MESAN

MST®

MST-1000 Series

Cross Flow Induced Draft
Single Inlet Horizontal Discharge

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- Specifications & Design are subject to change without notice.
- One year warranty under normal operation.
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2014-3F/MST-1000/M

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Cross Flow Induced Draft Single Inlet Horizontal Discharge

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-1000 is a cost-effective, induced-draft, single inlet horizontal dischange cross-flow cooling tower. Single cell's capacity range is from 30m³/h to 250m³/h. The MST-1000 is designed for both indoor or outdoor installation with ASHRAE 90.1-2010 compliance.

Model Designation

MST-1030 - S4 - 2

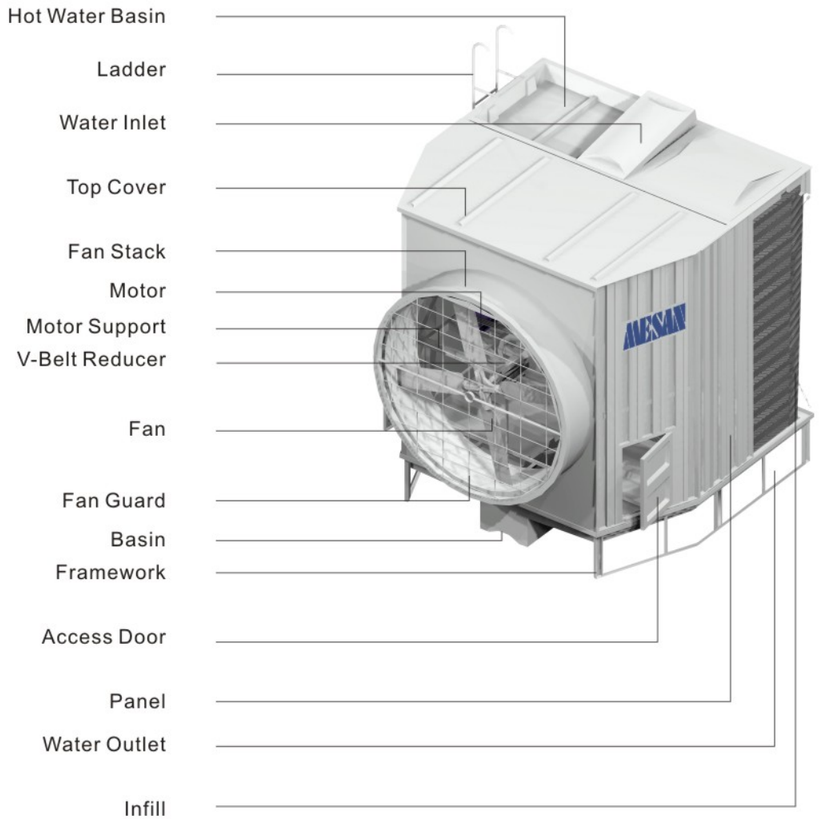
- MST-1030 — Model Number
- S4 — F4 – for SS304 Casing & Structure; F6 – for SS316 Casing & Structure; S4 – for FRP Casing & SS304 Structure; S6 – for FRP Casing & SS316 Structure; G – for HDGS Casing & Structure
- 2 — Numbers of Cells eg. 2 cells per set

Convenience

One of the limitations of conventional induced draft towers is having vertical air discharge. When the project requires the towers to be installed indoors (mechanical room). MESAN's MST-1000 series is the cost-effective alternative for applications requiring towers capable of being installed under a roof, discharging the air horizontally. They are easy to integrate into the building's architecture and offer the usual MESAN's low energy consumption (about half of the energy consumed by an equivalent capacity forced-draft tower).

Trust MESAN with your evaporative cooling needs.

Tower Structure



Components

Motor
TEAO type, IP55 enclosure, class F insulation, high efficiency, and low noise. Specially designed to operate within the high-humidity environment of a cooling tower.

Fan
High efficiency axial aluminum alloy fans with innovative low drag, aerodynamic airfoil blade design, adjustable pitch blades and low-noise.*
*Note: * Models MST-1030 to MST-1050 use ABS plastic fans.*

Reducer
3 Kw and larger fans, are driven by low-noise v-belt reducers. Our reducers have very sturdy design with large diameter, high tensile strength shafts; NSK permanently lubricated sealed bearings, isolated from the airstream within a sealed enclosure. Multi-grooved V-belts are designed to withstand the rigors of the humid environment and ensure long and reliable operation.

FRP Components
Hand-laid fiberglass with E-glass chopped strand mat, unsaturated polyester resin and UV-resistant stabilized gel coat, combine to provide excellent corrosion resistance, structural integrity and long service life with minimum maintenance.

Structural Frame
Our structure made of heavy-gauge hot-dipped galvanized steel or SS-304/316 stainless steel .

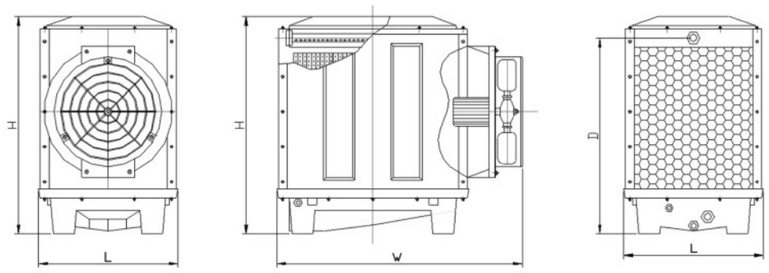
Infill
MESAN's high efficrency infill design, maximizes the contact surface between water and air, allowing for higher evaporation rates and improved heat transfer, while offering the lowest resistance to air flow, for reduced air pressure smaller drop and lowest energy consumption. The cross-flow infill is the built-in honeycomb air inlet channels that direct the air downwards for maximum coverage and contact between air and water and eliminate the intake louvers, which are required by other brands. For special applications we also offer intake louvers as an option.

Optional Accessories

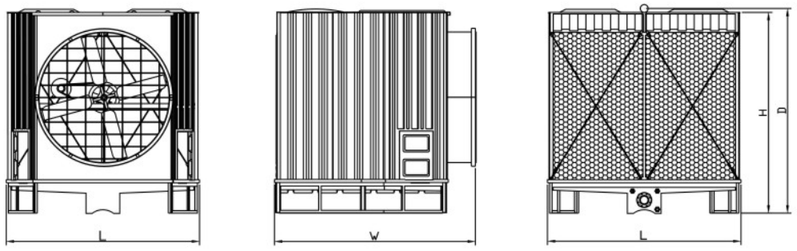
Motor	High Efficiency Motor	**Others**	Basin Sweeper Systems with Filter / Separator Package
	Two Speed Motor		Basin Heater
	VFD Motor		Discharge Sound Attenuator
Fan	FRP Fan		Equalizing Pipe Connection
	Low Noise Fan		FRP Louver
Infill	ASTM PVC Infill		OSHA Fan Guard
	High Temperature PP Infill		OSHA Ladder Safety Cage and Handrail
			Removable Strainer
			Variable and Constant Speed Control Pannels
			Vibration Cut-off Switch

Product Technical Data

MST-1030~1200



MST-1250

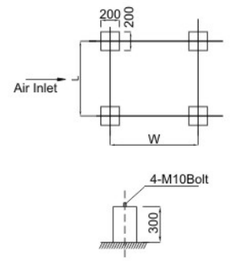


Model	Water Flow (m^3/h)	Tower Dimensions (mm)				Fan Diameter	Motor (Kw)	Air Flow (m^3/h)	Weight (Kg)		Water Pressure Drop (Kpa)
MST-1000		L	W	H	D				Dry	Operating	
1030	30	1620	2000	1890	1790	1184	1.5	23000	300	720	30
1040	40	1620	2000	2290	2190	1184	1.5	28000	320	780	30
1050	50	1940	2330	2380	2280	1184	1.5	31000	540	1180	34
1060	60	1940	2330	2880	2780	1470	2.2	40500	600	1380	35
1080	80	2140	3280	2900	2800	1600	3	49500	680	1460	35
1100	100	2640	3280	2900	2800	1780	4	65000	800	2080	35
1125	125	2640	3280	3400	3300	1780	4	75000	880	2300	40
1150	150	3150	3280	3430	3320	2080	5.5	95000	980	2450	40
1175	175	3150	3280	3930	3820	2080	5.5	110000	1080	3150	45
1200	200	3150	3280	3930	3820	2360	7.5	125000	1150	3320	45
1250	250	3750	3280	3930	4038	2360	11	148000	1320	3550	45

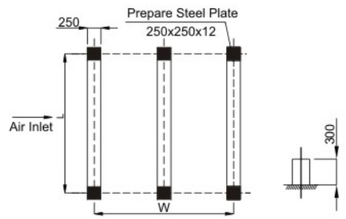
Notes:
1) Nominal water flow rate of m^3/h cooled from 37°C to 32°C at 28°C entering wet-bulb temperature.
2) These are estimated nominal capacities and for more accurate sizing we encourage our customers to use our selection software.
3) Satisfactory performance is based on precise selection, proper system design and installation in a clean and well-ventilated location.

Foundation

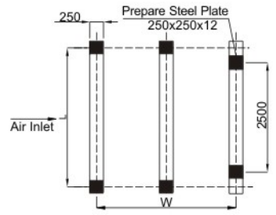
MST-1030~1040



MST-1050~1200



MST-1250



Model	Foundation Dimension (mm)		Piping Connection (mm)				
MST-1000	L	W	WI	WO	OF	Drain	M-U
1030	1330	1360	50×2	80	25	25	15
1040	1330	1360	50×2	80	25	25	15
1050	1880	1840	80×2	100	40	40	20
1060	1880	1840	80×2	100	40	40	20
1080	2080	2740	80×2	125	50	40	20
1100	2580	2740	80×3	150	50	40	20
1125	2580	2740	80×3	150	50	40	20
1150	3080	2740	100×2	150	50	40	25
1175	3080	2740	100×2	150	50	40	25
1200	3080	2740	100×3	200	80	40	25
1250	3690	2740	200	200	80	40	25