2 pipe units.

The following standard rating conditions are used:

COOLING

Entering air temperature +27°C d.b. +19°C w.b.
 Water temperature + 7°C E.W.T. +12°C L.W.T.

HEATING

Entering air temperature +20°C
 Entering water temperature +50°C
 Water flow rate as for the cooling conditions

MODEL		CRC 14						CRC 24						CRC 34					
Speed		1 (E)	2	3	4 (E)	5	6 (E)	1 (E)	2	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN			MED		MAX	MIN		MED		MAX		MIN		MED		MAX	
Air flow	m³/h	105	125	150	175	195	220	145	170	220	250	295	340	185	235	270	325	385	440
Cooling total emission (E)	kW	0,67	0,78	0,89	1,02	1,11	1,23	1,01	1,13	1,43	1,59	1,81	2,04	1,34	1,65	1,89	2,21	2,57	2,88
Cooling sensible emission (E)	kW	0,51	0,60	0,68	0,79	0,87	0,97	0,74	0,83	1,07	1,19	1,38	1,57	0,96	1,20	1,38	1,62	1,90	2,14
Heating (E)	kW	0,82	0,96	1,10	1,27	1,39	1,55	1,18	1,34	1,72	1,92	2,20	2,50	1,56	1,94	2,23	2,63	3,07	3,46
Dp Cooling (E)	kPa	1,9	2,5	3,2	4,0	4,7	5,6	4,9	6,1	9,2	11,0	13,9	17,2	3,7	5,3	6,7	8,9	11,5	14,1
Dp Heating (E)	kPa	1,5	2,0	2,6	3,3	3,9	4,7	3,9	4,9	7,5	9,2	11,6	14,6	2,9	4,2	5,4	7,0	9,2	11,3
Fan (E)	W	16	19	21	25	29	33	14	16	22	26	32	40	15	20	25	32	41	49
Sound power (E)	Lw dB(A)	32	34	36	39	42	45	30	33	40	43	47	51	31	36	40	45	49	52
Sound pressure (*)	Lp dB(A)	23	25	27	30	33	36	21	24	31	34	38	42	22	27	31	36	40	43

MODEL		CRC 44						CRC 54						CRC 64					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3	4 (E)	5 (E)	6	1 (E)	2	3 (E)	4	5 (E)	6
			MIN	MED		MAX			MIN		MED		MAX	MIN		MED		MAX	
Air flow	m³/h	185	265	335	400	485	570	250	315	420	495	545	650	415	505	590	680	760	830
Cooling total emission (E)	kW	1,32	1,83	2,28	2,65	3,12	3,56	1,79	2,19	2,83	3,25	3,54	4,09	2,83	3,38	3,86	4,38	4,79	5,13
Cooling sensible emission (E)	kW	0,95	1,34	1,68	1,97	2,34	2,69	1,30	1,60	2,08	2,40	2,63	3,07	2,07	2,49	2,86	3,27	3,60	3,87
Heating (E)	kW	1,54	2,16	2,72	3,17	3,76	4,34	2,06	2,53	3,30	3,81	4,17	4,83	3,39	4,07	4,69	5,35	5,88	6,35
Dp Cooling (E)	kPa	3,4	6,1	9,0	11,7	15,5	19,6	7,3	10,4	16,3	20,8	24,2	31,3	14,4	19,7	24,8	30,9	36,2	40,9
Dp Heating (E)	kPa	2,5	4,6	6,9	9,0	12,2	15,6	5,7	8,3	13,1	17,0	19,9	25,7	11,0	15,2	19,5	24,7	29,3	33,5
Fan (E)	W	14	21	28	34	44	57	18	22	32	39	46	61	37	46	55	67	78	88
Sound power (E)	Lw dB(A)	27	33	39	43	47	52	26	31	37	41	43	48	37	42	46	49	52	54
Sound pressure (*)	Lp dB(A)	18	24	30	34	38	43	17	22	28	32	34	39	28	33	37	40	43	45

MODEL		CRC 74						CRC 84						CRC 94					
Speed		1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)
			MIN		MED		MAX		MIN		MED		MAX		MIN		MED		MAX
Air flow	m³/h	445	535	630	735	840	925	510	655	815	1020	1100	1200	735	830	980	1210	1365	1500
Cooling total emission (E)	kW	3,03	3,56	4,08	4,64	5,17	5,58	3,27	4,03	4,80	5,73	6,06	6,47	4,42	4,88	5,57	6,54	7,13	7,60
Cooling sensible emission (E)	kW	2,22	2,62	3,03	3,47	3,89	4,23	2,43	3,04	3,66	4,43	4,71	5,06	3,36	3,72	4,29	5,11	5,63	6,05
Heating (E)	kW	3,55	4,20	4,86	5,55	6,19	6,71	4,03	5,06	6,11	7,36	7,84	8,43	5,59	6,22	7,14	8,53	9,38	10,08
Dp Cooling (E)	kPa	9,5	12,5	15,9	20,0	24,2	27,7	5,2	7,6	10,3	14,1	15,6	17,5	9,0	10,6	13,4	17,8	20,7	23,2
Dp Heating (E)	kPa	7,7	10,3	13,3	16,9	20,5	23,7	4,1	6,2	8,4	11,4	12,7	14,5	7,2	8,7	11,1	14,8	17,0	19,3
Fan (E)	W	44	54	66	79	92	103	47	62	81	105	116	130	78	92	108	134	152	176
Sound power (E)	Lw dB(A)	38	42	47	51	54	56	39	45	50	56	58	60	47	50	54	58	62	64
Sound pressure (*)	Lp dB(A)	29	33	38	42	45	47	30	36	41	47	49	51	38	41	45	49	53	55

(E) = Eurovent certified performance.

MIN-MED-MAX = Standard connected speeds.

(*) = The sound pressure levels are 9 dB(A) lower than the sound power levels
 and apply to the reverberant field of a 100 m³ room and a reverberation time of 0.5 sec.