



2015



MXC Series

Closed Circuit
Cross Flow Induced Draft

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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.



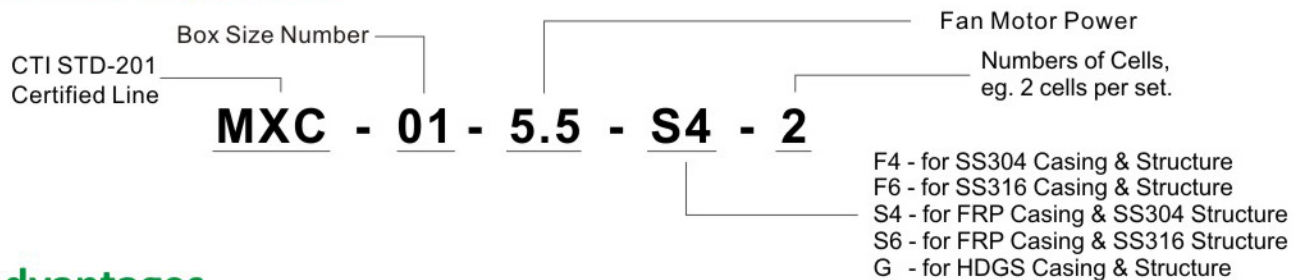
Whenever a process or equipment requires clean cooling water, free from airborne debris and oxygen (main cause of internal corrosion in chillers and process machinery), a closed-circuit cooling tower is the solution.

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 67 tons to 346 tons.



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.
- Operating in "free cooling" mode during the winter to save energy.
- 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.

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Tower Structure



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.

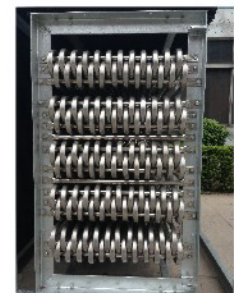
Components

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.





Product Technical Data

Model		Nominal tons	Motor	Pump	Tower Dimensions				Pipe Connections				
MXC			HP	HP	L	W	H	h	Inlet	Outlet	Overflow	Drain	M-U
01	3	67	5	1.5	7'- 3 1/2"	14'- 10 3/4"	14'-1 1/4"	11'- 11 3/4"	4"	4"	2"	1 1/2"	1"
	4	73	5										
	5.5	80	7.5										
02	4	72	5	2	7'- 3 1/2"	14'- 10 3/4"	14'- 7 1/4"	12'- 5 1/2"	4"	4"	2"	1 1/2"	1"
	5.5	79	7.5										
	7.5	86	10										
03	5.5	101	7.5	3	9'- 1/4"	17'- 2 3/4"	15'- 5"	12'- 11 1/2"	6"	6"	3"	2"	1"
	7.5	110	10										
	11	121	15										
04	7.5	129	10	5	9'- 1/4"	17'- 2 3/4"	17'- 3 1/2"	14'- 10"	6"	6"	3"	2"	1"
	11	141	15										
	15	152	20										
05	7.5	152	10	5	9'- 7 3/4"	18'- 3 1/4"	16'- 7 1/2"	14'- 2"	6"	6"	3"	2"	1"
	11	166	15										
	15	182	20										
06	11	188	15	5	9'- 7 3/4"	18'- 3 1/4"	18'- 3 3/4"	15'- 10 1/4"	6"	6"	3"	2"	1"
	15	206	20										
	18.5	216	25										
07	11	237	15	7.5	12'- 7 1/4"	21'- 1 1/4"	16'- 8 3/4"	13'- 7 1/2"	8"	8"	3"	2"	1 1/2"
	15	256	20										
	18.5	268	25										
	22	282	30										
08	11	273	15	10	12'- 7 1/4"	21'- 1 1/4"	17'- 10 1/2"	14'- 9 1/4"	8"	8"	3"	2"	1 1/2"
	15	297	20										
	18.5	312	25										
	22	328	30										
	30	346	40										

Notes:

- 1) Nominal tons flow rate is for 3gpm of water cooled from 95°F to 85°F with 78°F entering wet- bulb temperature.
- 2) Satisfactory performance is based on precise selection, proper system design and installation in a clean and well-ventilated location.

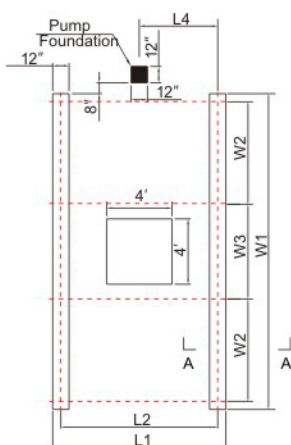
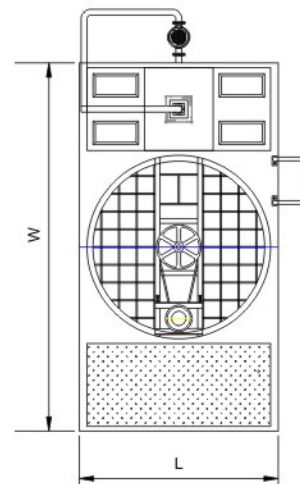
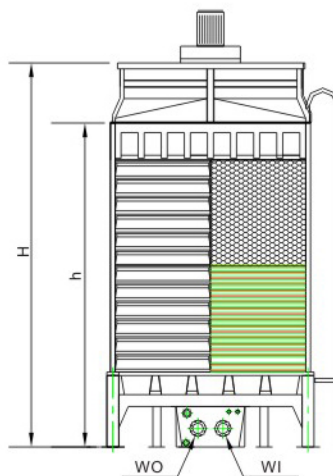
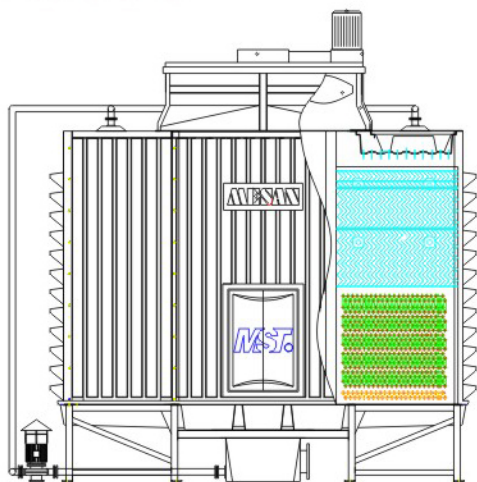
Optional Accessories

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

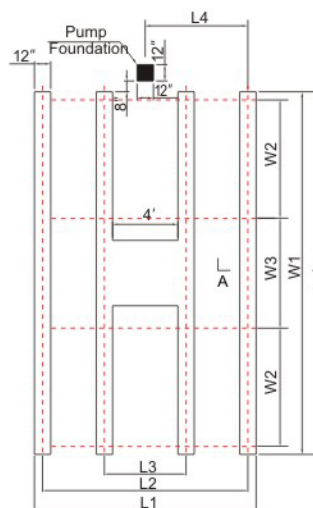
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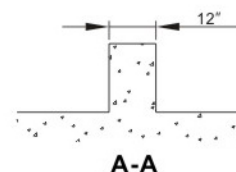
Dimensions



MXC-01~06



MXC-07~08



Foundation

Model	Foundation Dimensions						
MXC	L1	L2	L3	L4	W1	W2	W3
01	8'- 1/2"	7'- 3/4"	—	3'- 6 1/4"	15'- 7 3/4"	5'- 1 3/4"	4'- 4 1/4"
02	8'- 1/2"	7'- 3/4"	—	3'- 6 1/4"	15'- 7 3/4"	5'- 1 3/4"	4'- 4 1/4"
03	9'- 9 1/4"	8'- 9 1/2"	—	4'- 4 3/4"	17'- 11 3/4"	5'- 7 3/4"	5'- 8 1/2"
04	9'- 9 1/4"	8'- 9 1/2"	—	4'- 4 3/4"	17'- 11 3/4"	5'- 7 3/4"	5'- 8 1/2"
05	10'- 5 1/4"	9'- 5 1/2"	—	4'- 8 3/4"	19'- 1/4"	6'- 2"	5'- 8 1/2"
06	10'- 5 1/4"	9'- 5 1/2"	—	4'- 8 3/4"	19'- 1/4"	6'- 2"	5'- 8 1/2"
07	13'- 4 1/4"	12'- 4 1/2"	4'- 11"	6'- 2 1/4"	21'- 10 1/4"	7'- 1 1/2"	6'- 7 1/2"
08	13'- 4 1/4"	12'- 4 1/2"	4'- 11"	6'- 2 1/4"	21'- 10 1/4"	7'- 1 1/2"	6'- 7 1/2"

Notes:

Secure the base of the cooling tower with the anchor bolts. Buyer is responsible for the tower support and for the positioning and diameter of the anchoring bolts to comply with local building codes.



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



CTI
CERTIFIED

MXC



MCC





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