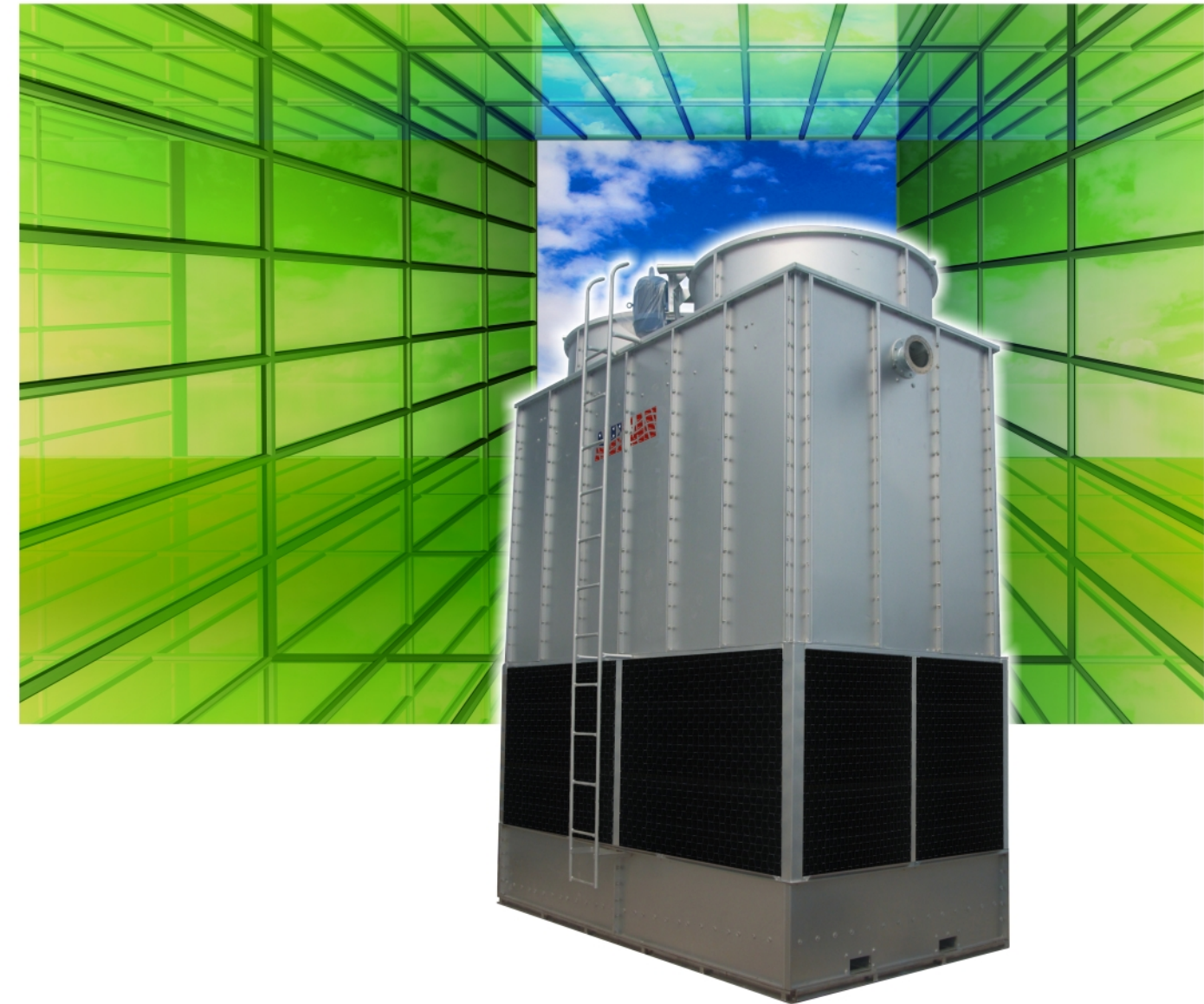


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2014-12L/MCC/IP

2015



MCC Series
Counter Flow, Induced Draft

MCC Series

Counter 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.



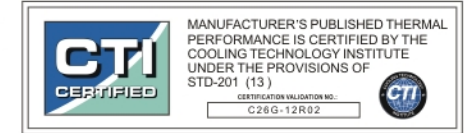
MESAN USA strategically located at the center of the Americas continent, in Miami, Florida, USA, consolidates MESAN Group's global presence and reiterates its commitment to provide world-class products for an ever-expanding market.

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.

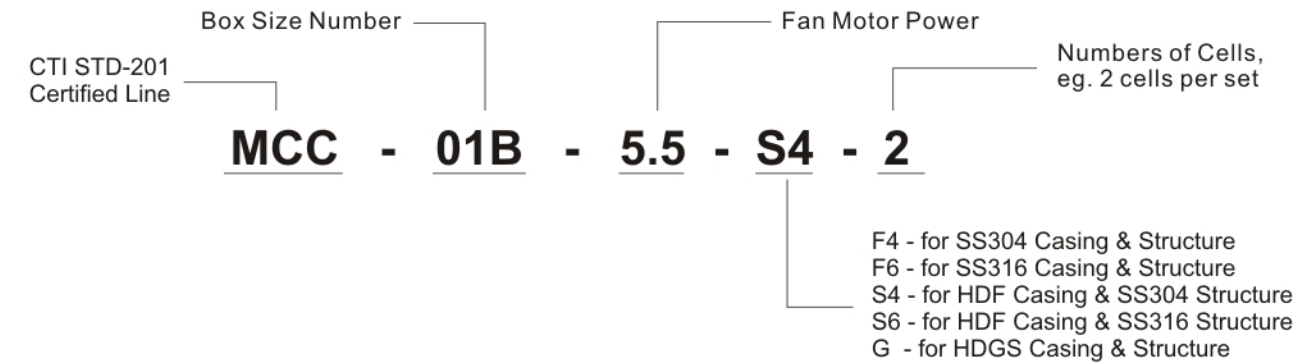
Overview

The MCC Series comes to fill a need in the market for a cost-effective, energy-saving, high-efficiency induced-draft counter-flow cooling tower for all outdoor applications. All MCC models are fully compliant with ASHRAE 90.1 and contribute to LEED® Certification Points. Some MCC towers come in 3 modules, that can be precisely assembled at the factory and shipped inside a 40' container and delivered to the job-site to reduce the installation cost and time.



The MCC Series is available in 20 different box sizes with multiple motors, for a total of 164 models ranging between 95 tons and 1,143 tons per cell.

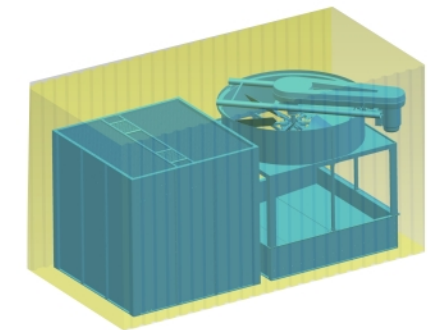
Model Designation



Advantages

Modular Construction

Some MCC sizes come in pre-assembled modules easily stackable in the field. Even the infill comes in factory-assembled blocks and pre-installed inside the middle section of the unit. The result is a reduced field assembly time and consequent reduction on installation costs for the customer.



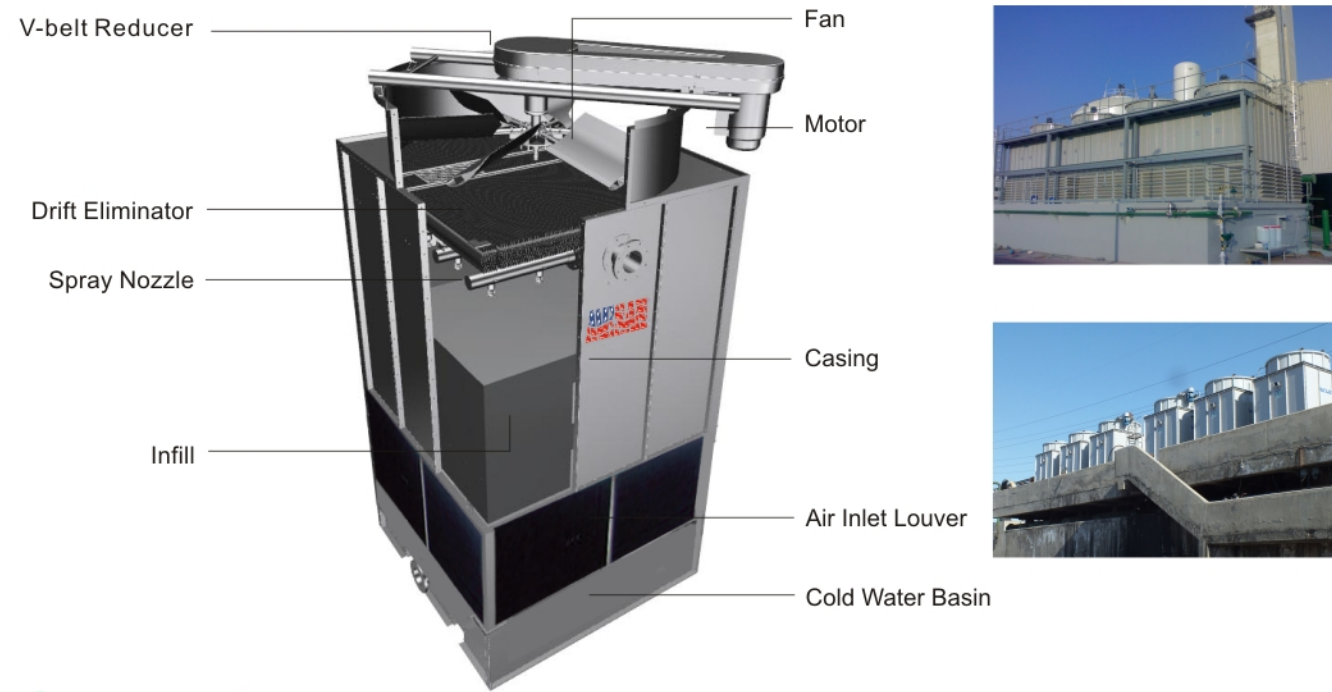
Now in addition to the containerized towers, MESAN also offers new models designed to be pre-assembled off-site and transported on regular flat-bed trailers. These models identified in this catalog tables with the suffix "TRL" have a reduced width to comply with most road regulations.



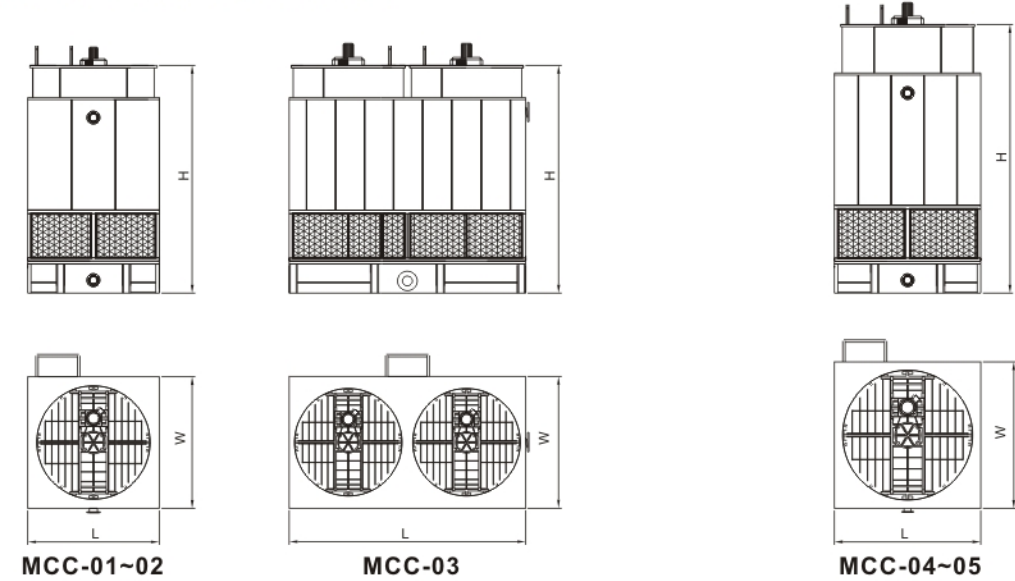
Trust MESAN with your evaporative cooling needs.



Tower Structure



Product Technical Data



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.

Fan

Aerodynamic airfoil extruded aluminum fan blades, are low noise, high efficiency, dynamically balanced, with adjustable pitch blades and self-centering conical hub bushings (tapered-lock), for smooth and quiet operation.



Panel and Structure

The MCC series is available in several construction materials:

- HDF (high density FRP), which is a special manufacturing process that produces very smooth surfaces on both sides of the components and higher structural strength. Smooth inner surface on wet parts reduces bacteria growth and facilitates maintenance, and provides the ultimate corrosion resistance.
- HDGS (Hot Dipped Galvanized Steel). G235 quality is the highest galvanized grade in the market.
- SS-304 or SS-316 stainless steel construction are also available for the highest corrosion resistance.

Water Distribution System

Non corrosive water distribution piping, non-clogging large diameter spray nozzles, ensure complete and uniform coverage of the heat transfer surfaces for optimal thermal performance.

Infill

High efficiency, PVC heat transfer surfaces with proprietary design that combines excellent contact between air and water while offering very little resistance to airflow for the lowest fan energy consumption.



Air Inlet Louver

The sectional louver made from light-weight corrosion-free PVC sections offers easy access to cold water basin. Each louver section is easily removed and the unique design limits the direct sunlight entering the cold water basin plus keeping airborne debris away from the tower, reducing the potential for algae growth and eliminating water splash out.

Model	Nominal	Motor	L	W	H	Remark
MCC	Tons	HP				
01B	2.2	95	7'-5 1/4"	7'-5 1/4"	12'-10 1/4"	
	3	106				
	4	116				
	5.5	128				
	7.5	141				
	11	160				
02B	3	141	7'-5 1/4"	9'-1"	12'-10 1/4"	CNT
	4	154				
	5.5	170				
	7.5	188				
	11	213				
	15	235				
03B	4.4	191	7'-5 1/4"	13'-4 1/4"	12'-10 1/4"	
	6	211				
	8	232				
	11	255				
	15	282				
	22	320				

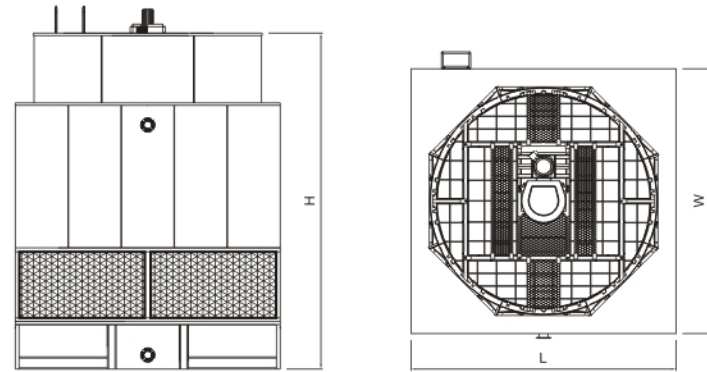
Model	Nominal	Motor	L	W	H	Remark
MCC	Tons	HP				
04B	2.2	114	8'-3 1/4"	8'-3 1/4"	15'-2 1/4"	TRL
	3	126				
	4	138				
	5.5	153				
	7.5	169				
	11	191				
05B	3	156	9'-5"	9'-5"	15'-3 1/4"	
	4	170				
	5.5	188				
	7.5	207				
	11	235				
	15	260				

Notes:

- 1) Nominal tons flow 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.
- 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

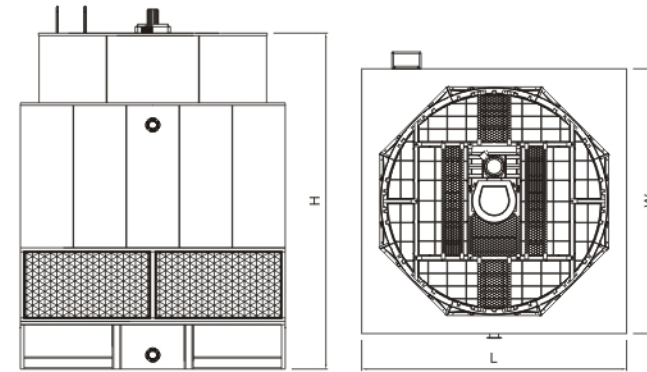


Product Technical Data

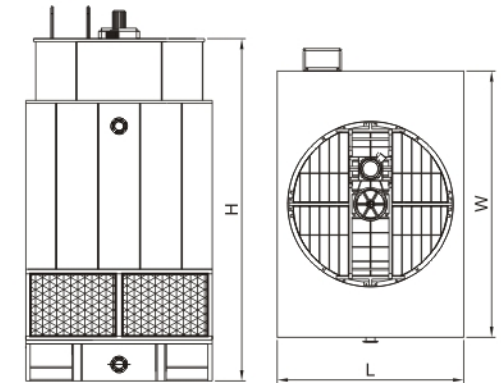


MCC-06~09

Product Technical Data



MCC-10~11



MCC-12~14

Model	Nominal Tons	Motor HP	L	W	H	Remark
MCC						
06A	5.5	244	12'- 2/4"	12'- 2/4"	16'- 2/4"	TRL
	7.5	270				
	11	307				
	15	339				
	18.5	363				
22	383					
06B	5.5	266	7'-5 1/4"	7'-5 1/4"	7'-5 1/4"	
	7.5	294				
	11	333				
	15	368				
	18.5	395				
22	418					
07A	5.5	301	13'-8 1/4"	13'-8 1/4"	17'-4 1/4"	CKD
	7.5	333				
	11	377				
	15	417				
	18.5	446				
22	473					
07B	5.5	326	13'-8 1/4"	13'-8 1/4"	17'-4 1/4"	
	7.5	361				
	11	410				
	15	454				
	18.5	486				
22	514					

Model	Nominal Tons	Motor HP	L	W	H	Remark
MCC						
08A	7.5	383	15'-3 3/4"	15'-3 3/4"	17'-11 3/4"	CKD
	11	434				
	15	481				
	18.5	515				
	22	545				
	30	603				
08B	7.5	414	15'-3 3/4"	15'-3 3/4"	17'-11 3/4"	
	11	470				
	15	520				
	18.5	556				
	22	589				
	30	652				
09A	11	527	16'-7 3/4"	16'-7 3/4"	17'-11 3/4"	
	15	584				
	18.5	625				
	22	662				
	30	734				
	30	734				
09B	11	561	16'-7 3/4"	16'-7 3/4"	17'-11 3/4"	
	15	621				
	18.5	665				
	22	703				
	30	779				
	30	779				

Notes:
 1) Nominal tons flow 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.
 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

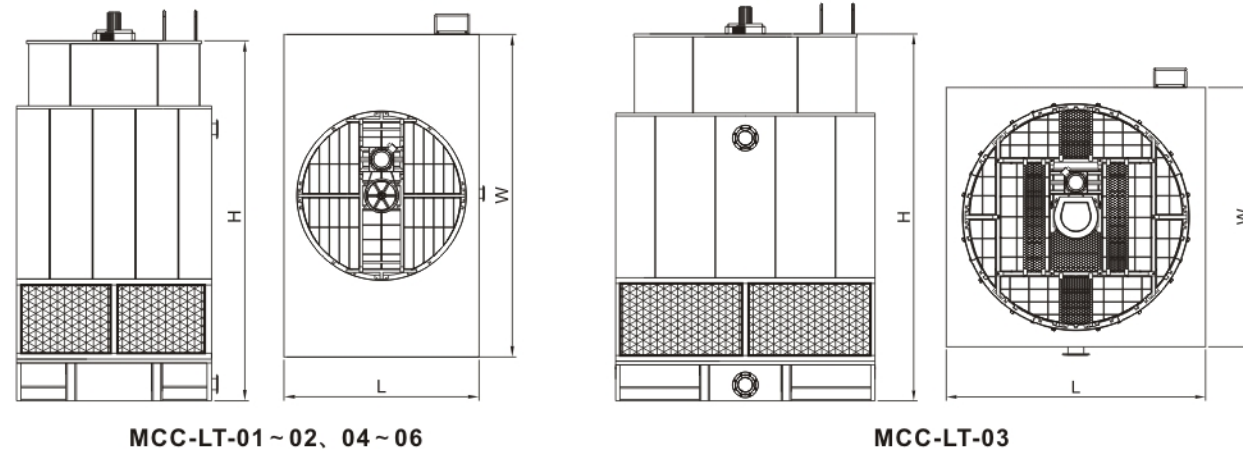
Model	Nominal Tons	Motor HP	L	W	H	Remark
MCC						
10A	11	590	18'-3 1/4"	18'-3 1/4"	17'-11 3/4"	CKD
	15	653				
	18.5	700				
	22	741				
	30	820				
	37	879				
10B	11	646	18'-3 1/4"	18'-3 1/4"	17'-11 3/4"	
	15	715				
	18.5	766				
	22	812				
	30	900				
	37	964				
11A	15	746	19'-11"	19'-11"	17'-11 3/4"	
	18.5	798				
	22	845				
	30	936				
	37	1,004				
	45	1,071				
11B	15	794	19'-11"	19'-11"	17'-11 3/4"	
	18.5	851				
	22	901				
	30	998				
	37	1,070				
	45	1,143				

Notes:
 1) Nominal tons flow 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.
 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

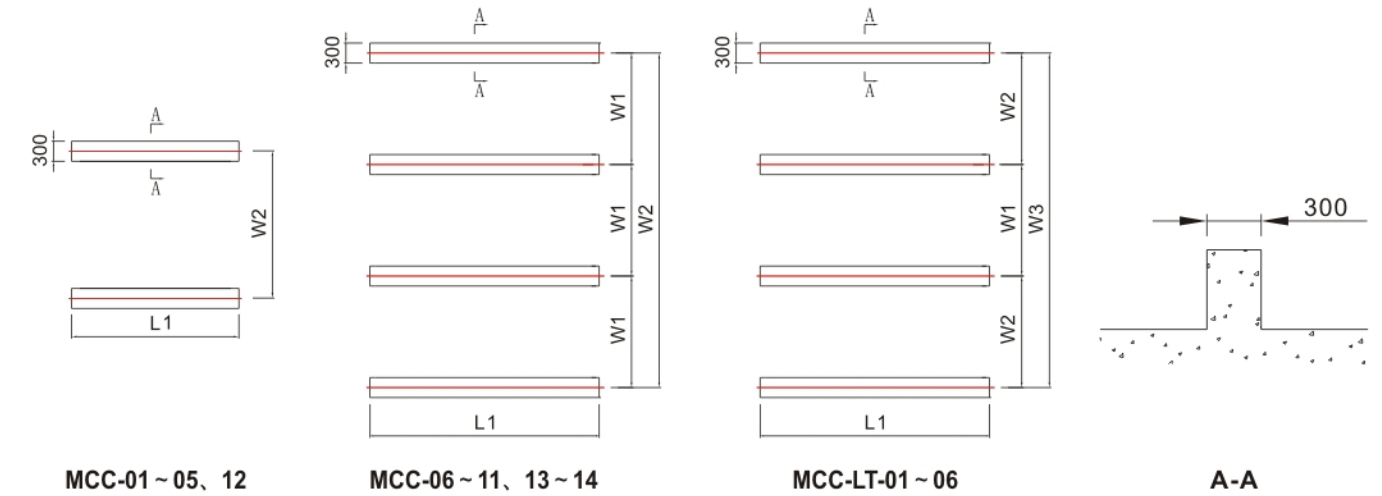
Model	Nominal Tons	Motor HP	L	W	H	Remark
MCC						
12B	2.2	123	8'-3 1/4"	9'-5"	15'-2 1/4"	TRL
	3	137				
	4	150				
	5.5	166				
	7.5	183				
	11	208				
13B	15	230	8'-3 1/4"	11'-9 3/4"	15'-2 1/4"	
	18.5	247				
	3	150				
	4	160				
	5.5	181				
	7.5	200				
14B	11	228	9'-3 1/4"	19'-11"	19'-11"	
	15	252				
	18.5	269				
	22	283				
	4	205				
	5.5	228				
14B	7.5	251	9'-3 1/4"	19'-11"	19'-11"	
	11	285				
	15	316				
	18.5	338				
	22	357				
	22	357				



Product Technical Data



Foundation



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Model	Nominal Tons	Motor HP	L	W	H	Remark
LT-01	3	175	8'-5 1/2"	13'-11 3/4"	15'-7 1/4"	
	4	192				
	5.5	214				
	7.5	236				
	11	269				
	15	298				
LT-02	3	222	9'-3 1/4"	9'-3 1/4"	9'-3 1/4"	TRL
	4	244				
	5.5	270				
	7.5	299				
	11	341				
	15	379				
	18.5	405				
LT-03	5.5	233	11'-9 3/4"	12'	16'-11 1/4"	
	7.5	258				
	11	294				
	15	326				
	18.5	349				
	22	370				
	30	411				

Model	Nominal Tons	Motor HP	L	W	H	Remark
LT-04	7.5	298	11'-10"	13'-11 3/4"	17'-1 1/2"	
	11	338				
	15	374				
	18.5	402				
	22	426				
	30	473				
LT-05	11	408	11'-10"	18'	18'-9 1/2"	TRL
	15	454				
	18.5	486				
	22	515				
	30	571				
	37	612				
LT-06	11	440	11'	19'	18'	
	15	487				
	18.5	523				
	22	553				
	30	615				
	37	659				

- Notes:**
- 1) Nominal tons flow 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.
 - 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

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Model	Foundation Dimensions				Pipe Connections					
	MCC	L1	W1	W2	W3	Inlet	Outlet	Overflow	Drain	M-U
01	8'-2 1/2"	—	7'-2 3/4"	—	—	6"	6"	2"	1 1/2"	1"
02	8'-2 1/2"	—	8'-10 1/2"	—	—	6"	6"	2"	1 1/2"	1"
03	14'-1 3/4"	—	7'-2 3/4"	—	—	8"	8"	3"	1 1/2"	1"
04	9'-3/4"	—	8'-3/4"	—	—	6"	6"	2"	1 1/2"	1"
05	10'-2 1/4"	—	9'-2 1/2"	—	—	6"	6"	2"	1 1/2"	1"
06	12'-9 1/2"	3'-11"	11'-9 3/4"	—	—	8"	8"	3"	1 1/2"	1"
07	14'-5 1/2"	4'-6"	13'-5 3/4"	—	—	10"	10"	3"	2"	1 1/2"
08	16'-1"	5'-1/2"	15'-1 1/4"	—	—	10"	10"	3"	2"	1 1/2"
09	17'-4 3/4"	5'-5 1/2"	16'-5 1/4"	—	—	10"	10"	3"	2"	1 1/2"
10	19'-1/4"	6'	18'-3/4"	—	—	12"	12"	4"	4"	2"
11	20'-8"	6'-6 1/2"	19'-8 1/4"	—	—	14"	14"	4"	4"	2"
12	9'-3/4"	—	9'-2 1/2"	—	—	6"	6"	2"	1 1/2"	1"
13	9'-3/4"	3'-10 1/2"	11'-7 1/4"	—	—	6"	6"	2"	1 1/2"	1"
14	10'-2 1/4"	3'-10 1/2"	11'-7 1/4"	—	—	8"	8"	3"	1 1/2"	1"
LT-01	9'-2 3/4"	4'-7 1/4"	4'-7"	14'-9"	—	6"	6"	2"	1 1/2"	1"
LT-02	10'-7"	5'-11 1/4"	5'-11"	18'-9 1/4"	—	8"	8"	3"	1 1/2"	1"
LT-03	12'-7"	3'-10 3/4"	3'-10 1/4"	12'-7"	—	8"	8"	3"	1 1/2"	1"
LT-04	12'-7 1/4"	4'-7 1/4"	4'-7"	14'-9"	—	8"	8"	3"	1 1/2"	1"
LT-05	12'-7 1/4"	5'-11 1/4"	5'-11"	18'-9 1/4"	—	10"	10"	3"	2"	1 1/2"
LT-06	12'-7 1/4"	6'-7 1/4"	6'-7 1/4"	20'-9 1/4"	—	10"	10"	3"	2"	1 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.



Optional Accessories

HDGS Construction

For those jobs requiring non-combustible tower casings, we offer a low cost hot-dipped galvanized option, using G235 steel, the highest grade available.

Stainless-steel Construction

When the ultimate corrosion resistance and non combustibility is required, we offer either SS304 or SS316 construction; also any combination of the two is available.

Motors

Single-speed, TEAO enclosure, but as optional we can also supply NEMA-Premium, VFD-compatible or 2-speed motors.

Super Low Noise Fan

Standard fans are low-noise aluminum airfoil blades, but also available are the "Silent-Choice" super low-noise type with over 15dBA reduction in noise levels.

Gear Reducers

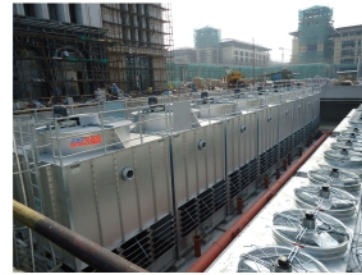
Our standard is belt-driven speed reducers, but as an option we also offer 90° and 180° gear reducers.

Discharge Sound Attenuators

Designed for low air pressure drop, our discharge sound attenuators offer a cost-conscious way to mitigate noise from the tower fan.

Other 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



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

