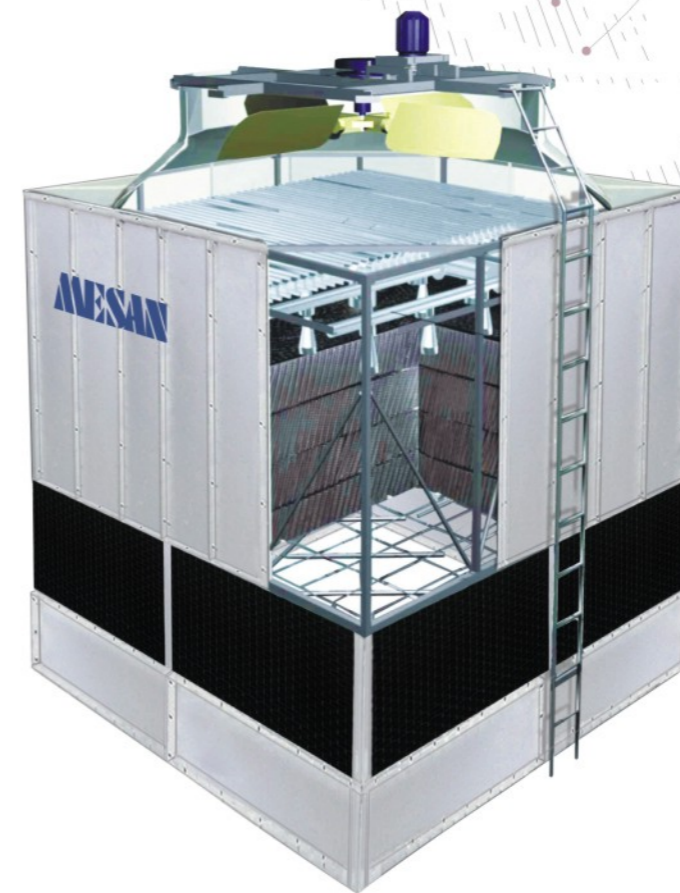


MST

MST

www.mesanct.com

e-mail: sales@mesanct.com



MST-2000 Series

Counter Flow Induced Draft

- Specifications & Design are subject to change without notice.
- One year warranty under normal operation.
- All rights reserved.

2014-04L/MST-2000/M



MST-2000 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-90.1-2010 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.

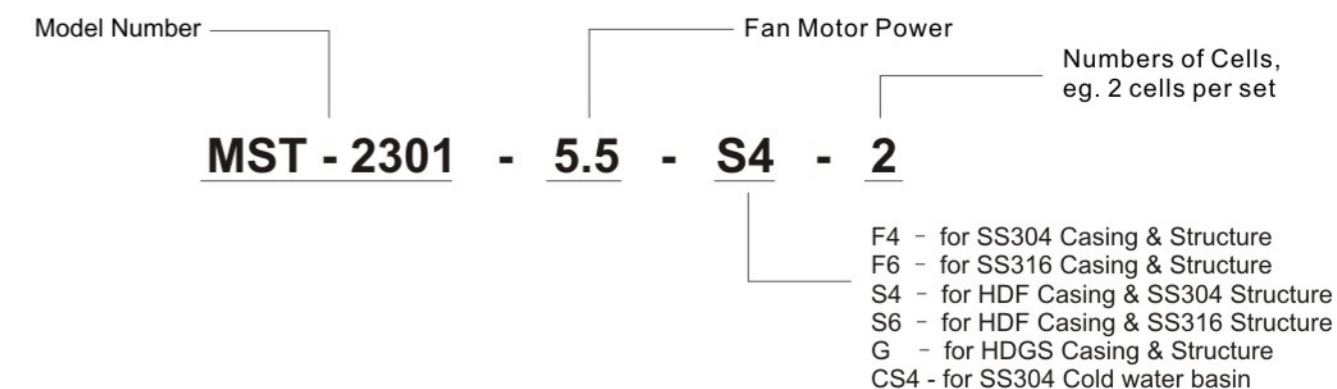
MESAN USA offers local presence, local inventory of equipment and spare parts and bilingual technical support as well as customer service, in English and Spanish. All products offered by MESAN USA have been engineered to

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

Overview

The MST-2000 series is available in 10 different box sizes with multiple motors, for a total of 83 models ranging between 90m³/h to 1110m³/h per cell.

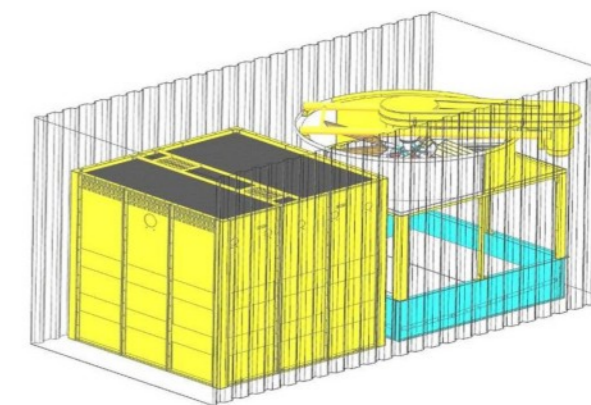
Model Designation



Advantages

Modular Construction

Some MST-2000 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.

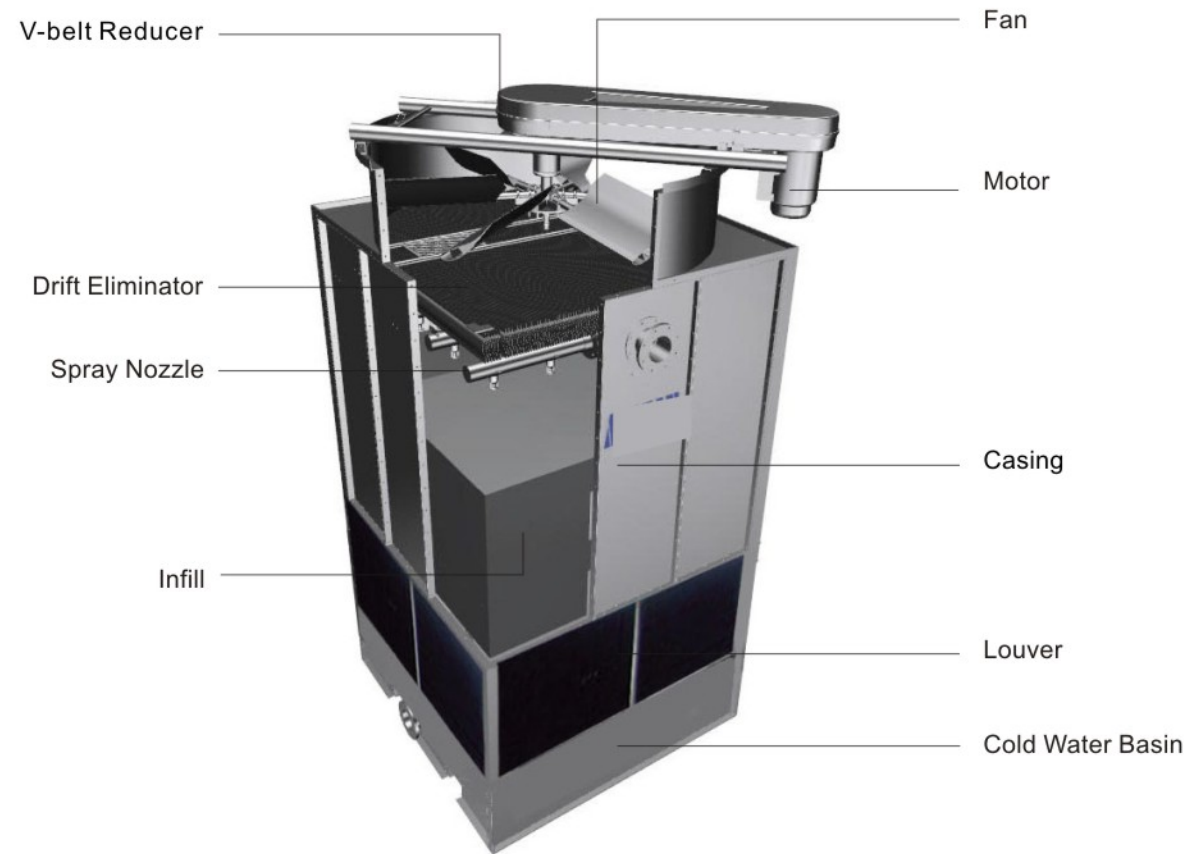


Low Energy Consumption

Maximizing energy savings is at the core of every MESAN product. Low energy consumption is the most important variable to consider when pursuing LEED certification. Thanks to our proprietary heat-exchange surfaces design (infill), with very low air pressure drop, our towers have the lowest motor kw rating per ton of capacity in our industry. All models are fully ASHRAE 90.1-2010 compliant, largely exceeding this standard's m³/h/kw requirements.

Trust MESAN with your evaporative cooling needs.

Tower Structure



Components

Motor

TEAO motor, weatherproof, IP55 protection degree with class F insulation, high efficiency, low noise and specially insulated for running in humid environment.

* Also available with Two Speed motor and VFD motor.

High Efficiency Fan

High efficiency axial aluminum alloy fans with innovative aerodynamic blade design, adjustable pitch blades at low fan tip speeds with low noise emission ensures optimum performance and low power consumption.

* Also available with FRP fan for special application.



Casing and Structure

The MST-2000 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 surfaces on wet parts reduces bacteria growth and facilitates maintenance, and provides the ultimate corrosion resistance.
- HDGS (Hot Dipped Galvanized Steel), this is a cost effective alternative to casing construction, with good structural strength and adequate corrosion resistance.
- SS-304 or SS-316 stainless steel construction are also available for the highest corrosion resistance.



Water Distribution System

The hot water distribution piping is fabricated using PVC and the water is efficiently and uniformly distributed across entire the infill surface by the removable ABS non-clogging spray nozzles to maximize the heat transfer.

For multicell installation connected to a single system, an optional equalizing pipe between basins to maintain the water level.

Infill

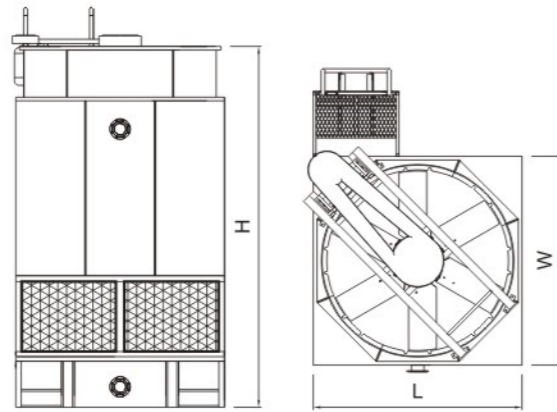
High efficiency, PVC heat transfer surfaces with proprietary design that combine excellent contact between air and water while offering very little resistance to airflow for the lowest fan energy consumption.



Optional Accessories

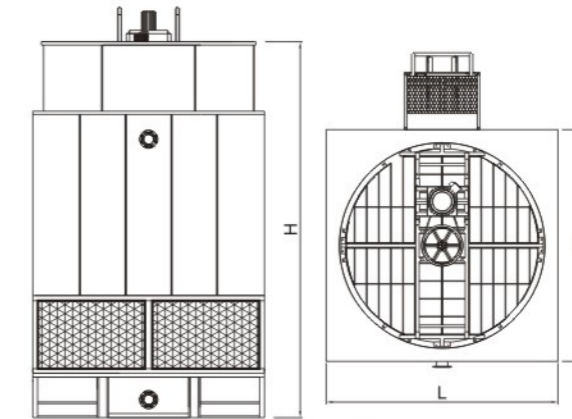
Motor	High Efficiency Motor	Others	Basin Sweeper Systems with Filter / Separator Package
	Two Speed Motor		Basin Heater
	VFD Motor		Discharge Sound Attenuator
Fan	FRP Fan		Equalizing Pipe Connection
	Low Noise Fan		FRP Louver
Reducer	180° Gear Box		OSHA Fan Guard
	90° Gear Box		OSHA Ladder Safety Cage and Handrail
Infill	ASTM PVC Infill		Removable Strainer
	High Temperature PP Infill		Variable and Constant Speed Control Panels

Product Technical Data



MST-2301 ~ 2302

Product Technical Data



MST-2303 ~ 2304

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Model	Water Flow m ³ /h	Motor kw	L mm	W mm	H mm	Remark	
							2301
3	100	3					
4	110	4					
5.5	125	5.5					
7.5	135	7.5					
2302	3	135	3	2,268	2,768	3,920	
4	150	4					
5.5	165	5.5					
7.5	185	7.5					
11	205	11					

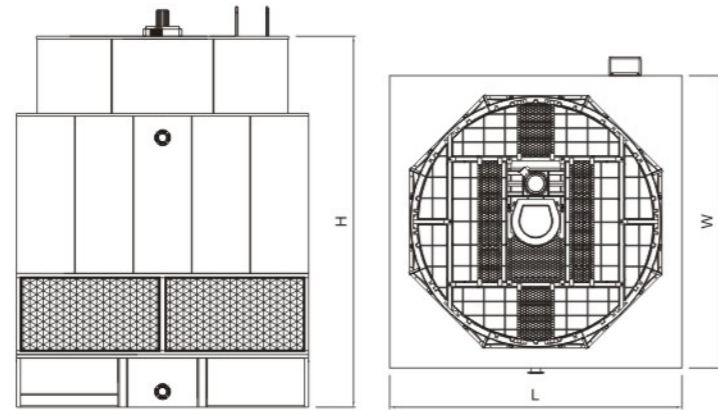
Notes:
 1) Nominal water flow is defined as rate of water cooled from 37°C to 32°C with 28°C wet-bulb temperature.
 2) Satisfactory performance is based on precise selection, proper system design and installation in a clean and well-ventilated location.
 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

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Model	Water Flow m ³ /h	Motor kw	L mm	W mm	H mm	Remark	
							2303
4	135	4					
5.5	150	5.5					
7.5	165	7.5					
2304	3	150	3	2,868	2,868	4,652	
4	165	4					
5.5	185	5.5					
7.5	200	7.5					
11	225	11					
15	250	15					

Notes:
 1) Nominal water flow is defined as rate of water cooled from 37°C to 32°C with 28°C 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

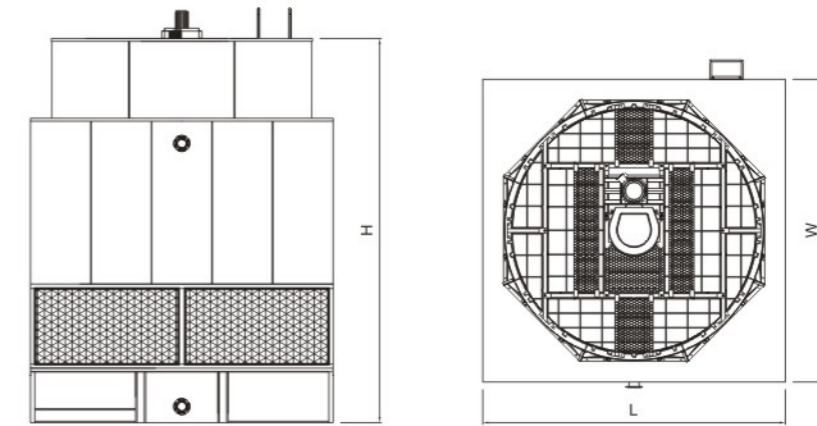


MST-2305 ~ 2308

Model	Water Flow		Motor	L	W	H	Remark
	m ³ /h		kw				
2305	5.5	235	5.5	3,670	3,670	4,892	TRL
	7.5	260	7.5				
	11	300	11				
	15	330	15				
	18.5	350	18.5				
	22	370	22				
2306	5.5	260	5.5	3,670	3,670	4,892	
	7.5	280	7.5				
	11	325	11				
	15	355	15				
	18.5	385	18.5				
	22	405	22				
2307	7.5	325	7.5	4,170	4,170	5,292	
	11	365	11				
	15	405	15				
	18.5	430	18.5				
	22	450	22				
2308	7.5	350	7.5	4,170	4,170	5,292	
	11	400	11				
	15	450	15				
	18.5	470	18.5				
	22	500	22				

Notes:
 1) Nominal water flow is defined as rate of water cooled from 37°C to 32°C with 28°C 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

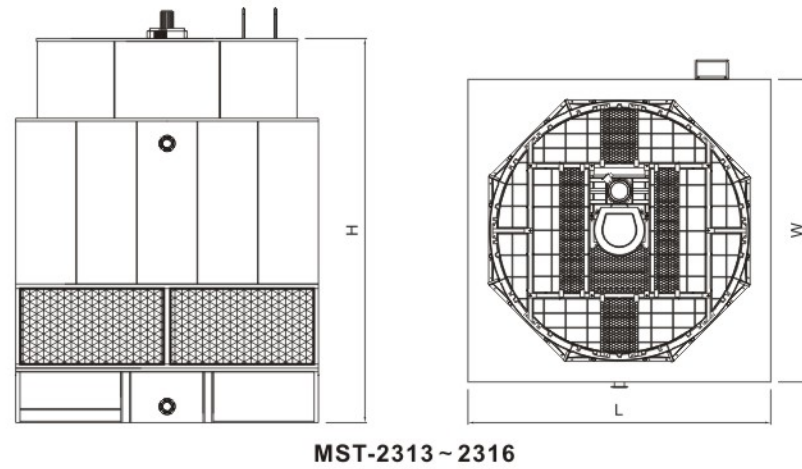


MST-2309 ~ 2312

Model	Water Flow		Motor	L	W	H	Remark
	m ³ /h		kw				
2309	11	420	11	4,670	4,670	5,480	CKD
	15	465	15				
	18.5	500	18.5				
	22	530	22				
	30	585	30				
	2310	11	455				
15		505	15				
18.5		540	18.5				
22		570	22				
30		630	30				
2311		11	510	11	5,072	5,072	
	15	565	15				
	18.5	605	18.5				
	22	640	22				
	30	710	30				
2312	11	545	11	5,072	5,072	5,480	
	15	600	15				
	18.5	645	18.5				
	22	680	22				
	30	755	30				

Notes:
 1) Nominal water flow is defined as rate of water cooled from 37°C to 32°C with 28°C 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



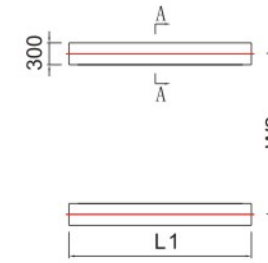
MST-2313 ~ 2316

Model		Water Flow	Motor	L	W	H	Remark
		m ³ /h	kw				
2313	15	635	15	5,572	5,572	5,480	CKD
	18.5	680	18.5				
	22	720	22				
	30	800	30				
	37	850	37				
2314	15	700	15	5,572	5,572	5,480	
	18.5	745	18.5				
	22	790	22				
	30	870	30				
	37	935	37				
2315	18.5	775	18.5	6,072	6,072	5,480	
	22	820	22				
	30	910	30				
	37	975	37				
	45	1,040	45				
2316	18.5	825	18.5	6,072	6,072	5,480	
	22	875	22				
	30	965	30				
	37	1,040	37				
	45	1,110	45				

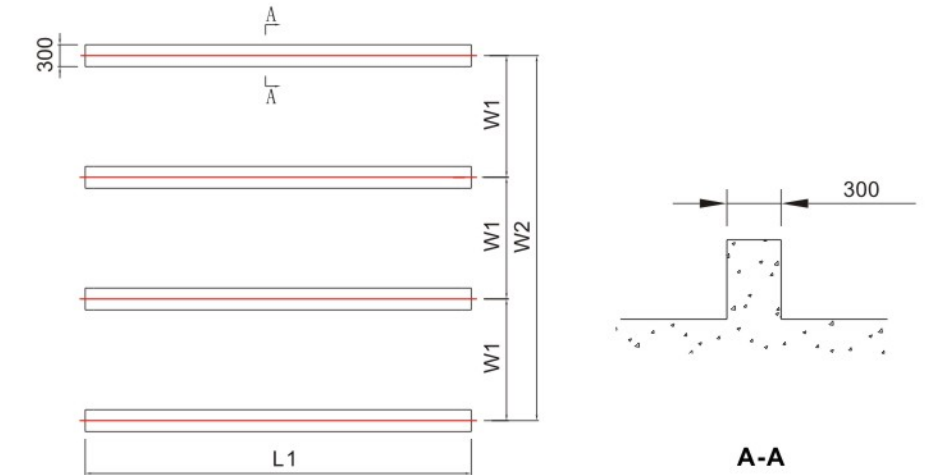
Notes:
 1) Nominal water flow is defined as rate of water cooled from 37°C to 32°C with 28°C wet-bulb temperature.
 2) Satisfactory performance is based on precise selection, proper system design and installation in a clean and well-ventilated location.
 3) CNT: Containerized, TRL: Trailer, CKD: Knocked-down model.

Foundation

MST-2301 ~ 2304



MST-2305 ~ 2316



Model	Foundation Dimensions			Pipe Connections				
	L1	W1	W2	Inlet	Outlet	Overflow	Drain	M-U
	mm	mm	mm	DN	DN	DN	DN	DN
2301	2,505	—	2,205	125	125	50	40	25
2302	2,505	—	2,705	150	150	50	40	25
2303	2,760	—	2,460	125	125	50	40	25
2304	3,105	—	2,805	200	200	50	40	25
2305	3,900	1,200	3,600	200	200	80	40	25
2306	3,900	1,200	3,600	250	250	80	40	25
2307~2308	4,410	1,370	4,110	250	250	80	50	40
2309~2310	4,905	1,535	4,605	250	250	80	50	40
2311~2312	5,300	1,670	5,010	300	300	80	50	40
2313~2314	5,800	1,835	5,505	300	300	100	100	50
2315~2316	6,300	2,000	6,000	350	350	100	100	50

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.