



[www.mesanct.com](http://www.mesanct.com)

e-mail: [sales@mesanct.com](mailto:sales@mesanct.com)



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## MXC Series

Closed Circuit  
Cross Flow Induced Draft



# MXC Series

## Closed Circuit, Cross Flow Induced Draft



For over 40 years, the MESAN Group has engaged in the engineering and manufacturing of high quality, high efficiency evaporative cooling equipment. Through hard work, ethics, and a constant pursuit of excellence, MESAN has become a leader in the cooling tower industry in Asia. Today, MESAN continues to play a vital role in the development of new technologies and products, and is proud to have been selected as a key supplier for many renowned projects in the global market.



MESAN is an ISO-9001 and 14001 certified company; our towers were the first ones in Hong Kong and China to obtain the CTI STD-201 performance certification, all of our products are ASHRAE-90.1-2013 compliant, a requisite towards LEED certification for Green Buildings by the USGBC (United States Green Building Council). All this confirms MESAN's constant pursuit of excellence and world-class quality.

MESAN's focus on engineering, research and development, quality management and excellent customer service, is the powerful combination that drives the MESAN brand up on a constant and steady growth. The many patents granted, are proof of MESAN's strive for delivering new environmentally friendly technologies and energy efficient products for the global markets.



MESAN USA strategically located at the center of the Americas continent, in Miami, Florida, USA, consolidates MESAN Group's global presence and reiterates its commitment to provide world-class products for an ever-expanding market.

MESAN USA offers local presence, local inventory of equipment and spare parts and bilingual technical support as well as customer service, in English and Spanish. All products offered by MESAN USA have been engineered to

meet and exceed all codes and standards applicable in this hemisphere.

## Overview

Closed-circuit cooling towers, are also known as indirect fluid coolers, the main difference between the open and closed types is that in the closed towers, the heat load is not rejected directly into the airstream but it's transferred through a heat exchanger or coil.



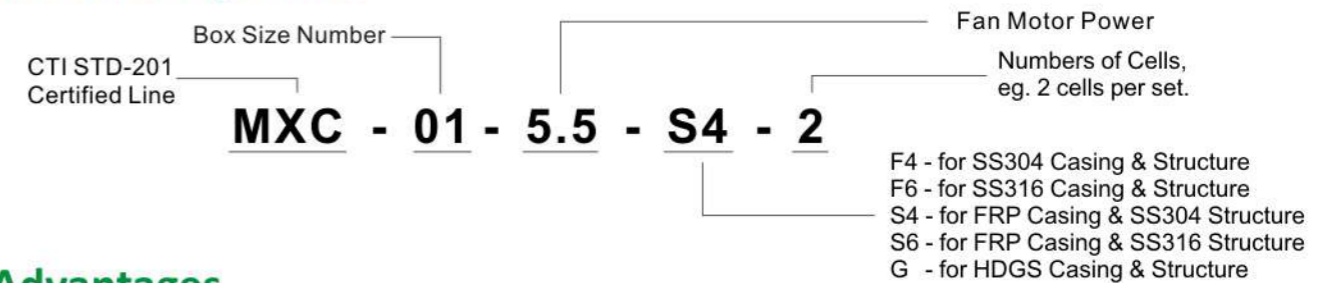
Whenever a process or equipment requires clean cooling water, free from airborne debris and oxygen (main cause of internal corrosion in chillers and process machinery), a closed-circuit cooling tower is the solution.

There are several types of closed circuit cooling towers. MESAN's MXC series is a cross-flow, induced-draft type. In addition to the heat exchangers or coils, the MXC series also uses a secondary heat exchanger or infill, which increases the thermal efficiency of the units and reduces scaling on the coil surface.



The MXC Series is available in 8 boxes with 27 models with capacities ranging from 55m<sup>3</sup>/h to 285m<sup>3</sup>/h.

## Model Designation



## Advantages

### Improved Efficiency of Cooling Equipment

Sustaining optimum performance in an open type system requires regular maintenance to assure top efficiency. High-efficiency chillers and heat exchangers rely on clean process water to function properly and are significantly impacted by even small amounts of fouling. A closed circuit system protects the quality of the process fluid, reduces system maintenance, and provides operational flexibility.

### Less Maintenance and Less Running Cost

The payback on the initial investment in a closed circuit system is just a few years, due to the following savings:

- Reduced system maintenance costs, particularly important for buildings using water source heat pumps with coaxial condensers.
- Reduced energy consumption due to higher efficiency on the chillers or water-cooled packaged units.
- Closed circuit towers allow for running a glycol solution throughout the condensing water loop for uninterrupted operation under freezing winter conditions.

Trust MESAN with your evaporative cooling needs.

## Tower Structure



## Product Technical Data

Model	Specification			Tower Dimensions				Pipe Connections				
	Water Flow	Motor	Pump	L	W	H	h	Inlet	Outlet	Overflow	Drain	M-U
MXC	m <sup>3</sup> /h	kw	kw	mm	mm	mm	mm	DN	DN	DN	DN	DN
01	3	55	3	2,220	4,540	4,300	3,650	100	100	50	40	25
	4	60	4									
	5.5	66	5.5									
02	4	59	4	2,220	4,540	4,450	3,800	100	100	50	40	25
	5.5	65	5.5									
	7.5	71	7.5									
03	5.5	83	5.5	2,750	5,250	4,700	3,950	125	125	80	50	25
	7.5	91	7.5									
	11	100	11									
04	7.5	106	7.5	2,750	5,250	5,270	4,520	125	125	80	50	25
	11	116	11									
	15	125	15									
05	7.5	125	7.5	2,940	5,570	5,070	4,320	150	150	80	50	25
	11	137	11									
	15	150	15									
06	11	155	11	2,940	5,570	5,580	4,830	150	150	80	50	25
	15	170	15									
	18.5	178	18.5									
07	11	195	11	3,840	6,430	5,100	4,150	200	200	80	50	40
	15	211	15									
	18.5	221	18.5									
	22	232	22									
08	11	225	11	3,840	6,430	5,450	4,500	200	200	80	50	40
	15	245	15									
	18.5	257	18.5									
	22	270	22									
	30	285	30									

**Notes:**

- 1) Nominal water flow is for m<sup>3</sup>/h of water cooled from 37°C to 32°C with 28°C entering wet-bulb temperature.
- 2) Satisfactory performance is based on precise selection, proper system design and installation in a clean and well-ventilated location.

## Mechanical Components

### Motor

TEAO motor, IP55 enclosure, class F insulation, high efficiency, low noise and weatherproof, specially designed for the humid environment of cooling towers. Also available, two speed, and inverter-duty motors.

## Casing and Structure

### Casing

The MXC series is available in FRP construction (Fiberglass Reinforced Polyester), Hot-dipped galvanized steel (HDGS) and SS-304/316 stainless steel. Also available in any combination of these materials.

### Structural Frame

At the core of the MXC series there is a structurally sound steel frame, which provides sturdy support to the casing panels.

## Components

### Infill

The vacuum formed PVC high efficiency infill with special design to maximize the heat transfer while protecting the coil surfaces from scaling.

### Coil

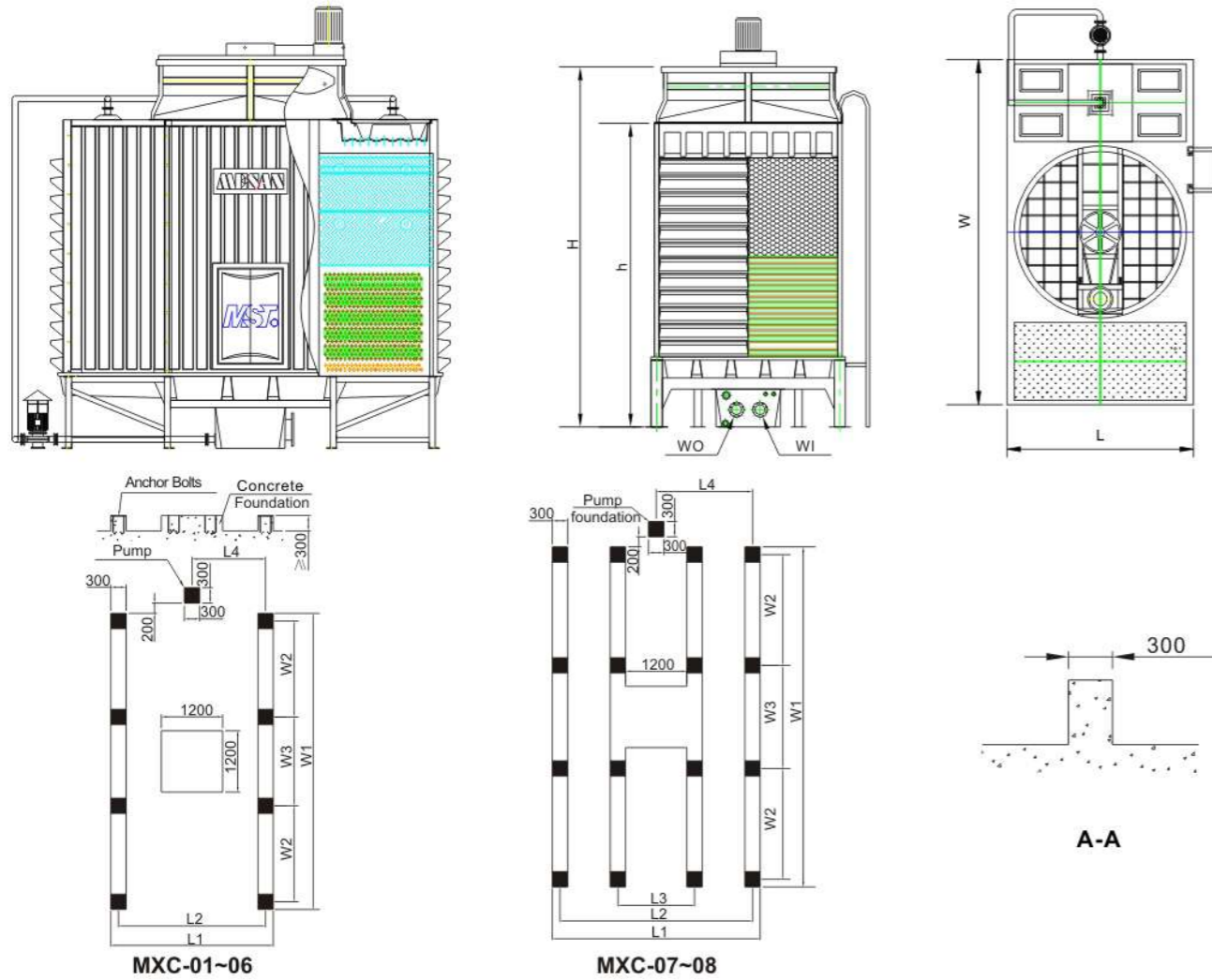
- Standard SS304 coils offer the best corrosion resistance and longest service life. Special design ensures complete drain out for winterizing or flushing purposes.
- All coils are pressure-tested at 375 psi.
- Flow balancing valves are provided for the process water loop.
- CTI-certified using SS304 coils which means no capacity de-rating.



## Optional Accessories

<b>Motor</b>	High Efficiency Motor	<b>Others</b>	Basin Heater
	Two Speed Motor		Discharge Sound Attenuator
	VFD Motor		OSHA Fan Guard
<b>Fan</b>	FRP Fan		OSHA-compliant Ladder Safety Cage and Handrail
	Low Noise Fan		Removable Strainer
<b>Reducer</b>	180° Gear Box		Service Platform to Fully Cover the Cold Water Basin
	90° Gear Box		SS/HDGS Louver
<b>Infill</b>	ASTM PVC Infill		Variable and Constant Speed Control Panels
	High Temperature PP Infill		Vibration Cut-off Switch
			5-Year Mechanical Warranty

## Dimensions



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## Foundation

Model	Foundation Dimensions						
	L1	L2	L3	L4	W1	W2	W3
MXC	mm	mm	mm	mm	mm	mm	mm
01	2,450	2,150	—	1,075	4,770	1,570	1,330
02	2,450	2,150	—	1,075	4,770	1,570	1,330
03	2,980	2,680	—	1,340	5,480	1,720	1,740
04	2,980	2,680	—	1,340	5,480	1,720	1,740
05	3,180	2,880	—	1,440	5,800	1,880	1,740
06	3,180	2,880	—	1,440	5,800	1,880	1,740
07	4,070	3,770	1,500	1,885	6,660	2,170	2,020
08	4,070	3,770	1,500	1,885	6,660	2,170	2,020

### Notes:

- 1) Secure the base of the cooling tower with the anchor bolts. The buyer is responsible for the tower support, the positioning of the screw holes & the anchor bolts.
- 2) The position & the dimension of the bolts may vary subject on the model number, the number of cells and options.

MESAN guarantees the thermal performance of its CTI certified products. All CTI models are fully compliant with ASHRAE 90.1. Cooling Technology Institute (CTI) is dedicated to promoting truthful rating of cooling tower capacity, provides a third party independent verification and periodic monitoring of the products thermal efficiency. Having CTI certified products eliminates the need for costly onsite field test and ensures the system performance will meet the design objectives, for the benefit of the building owners, operators and public.

## MXR-KM



## MXL



## MXC



## MCC



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