



Air cooled **Low Noise** condensing unit for outdoor location in capacities from 40 to 250kW



Green
High Performance
Low Noise





Refac Ecologic RA **Air cooled condensing unit for** **outdoor location in capacities** **from 40 to 250kW, Low Noise**

A total new concept in the succesful range of Refac condensing units is the Ecologic RA model. Having carefully noted our customers' requirements, the Ecologic RA condensing unit has been developed and perfectly matches a wide range of specific project requirements

With the Ecologic Low Noise condensing unit Refac now offers the market place exceptionally low noise equipment. The user friendly logic microprocessor control ensures a reliable operation of the system, which is equipped with scroll compressors.

An important feature is the application of multiple Maneurop Performer Scroll compressors per circuit in tandem operation. As a result even in single circuit models multiple capacity stages can be obtained depending on the unit type. The advantage is an optimal operation of the system in partial load conditions with the least possible installation work for refrigerant piping because hot-gas bypass options can often be omitted. Additionally single circuit dx-coils can be applied up to type RA120 (120kW nominal cooling capacity), which reduces installation cost considerably and simultaneously maintaining the possibilities of partial load.

The full range offers the choice between R22 or R407C refrigerants at the same price. Also like with the Aircubes, the weather protection finish is excellent, due to application of hot dipped galvanised steel frames



Showing respect for our environment

Priority has been given to the environment when designing the Ecologic. This is noted by the following characteristics:

- Supply of the ozone friendly refrigerant R407C as a standard.
- A high efficiency; the electrical power consumption is utilized at a maximum.
- Recycling of the applied materials
- Less refrigerant by using scroll compressors and plate type evaporators.
- Low Noise Concept; ultra silent!





High Performance

The Ecologic highlights Refac's effort for the maximum performance of a condensing unit. Both as a single circuit and a double circuit unit, the condensing unit is equipped with Maneurop Performer Scroll compressors. The compressors provide for a high efficiency and also ensure a vibration-free operation for noise reduction.

The parallel linkage of two or three compressors on one chilling circuit makes the condensing unit highly suitable for operation under partial loads. Briefly: always the correct cooling capacity available!

The installed Ziehl-Abegg axial fans have a very high efficiency.



Low Noise, almost completely silent

The **Ecologic Low Noise** is a very silent condensing unit:

- The new generation 8-pole axial fans with special shaped blades give a considerable noise reduction. These fans have a remarkable low speed. Acoustical design of the air inlet completes the Low Noise concept of the fans.
- Scroll compressors are placed in an acoustical enclosure.
- A relatively low air velocity over a large condenser surface minimises the air noise.
- Special application of acoustical materials.



Important options

- Refrigerant R407C or R22.
- Winter control up to -20°C (on request).
- Hot-gas bypass on single circuit models incorporating 2 compressors in tandem.
- Alucoat 507 condenser coating.
- (Spring) anti-vibration dampers.
- Manometer control panel.
- Electronic soft starters to reduce the starting current.
- RAL-colour as specified.

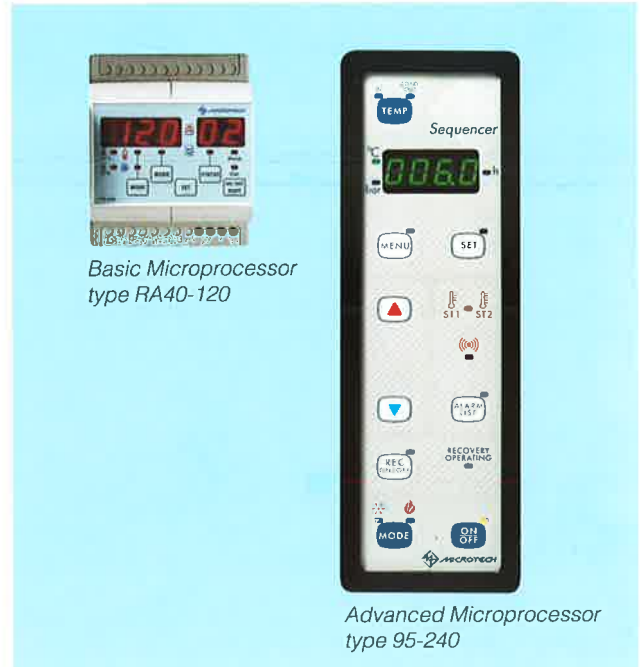




Controls : Control in line with the user

Basic/Advanced Microprocessor Control

The Ecologic Basic (standard) and the Ecologic Low Noise (optional) have an advanced Microprocessor control for read-out, operation and safety of the condensing unit. By using three levels of entry for user, service and supplier, the control is very user-friendly. Fitted as standard are operation signals per refrigerant circuit and a potential free failure indication for remote signal. Winter control up to 0°C is supplied as standard.



Basic Microprocessor
type RA40-120

Advanced Microprocessor
type 95-240



Technical Data (R22/R407C)

TYPE	RA	40	50	70	80	105	120	95	140	160	205	240
Refrigerant		R22/R407C										
Cooling capacity	kW	41,0	47,7	68,3	80,3	102,5	120,4	95,4	136,6	160,5	205,1	240,9
No. of circuits/compressors		1/2	1/2	1/2	1/2	1/3	1/3	2/4	2/4	2/4	2/6	2/6
No. of capacity steps		2	2	2	2	3	3	4	4	4	6	6
Power consumption	kW	14,3	17,2	25,2	30	33	37	44	49	59	73	87
Maximum current	A	38	44	58	66	82	94	82	111	127	163	187
Nominal current	A	32	36	51	57	71	79	65	96	107	141	158
Max starting current	A	110	145	207	211	231	239	183	260	271	312	332
Electrical supply		3~400V-50Hz+PE & 1x230V~50Hz+0+PE										
Total elec. con. value	kVA	26	31	41	46	57	65	57	77	88	113	129
No. of fans/compr.		2/2	2/2	2/2	2/2	3/3	3/3	4/4	4/4	4/4	6/6	6/6
Operating weight	kg	650	680	780	1100	1250	1350	1150	1886	2050	2500	2750
Dimensions LxWxH	mm	3300x1050x1850			4700x1050x1850			3300x1900x1850			4700x1900x1850	
Refrigerant connection (liq.)	inch		7/8"			1 1/8"	1 3/8"	2x 7/8"		2x 1 1/8"		
Refrigerant connection (suction)	inch	1 5/8"		2 1/8"	2 1/8"		2 5/8" *	2x 1 5/8"	2x 2 1/8"	2x 2 1/8"		2x 2 5/8"
Noise level	dB(A)	43,5	43,8	45,5	46,8	47,3	48,5	46,8	48,6	49,8	50,3	51,5
Refrigerant charge		nitrogen										

- 1 Condensor air inlet temperature 35°C, evaporating temperature +5°C
- 2 Noise level in dB(A) is 2×10^{-5} N/m² at 10 meters distance under free field conditions
- 3 Max. allowable variation in supply voltage +/- 10%
- 4 Max. starting current=Start of last compressor, other compressors and fans nominally loaded
- 5 Refrigerant risers to be reduced in diameter up to 1 5/8"
- 6 Refrigerant risers to be reduced in diameter up to 2 1/8"



Subject to change without notice.

