



PRODUCT GUIDE

BCM AIR COOLERS

HIGH EFFICIENCY COOLING SOLUTIONS FOR LARGE FACILITIES

BCM AIR COOLERS

BCM air coolers – high efficiency cooling solutions for large industrial, commercial and residential facilities. MASTER air coolers stand out for their low consumption and great efficiency, allowing air cooling of large spaces with a minimum operating cost.



Certified quality

FEATURES

- Powerful cooling method available in 19,000m³/h, 31,000m³/h, 50,000m³/h
- Control temperature and humidity through App
- Reduces temperature to 12°C
- Low running costs
- Easy to maintain
- Evaporative filter pads, blocking dirt
- Dust filter, blocking dust
- UV lamp option, disinfecting the water
- Low energy consumption, 10% compared to traditional AC
- Fresh, cool and healthy air to guarantee cool and clean environment
- Full technical and commercial support available for dimensioning and project support

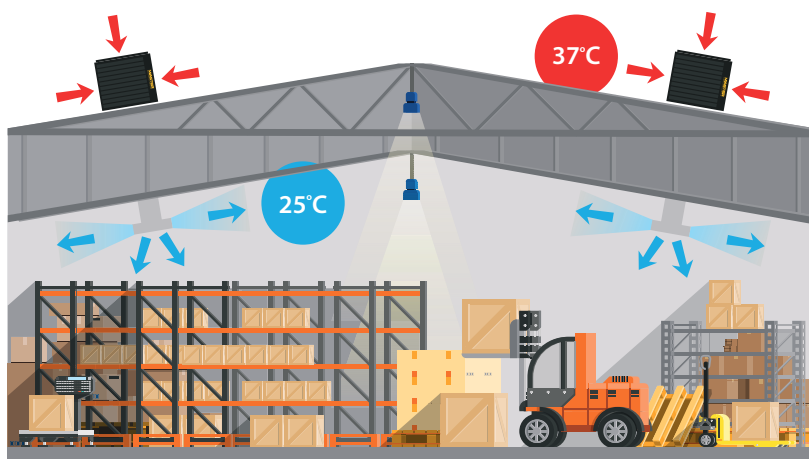
Specifications	Units	BCM 191	BCM 311	BCM 511
Cooling pad - total surface	dm ³	201	306	420
Cooling pad size - 1 pc.	cm	75 x 67 x 10	87 x 88 x 10	100 x 105 x 10
Air flow	m ³ /h	19,000	31,000	50,000
Fan type		Axial	Axial	Axial
Fan speed		12	12	12
Power consumption	kW	1.1	3.0	4.0
Power supply	V/Hz	230/1ph/50-60	380/3ph/50-60	380/3ph/50-60
Air exit	mm	Down or top or lateral	Down or top	Down or top
Tank capacity	l	30	50	60
Water consumption	l/h	20-40	30-50	40-70
Remote control integration	SM 4.0	Yes	Yes	Yes
Product size (l x w x h)	mm	1100 x 1100 x 960	1280 x 1280 x 1170	1500 x 1500 x 1450
Weight	kg	55	86	112

HOW DOES IT WORK?

The outdoor hot air is moistened and cooled as it passes through water-soaked filters, then driven indoors at up to 12°C lower temperature.

Thus, a constant flow of fresh and natural air is projected, which is introduced clean into the room, eliminating at the same time bad odours, germs and dust. This promotes the constant renewal of air that doesn't recirculate, generating a healthy environment.

Installation example



Cool air outlet – possible installation

Depending on the needs, the cooled air can be driven from the bottom, side or top.



Down discharge



Side discharge



Top discharge

WHY MASTER?

Master evaporative systems adapt to our climate and are an excellent alternative to condition large spaces with low energy costs.

The installation is simple, since it's sufficient with the positioning of the evaporative equipment on the roof or facade and connect it to a water supply and single-phase electric current. Thanks to its lightness, it doesn't require cranes or large supporting structures for the installation and commissioning.



Engine operation

Single-phase motor with direct transmission and 1.100w power. It has 3 operating modes: Ventilation, Extraction and Cooling.



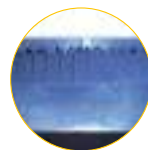
Adjustable drive

Axial fan, used in 90% of industrial installations. Adjustable to 10 different types of air drive speeds.



Electronic box

Sliding and easy to open, allowing quick access to electronic components. It's hermetically sealed.



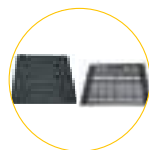
Water distribution

Water distribution system uniform anti-sealing, solid and resistant. Easy to clean and maintain.



Shipping of mounted equipment

Includes at no extra cost the assembly of the equipment before shipment and the preparation of the equipment so that when receiving and assembling.



Machine structure

Unlike most evaporatives, MASTER has an injected plastic housing. Resistant material to the degradation produced by ultraviolet rays and avoiding especially the deformation by the high temperatures.



Display information

With T° and RH% indicators in real time, water tray level, T° of impulsión and operation modes. Alarms with fault indicators and possibility of advanced control group.



Fan type

Nine-bladed fan with anti-corrosive structure, providing the highest rigidity and durability in its operation.

**20 year anti-corrosion warranty, 10 year structural warranty,
2 year warranty for components**



SELF-MANAGEMENT WATER CLEANING SYSTEM

Thanks to its electronic structure and components (electrovalve, drain valve and level sensors), MASTER equipment has an automated system for cleaning, emptying and filling water tank.

PRE-COOL

The evaporative cooler enters in pre-cooling mode for one minute, just before the engine starts to operate, thus ensuring the cooling from the first moment.

AUTO MODE

With the previous adjustment of the required values of temperature and humidity, this mode allows to operate the equipment autonomously and efficiently by regulating its air flow rate, as well as water levels according to the values (T° and %RH).

AUTO-CLEAN

This function allows to set a period of time (hrs.) for the automation of units cleaning. Programmable period of time from 0 to 72hrs. The water drain valve opens allowing its exit and in this way the corresponding cleaning. After one minute the inlet solenoid valve opens, giving rise to a new water inlet in the tank. This self-cleaning mode is adjusted according to the measures and recommendations for prevention and control of Legionellosis.

MAIN FEATURES OF THE COMMAND CONTROL

It includes:

- Display indicator
- Variable of frequency
- Communication line
- Water level sensor
- Drive temperatura sensor
- Relative humidity sensor
- Possibility to connect flexible tubes on inlet and outlet side



Allows adjust:

- Out frequency variable
- Engine start delay time (0-4min.)
- The value of the working current
- Self-cleaning time range
- The range of the driving temperature
- The percentage range of relative humidity
- Motor drive speeds

Remote control

The infrared control allows us to manage the main functions of the equipment: On/Off operating modes and drive speeds. It has an average range of 15 meters.

Are you worried about Legionellosis?

MASTER evaporatives works without producing aerosols, this means that don't give rise to the drop drag, thus avoiding the transmission and propagation through the air of the bacterium. Its also have cleaning and automatic water drainage.



EVAPORATIVE COOLING, THE MOST EFFECTIVE SOLUTION AGAINST HEAT

	VENTILATION	MASTER AIR COOLERS	AIR-CONDITIONER
ADVANTAGES >	Low investment cost Low operation cost Doors and windows can be open	Low investment cost Doors and windows can be open Low operating cost Indoor air is filtered Level of humidity is constant	T° total control
DISADVANTAGES >	Temperature is not reduced (Limit to outside T°)	Temperature required relates to outside temperature (approximate supply T°= 24C°)	High investment cost High operating cost Doors and windows must be closed Health hazard / Thermal gaps Dry environment

SUPERMASTER SM 4.0

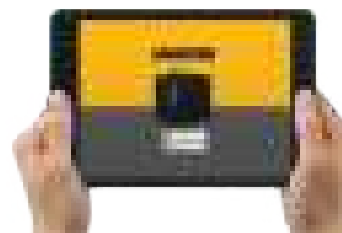
To control the units which are difficult to reach or to control multiple number of Master BCM coolers we have developed highly advanced remote control system SUPERMASTER SM 4.0

- The most advanced coolers controller on the market
- Very useful when coolers are difficult to reach or you need to control more than 1 unit
- All main cooler's functions can be set up via cloud on laptop or smartphone
- It can control up to 31 units of Master BCM coolers
- Easy to use centralized control panel



MASTER COOLERS APP

The Master Coolers mobile app allows simulations and real calculations for air-conditioning projects.



APPLICATIONS

GREENHOUSE



AGRICULTURE



SHOPPING MALLS



SPORTS FACILITIES



INDUSTRY, ASSEMBLY AND PAINTING PLANTS



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