



2021/2022

PORTABLE CLIMATE SOLUTIONS

HEATING, COOLING, DRYING, VENTILATION AND AIR CLEANING

About the Dantherm Group

Originally founded in 1954, the Dantherm Group is a European leader in portable and installed climate control solutions for a wide range of industries and uses. Based on the work of more than 500 passionate climate control experts and more than three million installations, our competence centres around Europe design and build exceptional heating, cooling, dehumidification and ventilation units that form the backbone of these climate solutions. In everything they do, they remain focused on creating healthy and comfortable climate surroundings in a sustainable, energy-efficient and cost-effective way.



Five competence centres in Denmark, Germany, Italy, Spain and UK.





Competence centre
for portable heating solutions: Pastrengo, Italy.

Master Climate Solutions

Part of the Dantherm Group since 2017, Master is a world-leading designer and manufacturer of portable and efficient climate control units for heating, air purification, cooling, dehumidification and ventilation. Since the inception in the 1950s in the USA, Master has delivered more than six million units for commercial and private use. Today, Master operates out of Pastrengo near Verona in Italy and it is the Dantherm Group competence centre for heating solutions.



CONTENT

Based on the extensive knowhow of our climate solution experts across the Group, we have developed an industry-leading range of products and solutions all characterised by reliability, sustainability, efficiency and ease of use.

Being able to source everything from just one supplier will help streamline your purchasing supply lines and reduce your costs for internal handling. To that end, you'll also find our local presence with an extensive network of professional dealers across Europe helpful. It means support in your time zone and language – from people who understand your local market requirements.

Enjoy the read!

Our solutions rest on these four pillars:

Reliability has always been at the heart of everything we do. So we still use long-lasting, solid components that have been through extensive testing.

Sustainability is an integral part of how we work. We aim to create solutions that are at least as good for the environment as any comparable solution.

Efficiency is about delivering impressive performance while generating savings in the form of reduced energy costs.

Usability is key to any solution. Our experts do many usability tests to make sure ours are easy to install and hassle-free to operate.



COOLING

WHY CHOOSE MASTER EVAPORATIVE COOLERS?



PRODUCTIVITY

The hotter it gets, the higher the effect will be on the productivity and accuracy of your employees. Using our practical Master evaporative coolers guarantees an improvement in productivity in hot working environments.



SAFE FOR YOUR HEALTH

Many workers are subjected to excessive heat risks. Using Master evaporative coolers reduces the temperature between 4 and 12 degrees and creates a safe working environment.



USE THE SAME COOLER IN DIFFERENT PLACES

Master portable air coolers are easy to move around to where cooling is required.



EASY INSTALLATION

Master air coolers are installation-free - no prior knowledge or special training required to install.



CHOOSE THE BEST SOLUTION

Master evaporative coolers are designed to cater for many different applications such as industry, construction, retail, offices or residential.



RESPECT THE ENVIRONMENT

Master evaporative coolers are free from chemicals and environment-friendly.



INVESTMENT IN COOLING

The coolers are maintenance-friendly and energy-efficient, making them a very economical solution.



ANTI-VIRUS AND BACTERIA






To counter the spread of virus and bacteria, Master evaporative coolers are fitted with UV lamps. They also eliminate any risk of Legionella.



3 YEAR WARRANTY














Master offers a 3-year warranty on all products. Who else can say that? Read the warranty terms online.

INDEX

Product	Name	Description	Power Range	Applications	Page
	PORTABLE EVAPORATIVE COOLERS	Master evaporative coolers cool the air using a simple natural process: the evaporating water decreases the temperature of the air. A pump takes the water from a tank and dampens a large pad made of natural cellulose. A powerful ventilator aspires air through the filter. The water evaporates from the filter and decreases the temperature of the air by several degrees. The fresh and clean air flows into the room and cools it down.	up to 30,000 m³/h	<ul style="list-style-type: none"> Agriculture Construction Industry Warehouse Restaurants Rental 	68-72
	STATIONARY EVAPORATIVE COOLERS	An energy saving and environmentally friendly evaporative coolers for climate control of large facilities. It creates a comfortable indoor climate with an optimal combination of temperature and humidity.	up to 50,000 m³/h	<ul style="list-style-type: none"> Agriculture Industry Warehouse Restaurants 	73-74
	MOBILE AIR-CONDITIONERS	An innovative new product that allows multiple usage of being an air-conditioner to cool and a dehumidifier. This durable and portable unit is ideal for emergency and temporary cooling and drying solutions including tents, mobile hospitals, work spaces and retail premises.	up to 1,020 m³/h	<ul style="list-style-type: none"> Industry Public spaces Emergency Events 	76-77
	CHART	How to choose your air cooler.			78
	REMOTE CONTROL SYSTEM	The innovative system for the remote control of the climate using GSM. It monitors the function of BCM coolers.			75




SOLUTIONS FOR:

CONSTRUCTION, PRODUCTION AND LOGISTICS, RESTAURANTS,
RETAIL AND HOMES

APPLICATION						
CONSTRUCTION						
	COOLING CONSTRUCTION SITES			●		
	COOLING WORKERS			●		
INDUSTRY & WAREHOUSES						
	SPACE COOLING			●		●
	SPOT COOLING			●	●	●
WORKSHOPS & GARAGES						
	SPACE COOLING	●	●			
	SPOT COOLING	●	●			
RESTAURANTS, RETAIL, OFFICES						
	SPACE COOLING	●	●	●		●
	SPOT COOLING	●	●	●	●	●

SOLUTIONS FOR:

AGRICULTURE, PUBLIC SPACES, EVENTS, MILITARY AND RENTAL

APPLICATION					
CCX 4.0					
BC 80					
BC 121, BC 221, BC 341, BCB 19					
ACD 137					
BCM					
AGRICULTURE					
 COOLING LIVESTOCK FACILITIES					
 COOLING GREENHOUSES					
EVENTS & MILITARY					
 OUTDOOR COOLING					
 TENT COOLING					
RENTAL					
 SPACE COOLING					
 SPOT COOLING					
EMERGENCY & PUBLIC SPACES					
 SPACE COOLING					
 SPOT COOLING					

MASTER

EVAPORATIVE COOLERS

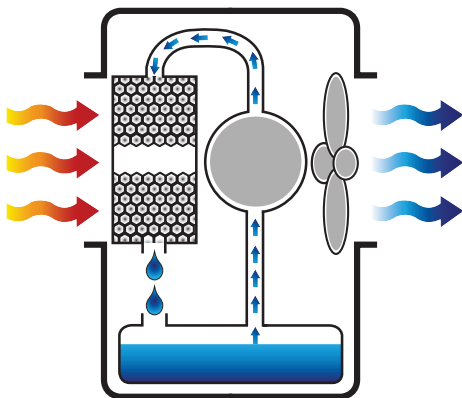
HOW DOES IT WORK?

The heart of the evaporative cooling system is the cooling pad where the water evaporates and the air passing through the pads is cooled.

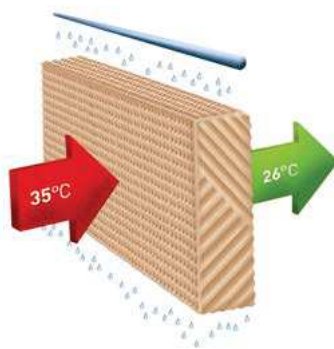
Evaporative cooling pads are manufactured from fluted cellulose sheets that are glued together. The material is chemically impregnated with special compounds to prevent rot and ensure a long service life and easy maintenance.

The integrated water distribution system spreads water evenly over the cooling pads to make sure the entire surface is kept wet. This maximises the cooling effect.

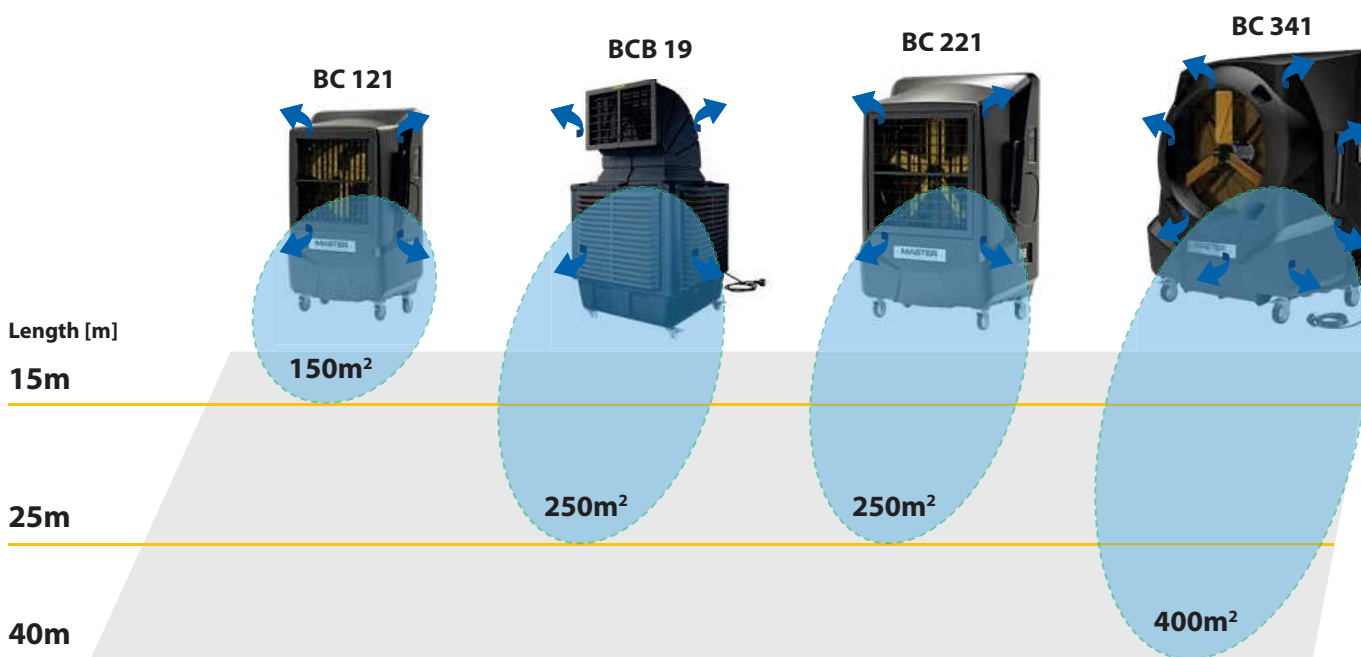
Fans create a negative pressure, causing air to be drawn through the pads.



Evaporation results from contact between air and water.



A control system operates the water pump and the fan distributes the cool air in the area.



MASTER

EVAPORATIVE COOLERS

EVAPORATIVE COOLING AND HUMIDITY

A given volume of air at a certain temperature and pressure is capable of absorbing and holding a certain amount of water vapour. If that volume of air contains 50% of the moisture it is capable of holding, we say it is at 50% relative humidity.

The hotter the day, the drier the air, the more cooling can be done by means of evaporation. In other words, the cooling effect is best when you need it most.

Our evaporative coolers are developed to work well in high-humidity environments too, however, and will remain much more efficient than a simple fan that just circulates warm air.

Our coolers will increase humidity by 2 to 5%, depending on temperature and humidity in the environment you want to cool. The slight increase is not noticeable in ventilated areas where the air produced by the unit is exhausted.

		RELATIVE HUMIDITY																
		2%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
INCOMING AIR TEMPERATURE	24°C	12°C	13°C	14°C	14°C	15°C	16°C	17°C	17°C	18°C	18°C	19°C	19°C	20°C	21°C	21°C	22°C	22°C
	27°C	14°C	14°C	16°C	17°C	17°C	18°C	19°C	19°C	20°C	21°C	22°C	22°C	23°C	23°C	24°C	24°C	25°C
	29°C	16°C	17°C	17°C	18°C	19°C	20°C	21°C	21°C	22°C	23°C	23°C	24°C	24°C	25°C	26°C	27°C	
	32°C	18°C	18°C	19°C	21°C	21°C	22°C	23°C	24°C	25°C	26°C	26°C	27°C	28°C	28°C	29°C	30°C	
	35°C	19°C	20°C	21°C	22°C	23°C	24°C	26°C	26°C	27°C	28°C	29°C	29°C	30°C				
	38°C	21°C	22°C	23°C	24°C	26°C	27°C	28°C	28°C	29°C	31°C	31°C						
	41°C	22°C	23°C	25°C	26°C	27°C	29°C	30°C	31°C	32°C								
	43°C	24°C	25°C	27°C	28°C	29°C	31°C	32°C	33°C									
	46°C	26°C	27°C	28°C	30°C	32°C	33°C	34°C										
	49°C	27°C	28°C	30°C	32°C	34°C	35°C											
	52°C	28°C	30°C	32°C	34°C	36°C												

This table shows the theoretical **OUTGOING AIR TEMPERATURE** of a cooler.

The theoretical **OUTGOING AIR TEMPERATURE** depends on the **INCOMING AIR TEMPERATURE** and on the **RELATIVE HUMIDITY**.

Simply find your **INCOMING AIR TEMPERATURE** and **REALATIVE HUMIDITY**, then locate the value where the two intersect and that is your theoretical **OUTGOING AIR TEMPERATURE**.

Example:

Incoming air temperature = 35°C

Relative humidity = 30%

Outgoing air temperature = 26°C

PORTABLE AIR COOLERS

CCX 4.0



CCX 4.0

CCX 4.0 CONTROL PANEL



- Attractive compact design
- Low installation, running and maintenance costs
- Remote control for easy operation
- Different settings and running features
- Handles to easily carry the unit
- Wheeled units with integrated water tank for multiple applications
- Long uninterrupted running time without the need to refill water
- Ionizer to improve air quality
- Low-noise level making it ideal for terraces

Consumables



Cleaning liquid
AI 500 - 4250.156

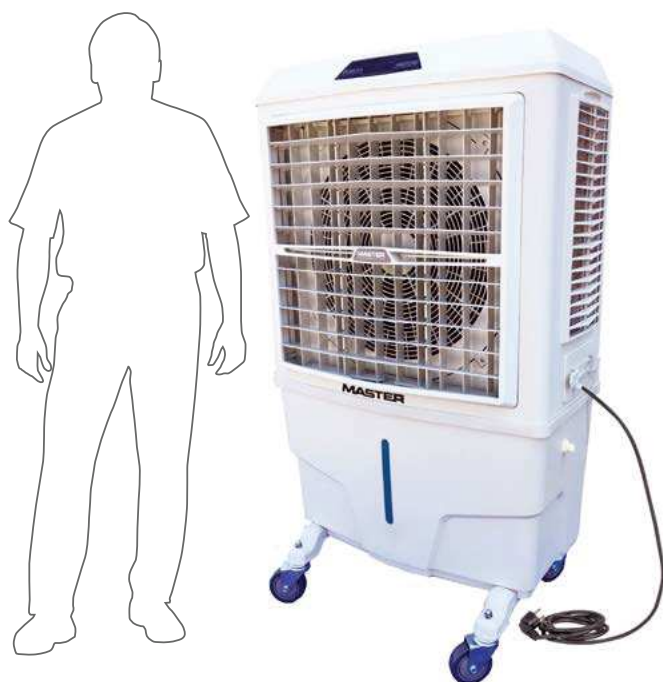


Spray sanitizer
AI 600 - 4250.158

Specifications	Units	CCX 4.0
Cooling pad	dm ³	40
Air flow	m ³ /h	4,000
Maximum area	m ²	80
Power consumption	W	150
Power supply	V/Hz	230/1ph/50
Rated current	A	1.45
Fan speed		3
Outlet versions		Front
Water consumption	l/h	5-10
Tank capacity	l	50
Direct water connection	inch	Yes
Tank level control		Yes
Sound level	dB(A)	67
Product size (l x w x h)	mm	640 x 450 x 1160
Box size (l x w x h)	mm	650 x 550 x 1160
Weight (without/with water)	kg	22/72
Pallet	pcs	2

PORTABLE AIR COOLERS

BC 80



BC 80



- Easy to move on wheels - ideal for rental
- Flaps can swing automatically
- No installation required - connect to water hose or refill tank and enjoy cool air
- Eco friendly: no compressor, no gas, very low energy and water consumption
- Ionizer to improve air quality - the cooler refreshes and cleans the air of fumes, dust and odours
- Remote control to easily find your ideal cooling modus
- Air filters to ease maintenance

COOLING ❄️

Consumables



Cleaning liquid
AI 500 - 4250.156



Spray sanitizer
AI 600 - 4250.158

Specifications	Units	BC 80
Cooling pad	dm ³	70
Air flow	m ³ /h	8,000
Maximum area	m ²	180
Power consumption	W	330
Power supply	V/Hz	230/1ph/50
Rated current	A	1.5
Fan speed		3
Outlet versions		Front
Water consumption	l/h	8
Tank capacity	l	100
Direct water connection	inch	½
Tank level control		Yes
Sound level	dB(A)	62
Product size (l x w x h)	mm	500 x 850 x 1410
Box size (l x w x h)	mm	520 x 870 x 1310
Weight (without/with water)	kg	32/132
Pallet	pcs	2

PORTABLE AIR COOLERS

BC 121-BC 221



BC 121



BC 221



- Efficient and durable spot cooler for industrial applications
- Quiet running even with large air-flow
- Automatic swing function as standard
- Large water tank for longer operating hours
- Large, durable wheels with brakes allow easy movement
- Connect water hose or refill tank manually to offer comfort to your employees
- Corrosion-resistant plastic casing
- Air filter included to enable easy maintenance
- Remote control to easily adjust speed
- UV lamp, disinfecting the water

Consumables



Cleaning liquid
AI 500 - 4250.156



Spray sanitizer
AI 600 - 4250.158



The temperature drop is proportional to the size of the evaporative pads.

Specifications	Units	BC 121	BC 221
Cooling pad	dm ³	120	180
Air flow	m ³ /h	12,000	22,000
Maximum area	m ²	150	250
Power consumption	W	450	750
Power supply	V/Hz	220-240/1ph/50	220-240/1ph/50
Rated current	A	2.7	4.5
Water consumption	l/h	8-10	10-15
Tank capacity	l	80	120
Direct water connection	inch	½	½
Tank level control		Yes	Yes
Product size (l x w x h)	mm	925 x 580 x 1430	1130 x 690 x 1640
Box size (l x w x h)	mm	935 x 560 x 1310	1120 x 680 x 1590
Net/gross weight	kg	45/50	59/64
Pallet	pcs	1	1

PORTABLE AIR COOLERS

BC 341



Control panel



- Powerful air volume 30,000 m³/h to cool large working areas
- No installation, no duct work required
- Low running costs
- Easy to maintain
- Evaporative filter pads, blocking dirt
- UV lamp, disinfecting the water
- Low energy consumption – 1.3 kW
- Applications: Workshops and warehouses, plastic, glass, assembly and painting plants, agriculture, greenhouses and aircraft hangars

Consumables



Cleaning liquid
AI 500 - 4250.156



Spray sanitizer
AI 600 - 4250.158

Specifications	Units	BC 341
Cooling pad	dm ³	340
Air flow	m ³ /h	30,000
Maximum area	m ²	400
Power consumption	W	1,300
Power supply	V/Hz	220-240/1ph/50
Rated current	A	4.5
Water consumption	l/h	15-20
Tank capacity	l	200
Direct water connection	inch	½
Tank level control		Yes
Product size (l x w x h)	mm	1690 x 920 x 1910
Pallet size (l x w x h)	mm	1000 x 1800 x 2100
Net/gross weight	kg	120
Pallet	pcs	1

PORTABLE AIR COOLERS

BCB 19



BCB CONTROLLER

BCB 19



- Axial fan with optional ducting for cool air
- Made of robust UV resistant plastic
- Easy to move – functional wheels
- Diffuser on top – upper exit
- LCD remote control with 7.5m cable
- Infrared remote control
- 12-speed fan, adjustable to create ideal climate
- Long-life cooling pads
- Automatic: self-cleaning, self-draining, self-drying when the cooler is inactive
- External filter included to protect against dust and dirt from the environment
- Prevention system against Legionella, algae, fungus, etc.
- Ideal for well-ventilated spaces like party and event tents
- Plug-and-play principle, connect water and enjoy cool air
- Ideal for rental purposes
- Very low energy consumption

Consumables



Cleaning liquid
AI 500 - 4250.156



Spray sanitizer
AI 600 - 4250.158

Specifications	Units	BCB 19
Cooling pad	dm ³	220
Cooling pad	cm	79 x 70 x 10
Air flow	m ³ /h	18,000
Maximum air pressure	Pa	200
Maximum area	m ²	250
Power consumption	W	1.1
Power supply	V/Hz	230/1ph/50
Air exit		Top
Fan type		Axial
Fan speed		12
Protection		IP44
Water consumption	l/h	10-15
Tank capacity	l	250
Sound level	dB(A)	66
Water input/drain	inch	½ and 1
Dimensions air exit	cm	64 x 45
Product size (l x w x h)	mm	1100 x 1100 x 1950
Box size (l x w x h)	mm	1150 x 1150 x 1150
Net weight	kg	75
Pallet	pcs	1

new
product
BCM 191
BCM 311
BCM 511

Installation example



Cool air outlet – possible installation

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



- Powerful cooling method available in 19,000m³/h, 31,000m³/h, 50,000m³/h
- Control temperature and humidity
- Low running costs
- Easy to maintain
- Evaporative filter pads, blocking dirt
- Dust filter, blocking dust
- UV lamp, 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



Down exit



Side exit



Top exit

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	380/3ph/50-60	380/3ph/50-60
Air exit	mm	Top, side or down	Top, side or down	Top, side or down
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

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 into pre-cooling mode for one minute, just before the engine starts to operate, thus ensuring instant cooling capability.

AUTO MODE

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

AUTO-CLEAN

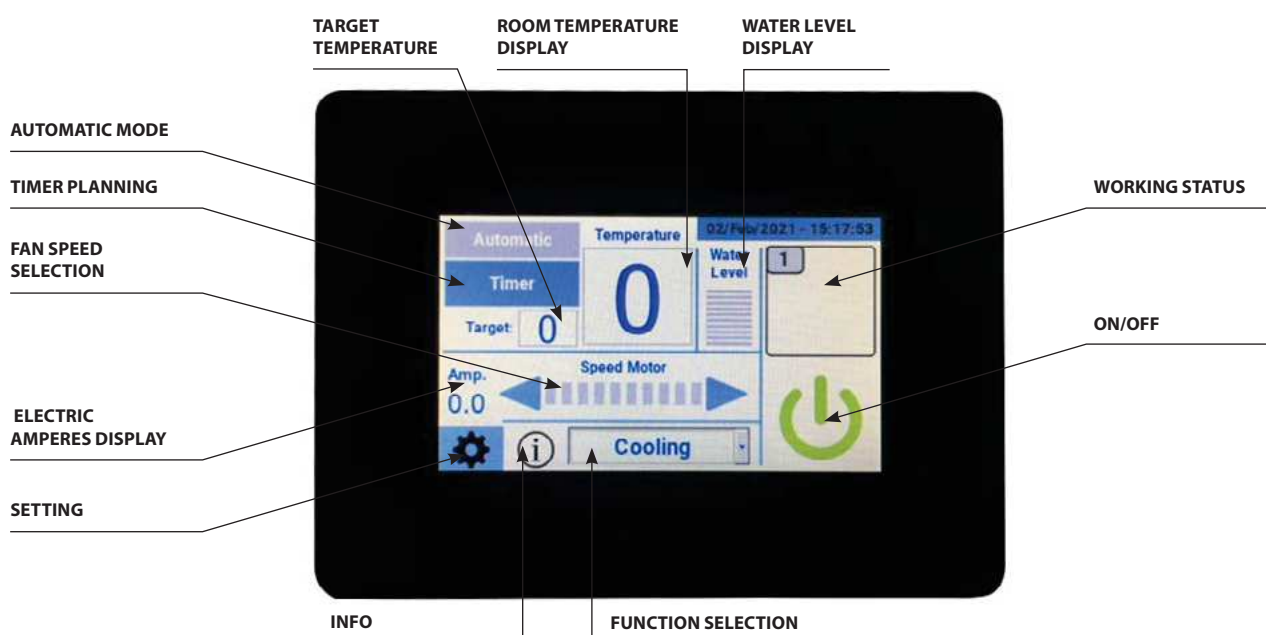
This function enables you to set a period of time (hrs.) for the automation of units cleaning. Programmable period of time from 0 to 72hrs. The water drain valve opens, empties the water tank and performs the cleaning process. After one minute, the inlet solenoid valve opens to refill the water tank. This self-cleaning mode is adjusted according to the measures and recommendations for prevention and control of Legionella.

MAIN FEATURES OF SUPERMASTER DISPLAY AND CONTROLLER

Available in two sizes:

*SUPERMASTER 4: Controlling a single cooler. Available with a 4,3" display touch screen

*SUPERMASTER 10: Controlling up to 31 coolers. Available with a 10" display touch screen

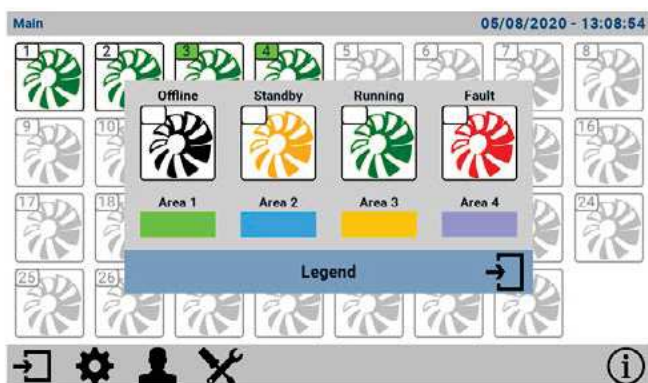


REMOTE CONTROL SYSTEM FOR BCM STATIONARY AIR COOLERS SUPERMASTER

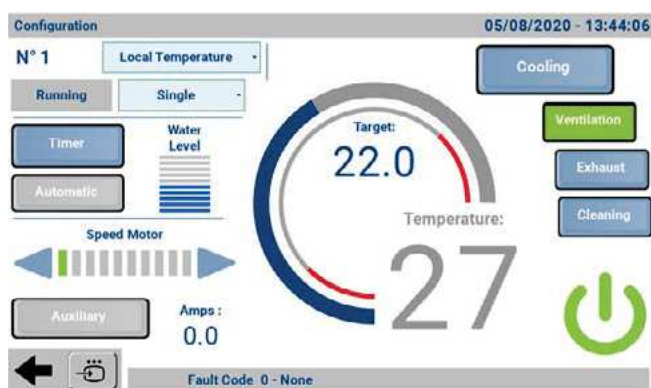


Start panel: protected by a password.

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



- It is possible to connect up to 31 units in one system.
- The application makes it possible to make the settings for each cooler separately or for groups of coolers.
- Cooler status is always indicated as either: off line, standby, running and fault.
- The coolers which are installed and active are checked with a white frame.
- They can be grouped in smaller zones with the same settings which allows for easy control
- Each zone is indicated by a different colour – easy to find to which zone a specific cooler belongs.



Possible actions:

- Setting a local and target humidity and temperature
- Checking the fault code - allows to easily control the failures during operation
- Checking the water tank level
- The Ampere box shows the instant current of the cooler. It is very useful for installation and for troubleshooting
- The settings can be made for one single cooler or for a group of coolers in the same area



The cooler panel also enables you to:

- Set a timer and a weekly planner
- Set the cooler functions: to cool, to ventilate, to exhaust, to swing, to clean
- Select fan speed motor and the air flow

HOW TO CHOOSE YOUR MASTER COOLER



Master evaporative coolers can be used in a wide variety of applications. Use the below guide to find the best unit for your specific needs. This will help ensure you to make the right choice so you can enjoy your investment for a long time to come.

Alternatively, feel free to reach out to our international team of experts. We would be more than happy to assist you in finding an economical, practical, durable and efficient solution that caters to your exact needs.



APPLICATION	CCX 4.0 SUGGESTED AREA	BC 80 SUGGESTED AREA	BC 121 SUGGESTED AREA	BC 221 SUGGESTED AREA	BC 341 SUGGESTED AREA	BCM SUGGESTED AREA
WELL-VENTILATED RESTAURANT OR BAR	60m ²	90m ²	NO	NO	NO	150m ²
OUTDOOR TERRACE	60m ²	90m ²	150m ²	220m ²	300m ²	NO
PLASTIC INDUSTRY	NO	90m ²	150m ²	250m ²	330m ²	180m ²
GLASS INDUSTRY	NO	90m ²	150m ²	250m ²	330m ²	180m ²
AUTOMOTIVE INDUSTRY	NO	90m ²	150m ²	250m ²	330m ²	180m ²
PAINTING PLANT	NO	90m ²	150m ²	250m ²	330m ²	180m ²
COMMERCIAL KITCHEN	60m ²	80m ²	NO	NO	NO	NO
GREENHOUSE	NO	NO	150m ²	250m ²	330m ²	180m ²
COW BARN	NO	NO	150m ²	250m ²	330m ²	180m ²
LOGISTICS CENTER	NO	NO	150m ²	250m ²	330m ²	180m ²
ASSEMBLY PLANT	NO	NO	150m ²	250m ²	330m ²	180m ²
HANGAR	NO	NO	150m ²	250m ²	330m ²	180m ²

COOLING SOLUTIONS FOR:

- AGRICULTURE
- SPORTS FACILITIES
- EVENTS
- WORKSHOPS & GARAGES
- INDUSTRY & WAREHOUSES



AGRICULTURE



SPORTS FACILITIES



EVENTS



WORKSHOPS & GARAGES



INDUSTRY & WAREHOUSES

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