

Remote air condenser



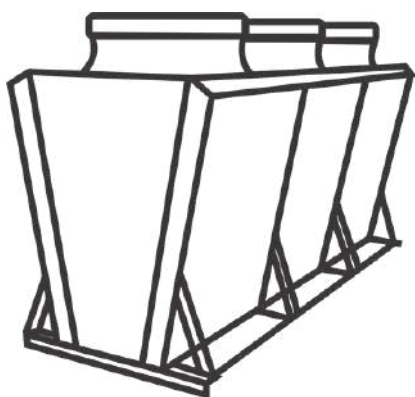
Remote air condenser





34.818 a 538.650 Kcal/h
40.486 a 626.227 W

Remote air-cooled condenser in V



Benefits

- Longer lifespan of the motor-fan assembly
- Greater thermal and energy efficiency
- Maximum efficiency throughout the entire lifespan
- Standard electronic motors
- Greater range of capacities
- Adaptable to all refrigerants
- Motor interchangeability: AC and EC, 800mm, with the possibility of mixed use
- Plug & Play concept: Easy installation and operation
- Standardized electrical assemblies (NBR5410)
- Electrical panel with printed circuits and easy power supply
- Easy cleaning and maintenance
- Special and ultra-resistant KTL paint on the feet
- Exclusive protection against harsh environments in 2 levels

Standard Version

- Spacing between 12 FPI (fins per inch) aluminum fins
- Copper tubes with 3/8" outer diameter
- Smooth aluminum flat panel casing
- Electronic fan motors
- Lifting handles

Options

- Multiple circuits can power several compressors at the same time
- Anti-corrosion treatment for installations near the seaside
- Pressure transducer for controlling electronic fans
- Copper tubes and aluminum fins (Cu/Al) for CO2

Applications



Meat



Dairys



Agrobussines



Beverages



Industrial



Pharmaceutical

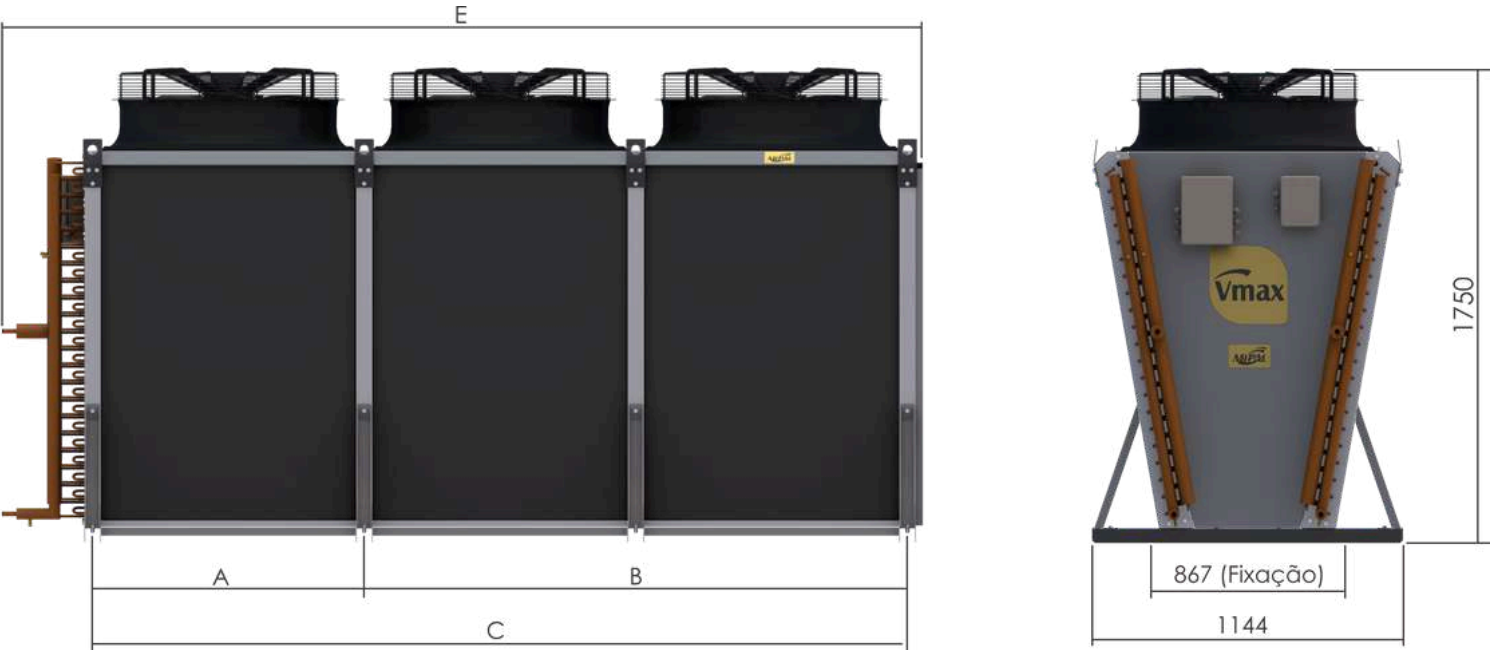



Food



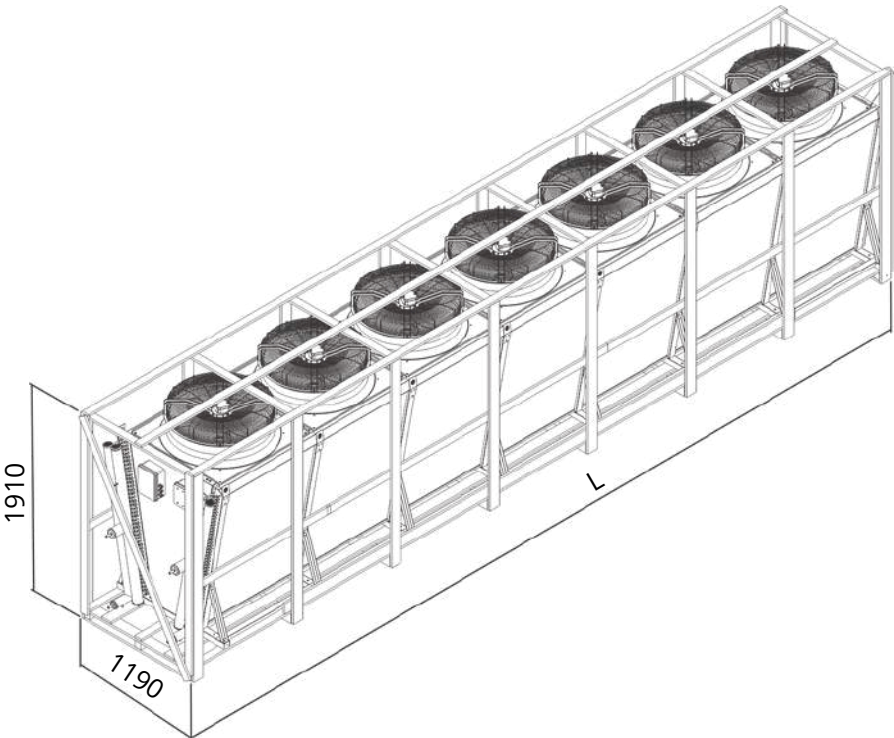
Wholesale
and retail


Dimensional










	Dimensional (mm)			
	A	B	C	E
1	1000	-	1000	1390
2	1000	1000	2000	2390
3	1000	1000 (2X)	3000	3390
4	1000	1000 (3X)	4000	4390
5	1000	1000 (4X)	5000	5390
6	1000	1000 (5X)	6000	6390
7	1000	1000 (6X)	7000	7390

Packaging



	(mm)
	L
1	1530
2	2530
3	3530
4	4530
5	5530
6	6530
7	7530

Capabilities • Motor fans 800 mm

			1x 		2x 		3x 		4x 		5x 		6x 		7x 		
AC 6 Polos	Model		70	76	140	152	210	228	280	304	350	380	420	456	490	532	
	Noise level at 10 meters	dB(a)	43	43	46	46	48	48	49	49	50	50	51	51	52	52	
	Cdr (12app) DT 10°C	Kcal/h	63,242	67,547	126,85	135,1	190,27	202,6	253,7	270,2	317,1	337,7	380,5	405,3	444	472,8	
		Watts	73,537	78,543	147,5	157,1	221,25	235,6	295	314,2	368,7	392,7	442,5	471,3	516,2	549,8	
	Air flow rate	m³/h	20,35	20,35	40,7	40,7	61,05	61,05	81,4	81,4	101,8	101,8	122,1	122,1	142,5	142,5	
	Motor 60Hz	Power	kW	1,99	1,99	3,98	3,98	5,97	5,97	7,96	7,96	9,95	9,95	11,94	11,94	13,93	13,93
		220V Voltage	A	6,5	6,5	13	13	19,5	19,5	26	26	32,5	32,5	39,0	39,0	45,5	45,5
380V Voltage		A	3,78	3,78	7,56	7,56	11,34	11,34	15,12	15,12	18,9	18,9	22,68	22,68	26,46	26,46	
AC 8 Polos	Model		60	65	120	130	180	195	240	260	300	325	360	390	421	455	
	Noise level at 10 meters	dB(a)	38	38	41	41	43	43	44	44	45	45	46	46	47	47	
	Cdr (12app) DT 10°C	Kcal/h	52,048	55,975	104,1	112	156,14	167,9	208,2	223,9	260,2	279,9	312,3	335,9	364,3	391,8	
		Watts	60,521	65,087	130,12	130,2	181,56	195,3	242,1	260,3	302,6	325,4	363,1	390,5	423,6	455,6	
	Air flow rate	m³/h	19,27	19,27	38,54	38,54	57,81	57,81	77,08	77,08	96,35	96,35	115,6	115,6	134,9	134,9	
	Motor 60Hz	Power	kW	1,12	1,12	2,24	2,24	3,36	3,36	4,48	4,48	5,6	5,6	6,72	6,72	7,84	7,84
		220V Voltage	A	4,15	4,15	8,3	8,3	12,45	12,45	16,6	16,6	20,75	20,75	24,9	24,9	29,05	29,05
380V Voltage		A	2,4	2,4	4,8	4,8	7,2	7,2	9,6	9,6	12	12	12	12	16,8	16,8	
AC 12 Polos	Model		40	44	80	86	122	129	160	172	200	215	241	258	282	302	
	Noise level at 10 meters	dB(a)	32	32	35	35	37	37	38	38	39	39	40	40	41	41	
	Cdr (12app) DT 10°C	Kcal/h	34,818	37,27	69,636	74,54	104,45	111,8	139,3	149,1	174,1	186,4	208,9	223,6	243,7	260,9	
		Watts	40,486	43,337	80,972	86,67	121,46	130	161,9	173,3	202,4	216,7	242,9	260	283,4	303,4	
	Air flow rate	m³/h	12,15	12,15	24,3	24,3	36,45	36,45	48,6	48,6	60,75	60,75	72,9	72,9	85,05	85,05	
	Motor 60Hz	Power	kW	0,4	0,4	0,8	0,8	1,2	1,2	4,48	4,48	5,60	5,60	6,72	6,72	7,48	7,48
		220V Voltage	A	2,00	2,00	4,00	4,00	6,00	6,00	16,60	16,60	20,75	20,75	24,90	24,90	29,05	29,05
380V Voltage		A	1,15	1,15	2,3	2,3	3,45	3,45	9,60	9,60	12,00	12,00	14,40	14,40	16,80	16,80	
Electronic motor	Model		83	89	166	179	249	267	332	356	415	446	498	534	581	623	
	Noise level at 10 meters	dB(a)	44	44	47	47	49	49	50	50	51	51	52	52	53	53	
	Cdr (12app) DT 10°C	Kcal/h	71,94	76,95	143,88	153,9	215,82	230,9	287,8	307,8	359,7	384,8	431,6	461,7	503,6	538,7	
		Watts	83,651	89,477	167,3	179	250,95	268,4	334,6	357,9	418,3	447,4	501,9	536,9	585,6	626,3	
	Air flow rate	m³/h	24,68	24,68	49,36	49,36	74,04	74,04	98,72	98,72	123,4	123,4	148,1	148,1	172,8	172,8	
	230V	230V Voltage	kW	2,4	2,4	4,8	4,8	7,2	7,2	9,6	9,6	12	12	14,4	14,4	16,8	16,8
		230V Voltage	A	7,5	7,5	15	15	22,5	22,5	30	30	37,5	37,5	45	45	52,5	52,5
380V		380V Voltage	kW	2,56	2,56	5,12	5,12	7,68	7,68	10,24	10,24	12,8	12,8	15,36	15,36	17,92	17,92
	230V Voltage	A	3,9	3,9	7,8	7,8	11,7	11,7	15,6	15,6	19,5	19,5	23,4	23,4	27,3	27,3	
Other data																	
Volume of the tubes		Litros	12,20	18,20	24,40	36,40	36,40	54,60	48,80	72,80	61,00	91,00	73,20	109,20	85,40	127,40	
Thermal exchange area		m²	195,4	198,1	390,8	396,2	586,2	594,3	781,6	792,4	977	990,5	1.172,4	1.188,6	1.367,8	1.386,7	
Input collectors		Ø	1 5/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	
Output Collectors		Ø	7/8"	7/8"	1 1/8"	1 1/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 5/8"	2 5/8"	2 5/8"	2 5/8"	2 5/8"	2 5/8"	
Net weight		kg	116,2	131,9	232,5	263,8	351,6	396,8	461,1	518,9	558,4	658,0	694,6	780,6	824,3	937,3	
Gross weight		kg	156,6	171,9	272,5	303,8	391,6	436,8	501,1	558,9	598,4	698,0	734,6	820,1	864,3	977,3	

Connectors resistant to temperature variations, vibration, and shock. The spring connection technology reduces the time of electrical installations, without the need for special tools. Standardized electrical components

*) Same capacities for 50Hz and 60Hz. Capacity in R-22.

Dt1: Difference between the air inlet temperature at the evaporator and the refrigerant evaporation temperature.

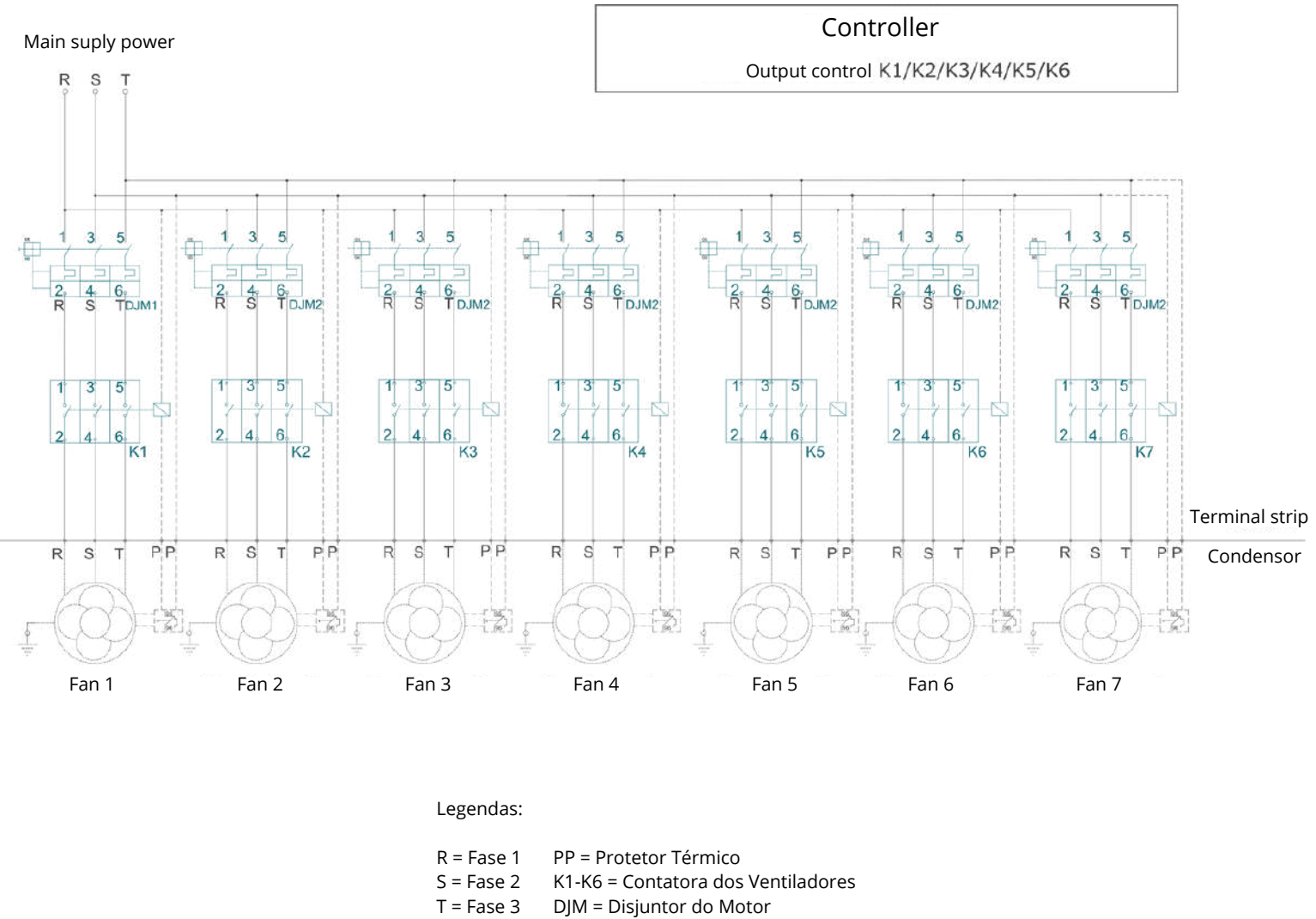
°K = Degrees Kelvin °F = Degrees Fahrenheit

The air inlet temperature at the evaporator is considered approximately the chamber temperature

How to buy

Model	Description	Available options
VMAX	Remote air condenser	
F	Spacing between fins	F • 12 app
0040	Model	0040 a 0623
T1	Number of circuits	Até 9 circuitos: T1, T2, T3, T4, T5, T6, T7, T8 ou T9 Acima de 9 circuitos: 10, 11, 12...
00	Accessories	00 • Without accessories 04 • Pressure transducer 05 • Electrical panel with control 06 • Electrical panel without control 07 • Electrical box 08 • Electrical box and pressure transducer 09 • Pressure transducer and electrical panel without control
A	Finish	A • Aluminum Cabinet B • Aluminum cabinet with N1 protection on the fins P • Aluminum cabinet with N3 protection on the fins
MEC	Motor	EC800 • EC 800mm Motor Fan AC80B • AC 800mm Motor Fan 06 Poles AC80C • EC 800mm Motor Fan 08 Poles AC80E • EC 800mm Motor Fan 12 Poles
G	Voltage and Frequency	H • Motor = 230V/3F/50Hz Q • Motor = 230V/3F/60Hz E • Motor = 380V/3F/50Hz V • Motor = 380V/3F/60Hz
1	Packaging	1 • Crate

Alimentação 220V, 380V e 440V • 50/60Hz • 3Ø



Attention:

- To size the installation components, refer to the data tables in the catalog.
- To change the factory power supply, contact engineering.
- The safety thermostat must be connected in series with the contactor coil and controller activation.
- Always use ground wire.
- Connect the fan's thermal protector in series with the contactor coil and controller activation (PP).

Correction of capabilities

F1	Factor related to DT(*)										
DT F1	7 1,42	8 1,25	9 1,11	10 1	11 0,91	12 0,83	13 0,77	14 0,71	15 0,67	18 0,55	20 0,5
F2	Refrigerant factor										
Refrigerant F2	R22 1		R134A 1,01		R404A 0,983		R407C 0,98		R410A 0,95		
F3	Factor related to the inlet air temperature										
Entrance temperature	+15 0,9	+20 0,95	+25 0,97	+30 0,98	+35 1	+40 1,03	+45 1,08	+50 1,12			
F4	Factor related to the altitude of the installation location										
Height F4	0 1,00	600 1,04	800 1,06	1000 1,07	1200 1,09	1400 1,10	1600 1,12	1800 1,14	2000 1,16		
Fsound	Sound level adjustment based on the distance from the condenser and desired location										
Distance Dba	1 +20	2 +14	3 +10	4 +8	5 +6	10 0	15 -4	20 -6	40 -12	60 -16	80 -20

The thermal capacities presented in the tables of this catalog correspond to standard operating conditions and may not always be those available in the project. Therefore, we present a correction method for real conditions that should be applied before entering the equipment selection table

DT = difference between air inlet and condensation temperatures

FCP	Evaporation temperature	FCP coefficient for hermetic or semi-hermetic compressors Condensation Temperature (°C)						Coeficiente Fcp para compressores abertos Temperatura de Condensação °C					
	°C	32	35	40	45	50	55	32	35	40	45	50	55
	10	1,14	1,16	1,18	1,22	1,24	1,29	1,09	1,11	1,13	1,16	1,18	1,21
	5	1,18	1,20	1,22	1,25	1,29	1,33	1,12	1,13	1,16	1,18	1,21	1,24
	0	1,21	1,23	1,25	1,29	1,33	1,37	1,14	1,15	1,18	1,21	1,24	1,28
	-5	1,25	1,27	1,30	1,33	1,38	1,41	1,16	1,18	1,21	1,24	1,28	1,32
	-10	1,29	1,31	1,34	1,38	1,43	1,48	1,19	1,21	1,24	1,28	1,32	1,36
	-15	1,33	1,35	1,39	1,43	1,48	1,55	1,23	1,25	1,28	1,32	1,36	1,40
	-20	1,38	1,41	1,44	1,48	1,55	1,62	1,26	1,28	1,32	1,36	1,40	1,45
	-25	1,44	1,47	1,50	1,55	1,62	1,72	1,30	1,32	1,36	1,40	1,45	1,49
	-30	1,51	1,53	1,57	1,62	1,72	1,87	1,34	1,36	1,40	1,45	1,49	1,55
	-35	1,58	1,60	1,66	1,75	1,87	2,07	1,37	1,40	1,45	1,49	1,55	1,62
-40	1,66	1,70	1,76	1,87	2,03	2,27	1,39	1,45	1,50	1,55	1,62	1,67	

Example of selection

Terminology	
Qcd	Heat effectively rejected in the condenser (value for entry in selection tables)
Qcp	Refrigeration capacity of the compressor (installation project data)
Qm	Heat generated by the compressor engine
Qbhp	Potência do eixo em compressores abertos (em HP)
Qkw	Potência consumida por compressores herméticos e semi-herméticos
F1, F2, F3, F4, Fsom e FCP	Correction factor and compressor factor
TA	Room temperature

Calculation formulas	
Qm = Pbhp x 642 To open compressors	
Qm = Qkw x 860 For hermetic or semi-hermetic compressors	
Qcd = (Qcp + Qm) x F1 x F2 x F3 x F4	
Here's the translation: "If information regarding the compressor's engine and consumption is not available, we recommend practical factors (Fcp) to be used for obtaining the effectively rejected capacity in the condenser, according to the formula below:	
Qcd = Qcp x Fcp x F1 x F2 x F3 x F4	

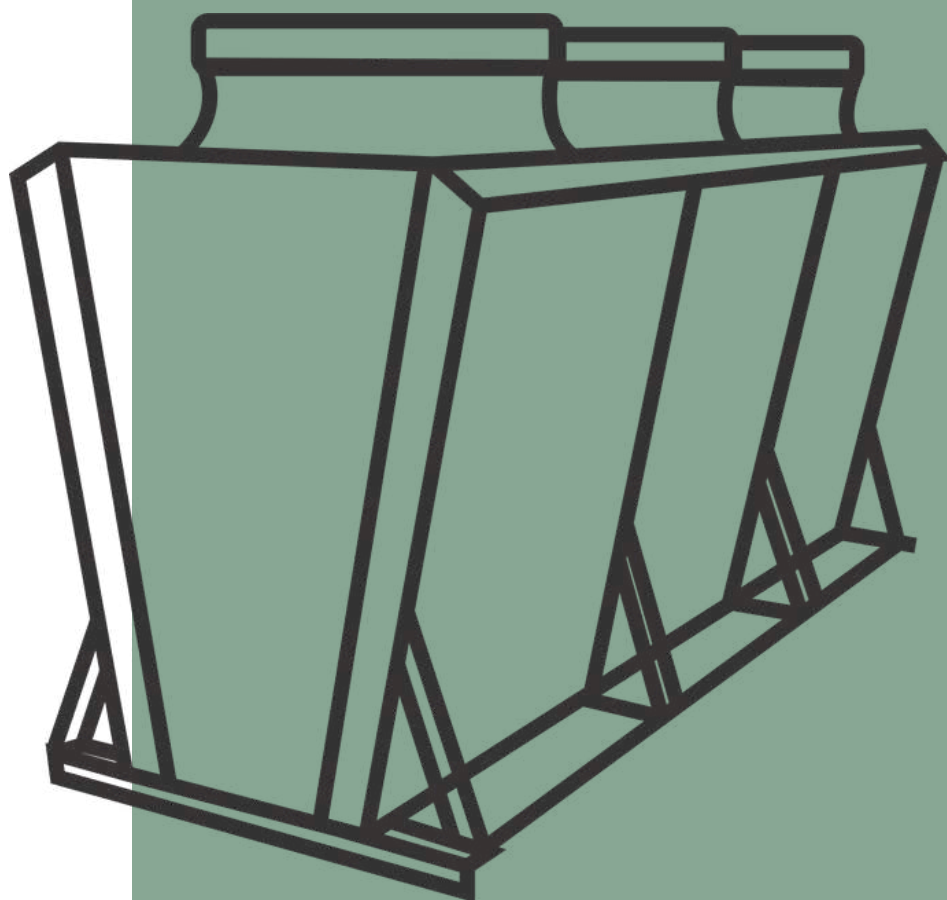
Data	
Compressor Semi-hermetic	QCP capacity 68.000 Kcal/h
Refrigerent R 404A	Room temperature of the installation site + 30°C
TEV Evaporation - 10°C	Installation Height 800m
TCD Condensation + 45°C	Max sound level 55 Dba a 20m do local

Resolução:

Qcd = Qcp x Fcp x F1 x F2 x F3 x F4
Qcp = 68000 Kcal/k
Fcp = -10°C/+45°C = 1,38 for semi-hermetic compressor
F1 = Tcd-Ta = 45-30 = 15 = 0,67
F2 = Gás R404A = 1,05
F3 = + 30°C = 0,98
F4 = Height = 1,06

Qcd = 68000 x 1,38 x 0,67 x 1,05 x 0,98 x 1,06 = 68577 Kcal/h - Effectively rejected capacity by the capacitor under these design conditions. Sound level = 55DBa at 20m = 55-6 = 49DBa at 10m


Given the capacity of 68,577 Kcal/h and the sound level of 49 dBA, let's refer to the table and select the Vmax 083 model with a capacity of 71,940 Kcal/h and 45 dBA




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