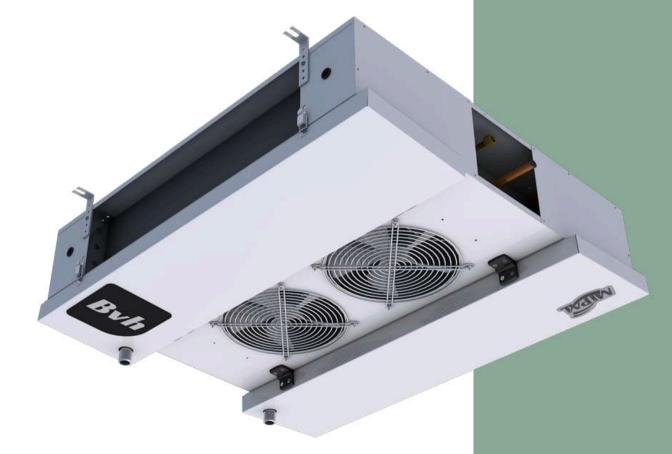


# Dual



# Low-speed forced air evaporator



4.630 a 37.800 Kcal/h 5.384 a 43.953 W

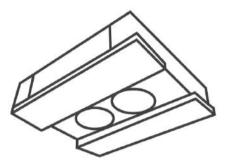
january - 2023



4.630 a 37.800 Kcal/h 5.384 a 43.953 W

# Low-speed forced

# air evaporator



# Up to 6m height cameras

# Versão Standard

- Copper tubes with 5/8" outer diameter
- Spacing between aluminum fins of 4mm
- Double tray with intermediate insulation
- Smooth flat aluminum cabinet
- Air defrost
- 300mm electronic fan motor

# Applications



products

Beverages













Food

Healthcare



Industrial

# **Benefits**

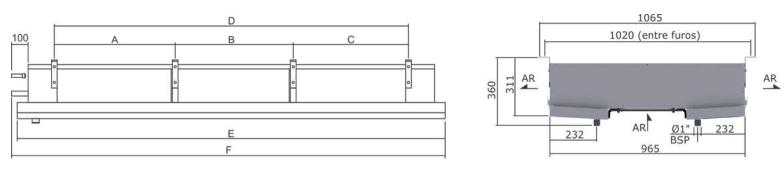
- Higher thermal and energy efficiency
- Longer lifespan of the fan motor assembly
- Adaptable to all refrigerant fluids
- Standard electronic motors
- Greater range of capacities
- Plug & Play concept: Ease of installation and operation
- Standardized electrical assemblies (NBR5410)
- Air reheating system for humidity control
- Incorporated thermal protector
- Mail 2 levels of protection against harsh environments

# Optional

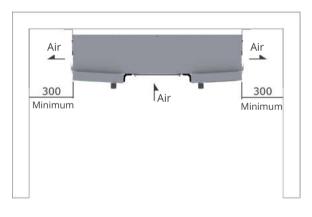
- Copper tubes and aluminum fins (Cu/Al) for CO2
- Copper tubes and aluminum fins (Cu/Al) with circuits for chilled water and glycol solutions
- Electric defrost
- Hot gas
- Stainless steel cabinet
- Cabinet and tray with white epoxy electrostatic paint
- Ma Exclusive protection against aggressive environments

Agribusiness

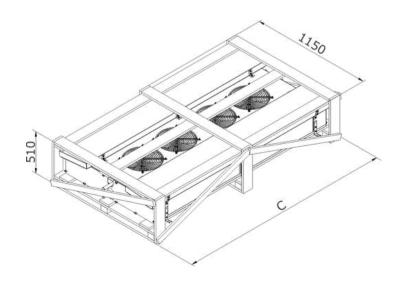
# Dimensional



	Model					Dimen	sional (	mm)		R	22		717 nonia		ylene ol 15%	
				А	В	С	D	Е	F	ØE	ØS	ØΕ	øs	ØЕ	ØS	Peso (Kg)
0005	0007	0004	2	-	-			1126	1276	1/2"	5/8"	1/2"	1"	3/4"	3/4"	40
0010	0015	0008	4	778	-	-	1578	1926	2076	1/2"	7/8"	1/2"	1"	1"	1"	72
0016	0023	0018	6	778	1600	-	2378	2726	2876	1/2"	1 1/8"	3/4"	1 1/2"	1 1/4"	1 1/4"	104
0021	0031	0022	8	1578	1600	-	3178	3526	3676	1/2"	1 1/8"	3/4"	1 1/2"	1 1/2"	1 1/2"	136
0025	0037	0026	10	1578	800	1600	3978	4326	4476	5/8"	2 1/8"	1"	2"	1 1/2"	1 1/2"	168
0032	0046	0034	12	1578	1600	1600	4778	5126	5276	5/8"	2 1/8"	1"	2"	2"	2"	200



# Packaging



				(mm)	Weight(Kg)	
	Mode				Gross	
0005	0007	0004	2	1310	52	
0010	0015	0008	4	2240	84	
0016	0023	0018	6	2940	126	
0021	0031	0022	8	3740	168	
0025	0037	0026	10	4540	210	
0032	0046	0034	12	5340	252	

# Capacities • AC and EC Fan

		R22												
				Kcal/h			Watts							
		Room temperature												
Model		14 ºF	23 ºF	32 ºF	41 ºF	50 ºF	14 ≌F	23 ºF	32 ≌F	41 ºF	50 ºF			
		-10 ºC	-5 ºC	0 º C	5 ºC	10 ºC	-10 ºC	-5 ≌C	0 º C	5 ≌C	10 ºC			
0005	2	4630	5020	5500	5970	6300	5384	5837	6395	6942	7326			
0010	4	9260	10040	11000	11940	12600	10767	11674	12791	13884	14651			
0016	6	13890	15060	16500	17910	18900	16151	17512	19186	20826	21977			
0021	8	18520	20080	22000	23880	25200	21535	23349	25581	27767	29302			
0025	10	23150	25100	27500	29850	31500	26919	29186	31977	34709	36628			
0032	12	27780	30120	33000	35820	37800	32302	35023	38372	41651	43953			

			R717 Ammonia											
				Kcal/h			Watts							
		Room temperature												
Model		14 ºF	23 ºF	32 ºF	41 ºF	50 ºF	14 ºF	23 ºF	32 ºF	41 ºF	50 ºF			
		-10 ºC	-5 ºC	0 º C	5 ºC	10 ºC	-10 ºC	-5 ≌C	0 º C	5 ºC	10 ºC			
0007	2	6000	6500	7000	7700	8400	6977	7558	8140	8953	9767			
0015	4	12000	13000	14000	15400	16800	13953	15116	16279	17907	19535			
0023	6	18000	19500	21000	23100	25200	20930	22674	24419	26860	29302			
0031	8	24000	26000	28000	30800	33600	27907	30233	32558	35814	39070			
0037	10	30000	32500	35000	38500	42000	34884	37791	40698	44767	48837			
0046	12	36000	39000	42000	46200	50400	41860	45349	48837	53721	58605			

		1	Propylene glycol 15%										
			Kcal/h			Watts							
			Room temperature										
		41 ºF	50 ºF	59 ≌F	41 ºF	50 ≌F	59 ºF						
Model	8	5 ºC	10 ºC	15 ºC	5 ºC	10 ºC	15 ºC						
8		E/S -5/-1	E/S 0/+4	E/S +5/+9	E/S-5/-1	E/S 0/+4	E/S+5/+9						
0004	2	4520	5170	5790	5256	6012	6733						
0008	4	9040	10340	11580	10512	12023	13465						
0018	6	13560	15510	17370	15767	18035	20198						
0022	8	18080	20680	23160	21023	24047	26930						
0026	10	22600	25850	28950	26279	30058	33663						
0034	12	27120	31020	34740	31535	36070	40395						

### Capacities (DT=10,8°F / DT1=6°K)

EC = Same capacities for 50Hz and 60Hz.

AC = Capacities for 60Hz, for 50Hz multiply the values by 0.92.

Dt1: Difference between the air inlet temperature at the evaporator and the refrigerant evaporation temperature.  $^{\circ}$ K=Kelvin degrees  $^{\circ}$ F=Fahrenheit degrees

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

### **Electrical Characteristics • EC Motor Fan**

				S	R	V	С	N	AC N	Noto	r	Rehe	ating
			AD A		2/2	Events	Refr.	Db(A)	Flow rate	1~220V		3~ 220V	
	Model			m²	m²/m²	dm³	Kg	1m	m³/h	W	А	W	А
0005	0007	0004	2	32	25	2,85	0,57	50	2 x 1250	64	0,56	4800	14,9d
0010	0015	8000	4	64	25	5,38	1,08	53	4 x 1250	128	1,12	9600	29,8d
0016	0023	0018	6	96	25	7,92	1,58	55	6 x 1250	192	1,68	14400	44,7d
0021	0031	0022	8	128	25	10,50	2,10	56	8 x 1250	256	2,24	19200	59,7d
0025	0037	0026	10	160	25	12,98	2,60	57	10 x 1250	320	2,80	24000	74,6d
0032	0046	0034	12	192	25	15,52	3,10	58	12 x 1250	384	3,36	28800	89,5d

# **Electrical characteristics • AC motor fan**

				S	R	V	С	N	AC N	lotor		Rehe	ating
Model			7	2/2		Refr.	Db(A)	Flow rate	1~220V		3~ 220V		
	woue			m²	m²/m²	am	dm <sup>3</sup> Kg	1m	m³/h	W	А	W	А
0005	0007	0004	2	32	25	2,85	0,57	50	2 x 1250	240	0,56	4800	14,9d
0010	0015	8000	4	64	25	5,38	1,08	53	4 x 1250	480	1,12	9600	29,8d
0016	0023	0018	6	96	25	7,92	1,58	55	6 x 1250	720	1,68	14400	44,7d
0021	0031	0022	8	128	25	10,50	2,10	56	8 x 1250	960	2,24	19200	59,7d
0025	0037	0026	10	160	25	12,98	2,60	57	10 x 1250	1200	2,80	24000	74,6d
0032	0046	0034	12	192	25	15,52	3,10	58	12 x 1250	1440	3,36	28800	89,5d

### Subtitles

V = Internal volume

C = Approximate refrigerant charge

- m<sup>3</sup>/h = Air flow measured at a density of 1.2 m<sup>3</sup>/kg
- d = Unbalanced consumption

Arrow of air

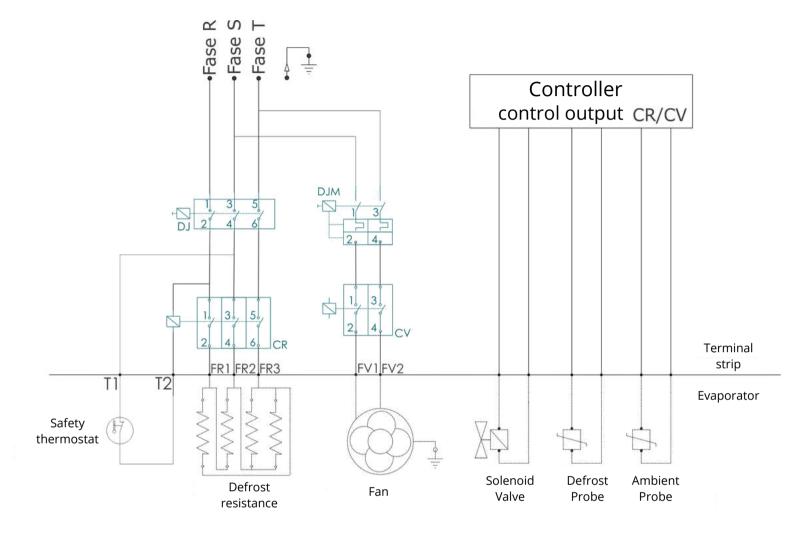


Range in the air with a final velocity of 0.25 m/s. The final velocity is achieved under open field conditions. The air range cannot be considered an absolute value due to many factors that influence this distance

# How to buy

Model	Description	Available Options
HD5	N	ledium-High Profile Forced Air Evaporator
A	Spacing between fins	A•4mm
А	Defrosting	A • Air E • Electric in the core and tray
0005	Model	0005 a 0032
С	Tube	A • Aluminum B • Copper for CO2 C • Copper
A	Connections and tray	<ul> <li>A • Direct Expansion</li> <li>B • 2 Manifolds</li> <li>C • 2 Manifolds with Flanges</li> <li>D • 2 Manifolds with Nipples</li> <li>E • 2 Threaded Manifolds (Al)</li> </ul>
00	Accessories	00 • No accessories       10 • 1 + 2 + 3         01 • Expansion Valve       11 • 1 + 2         02 • Solenoid Valve       12 • 2 + 3         03 • Drain Heater       13 • 1 + 3
A	Finish	<ul> <li>A • Aluminum Cabinet</li> <li>B • Aluminum Cabinet with N1 protection on the fins</li> <li>C • Aluminum Cabinet with N2 protection on the fins</li> <li>D • Protected Aluminum Cabinet</li> <li>E • Protected Al. Cabinet with N1 protection on the fins</li> <li>F • Protected Al. Cabinet with N2 protection on the fins</li> <li>M • Stainless Steel Cabinet</li> <li>N • Stainless Steel Cabinet with N1 protection on the fins</li> <li>O • Stainless Steel Cabinet with N2 protection on the fins</li> </ul>
MEC	Motor	MAC • AC Motor Fan MEC • EC Motor Fan
G	Tension and Frequency	G • Motor = 230V/1F/50Hz N • Motor = 230V/1F/60Hz
1	Packaging	1 • Box 2 • Crate

### Defrost 3~ 220V 50/60Hz • Fan 2~ 220V 50/60Hz



### Attention

- When sizing installation components, refer to the catalog data table.
- To change factory power supply, please contact Mipal engineering.
- The safety thermostat must be connected in series with the contactor coil.
- Always use the ground wire.

- CR Resistance Contactor
- CV Fan Contactor
- CJ Circuit Breaker
- DJM Motor Circuit Breaker

