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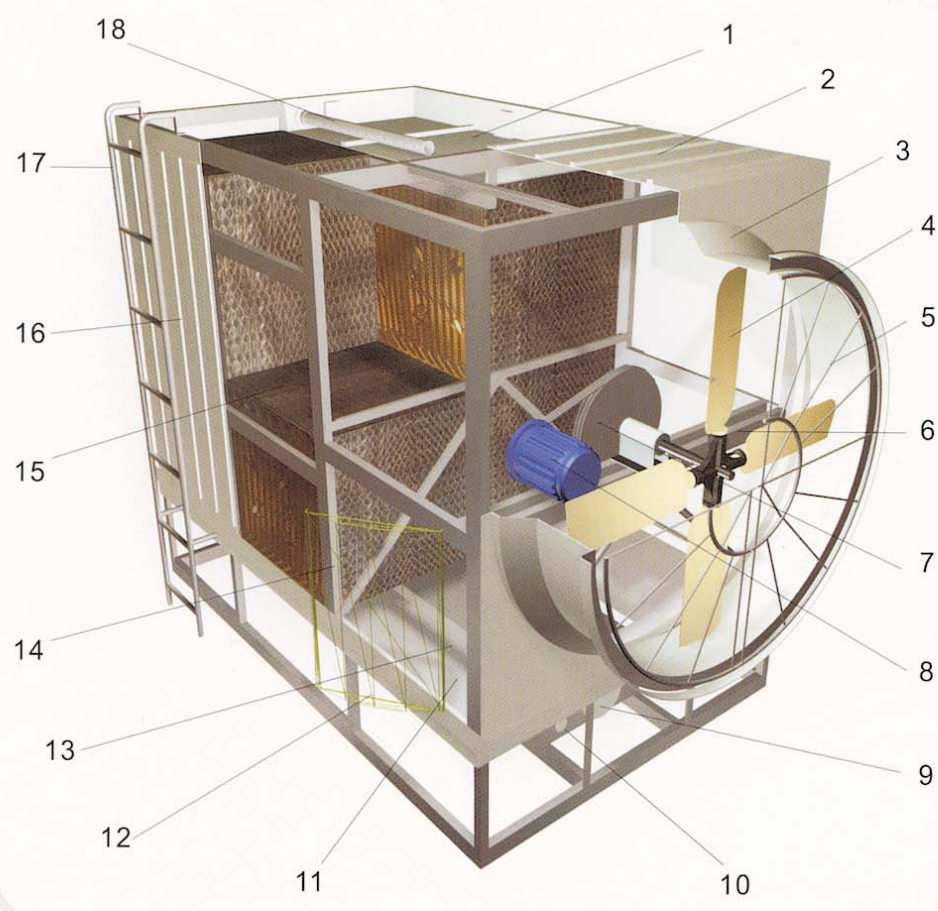
MSC

CROSS FLOW TYPE COOLING TOWER





结构简图 Tower Structure



Structure & Features

- 1. 布水槽 Hot Water Basin
- 2. 上盖板 Top Cover
- 3. 风筒 Fan Stack (FRP)
- 4. 风机 Fan
- 5. 风扇网 Fan Guard
- 6. 马达架 Motor Support
- 7. 皮带箱 V-Belt Reducer
- 8. 马达 (全封闭式) Motor (TEFC)
- 9. 出水口 Water Outlet
- 10. 排水口 Drain
- 11. 底盆 Basin (FRP)
- 12. 检修门 Inspection Door
- 13. 中心水槽 Suction Tank
- 14. 框架 Framework
- 15. 填料 Infill
- 16. 围板 Panel
- 17. 梯 Ladder
- 18. 进水管 Water Inlet Pipe

- 1.MSC系列冷却塔为侧进风、侧出风塔型结构，决定了以下其他形式冷却塔所不具备的优点：**
- a)侧进风、侧出风塔型结构，从根本上大大降低了塔体的高度，其中，MSC-100以下塔体总高度在3米以下，MSC-125~250塔体总高度在4米以下，非常适合安装于一般建筑和高层建筑的技术设备层或中间层，解决了有些建筑冷却塔不便安装于楼顶的问题，也使冷却塔的布置多出一种选择。
 - b)同时，侧进风、侧出风也使得安装于上述位置的冷却塔大大减小了湿空气的回流，提高了冷却塔的使用效率。
 - c)由于安装于中间楼层，降低了空调循环水系统的工作扬程，从而降低了空调系统的建设费用，并可大大节省系统的运行费用。
- 2.高效率、低能耗、低漂水** 本系列冷却塔气流非常顺畅，选用高效节能风机，使设备能耗大为下降，另外，因采用合适的水气比及高效的散热填料，填料片前后端均设计有蜂窝状导风结构，使冷却塔进出风更为均匀、顺畅，冷却塔降温得到充分保证，且使漂水率降至最低（小于总水量的0.05%）。
- 3.耐腐蚀、寿命长** 本系列冷却塔结构合理，坚固耐用，其构成配件均选用耐候和防腐性能好的材料制造而成，如水盘、风筒、侧板等采用优质玻璃钢结构，所有钢构件均经热浸镀锌防腐处理，提高耐腐蚀能力，增长冷却塔使用寿命。
- 4.噪声低** 本系列冷却塔采用高效超静宽叶轴流风机，使设备能在保证大风量的情况下，最大限度地降低噪声。

- 1.MSC Series Cross Flow Side Discharged Cooling Tower. It has following advantages:**
- a)Side air inlet and discharge design structure, it lower the height of the cooling tower greatly. For model below MSC-100, the total height $\leq 3m$, MSC-125~250, the total height $\leq 4m$. It is very suitable for installing into equipment & machine floor or A/C floor of high building. It solve the problem that cooling towers cannot be installed on the roof of the building. It's offer one more choice for designer to consider in installation arrangement.
 - b)Also side air inlet / discharge prevent wet air re-enter to the cooling tower. It greatly increases the performance of the cooling tower.
 - c)Due to installing into machine floor/A/C floor, pressure head of the water cycling system is reduced. Investment on setup is reduced.
- 2.High Efficiency, Energy Saving, Low Drift** MSC apply high efficiency fan to ensure low power consumption. MSC infill is integrated with the drift eliminator function, honey comb design ensure smooth air flow. Drift loss $\leq 0.05\%$ total water flow rate.
- 3.Anti-corrosive, Long Life** MSC parts are made of long lasting & anti-corrosive material such as FRP in basin and casing. All metal ware are made of Hot Dipped Galvanized Steel, greatly increase the cooling tower life.
- 4.Low Noise** LOW NOISE fan is used in MSC series. The low noise level is achieved by using the Low Noise Axial Fan Specially developed for Mesan Cooling Tower.

MSC系列横流式侧出风冷却塔性能参数表

SPECIFICATION FOR MSC CROSS FLOW SIDE DISCHARGED COOLING TOWER

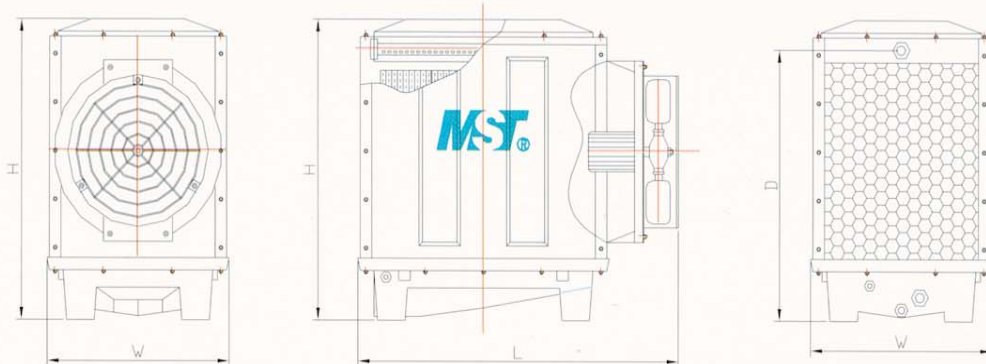
设计工况参数: 大气压力-P=99400Pa 湿球温度-WBT=28°C 进水温度-T₁=37°C 出水温度-T₂=32°C 水温降ΔT_s=5°C
 Design Condition: P=99400Pa Wet Bulb Temp=28°C Inlet Water Temp-T₁=37°C Outlet Water Temp-T₂=32°C Temperature DifferenceΔT_s=5°C

型号 MODEL	循环水量 CAPACITY		风、电机 FAN MOTOR		外形尺寸 TOWER DIMENSION				重量 WEIGHT		进塔水压 WATER PRESURE	噪音 NOISE
	(m ³ /h)		直径 diameter	功率 motor	长 length H	宽 width W	高 height H	进水高 inlet height D	干重 dry weight	运行重 wet weight	Kpa	dB (A)
	27°C	28°C	mm	Kw	L	W	H	D	Kg	Kg		
MSC-6	6.9	6	584	0.18	1380	770	1210	1120	70	190	20	60
MSC-8	9.2	8	584	0.37	1380	770	1210	1120	72	193	20	60
MSC-10	11.5	10	584	0.37	1500	1000	1220	1100	92	278	20	61
MSC-12	13.8	12	760	0.37	1625	1045	1420	1290	101	339	24	61
MSC-16	18.4	16	760	0.75	1625	1045	1420	1290	113	385	24	61
MSC-20	23	20	760	0.75	1800	1420	1690	1590	180	420	26	62
MSC-25	28.8	25	884	1.1	1800	1420	1940	1840	240	560	26	62
MSC-30	34.5	30	884	1.1	2000	1620	2290	2190	300	720	30	63
MSC-40	46	40	1184	1.5	2000	1620	2290	2190	320	780	30	63
MSC-50	57.5	50	1184	1.5	2330	1940	2380	2280	540	1180	34	64
MSC-60	69	60	1470	2.2	2330	1940	2800	2700	600	1380	35	64
MSC-80	92	80	1600	3.0	3280	2140	2900	2800	680	1460	35	65
MSC-100	115	100	1780	4.0	3280	2640	2900	2800	800	2080	35	66
MSC-125	143.8	125	1780	4.0	3280	2640	3400	3300	880	2300	40	67
MSC-150	172.5	150	2080	5.5	3280	3150	3430	3320	980	2450	40	67
MSC-175	201.3	175	2080	5.5	3280	3150	3930	3820	1080	3150	45	68
MSC-200	230	200	2360	7.5	3280	3150	3930	3820	1150	3320	45	68
MSC-250	287.5	250	2360	11	3280	3750	3930	3820	1320	3550	45	69

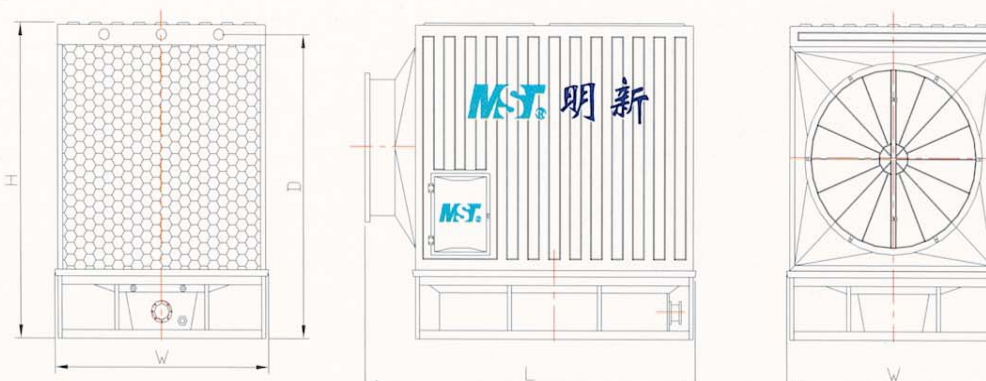
MSC系列横流式侧出风冷却塔外形图

DIMENSION DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED COOLING TOWER

MSC-6-40



MSC-50-250





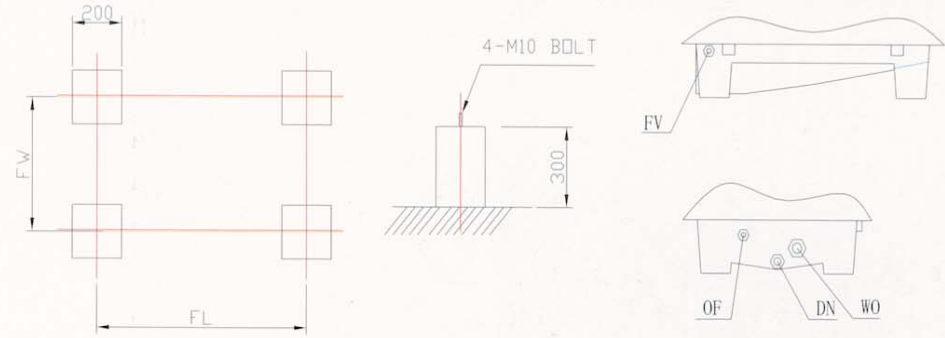
MSC系列横流式侧出风冷却塔基础、配管尺寸表 FOUNDATION AND PIPING SIZE DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED COOLING TOWER

设计工况参数：大气压力-P=99400Pa 湿球温度-WBT=28℃ 进水温度-T₁=37℃ 出水温度-T₂=32℃ 水温降ΔT_s=5℃
Design Condition: P=99400Pa Wet Bulb Temp=28℃ Inlet Water Temp-T₁=37℃ Outlet Water Temp-T₂=32℃ Temperature DifferenceΔT_s=5℃

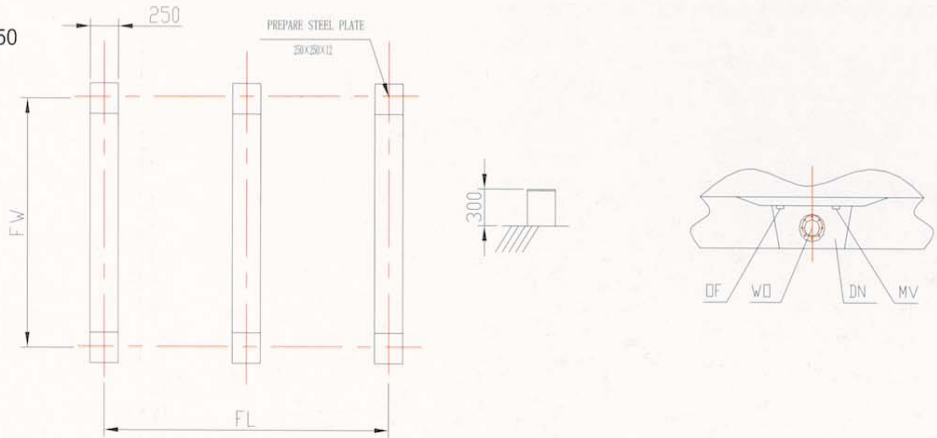
型号 MODEL	基础尺寸 FOUNDATION DIENSON		配管尺寸 PIPING SIZE				
	FL	FW	WI	WO	OF	FV	DN
	mm	mm	mm	mm	mm	mm	mm
MSC-6	850	500	40	40	25	15	25
MSC-8	850	500	40	40	25	15	25
MSC-10	850	730	50	50	25	15	25
MSC-12	1100	765	50	50	25	15	25
MSC-16	1100	765	50	50	25	15	25
MSC-20	1160	1130	50	50	25	15	25
MSC-25	1160	1130	50x2	80	25	15	25
MSC-30	1360	1330	50x2	80	25	15	25
MSC-40	1360	1330	50x2	80	25	15	25
MSC-50	1840	1880	80x2	100	40	20	40
MSC-60	1840	1880	80x2	100	40	20	40
MSC-80	2740	2080	80x2	125	50	20	40
MSC-100	2740	2580	80x3	150	50	20	40
MSC-125	2740	2580	80x3	150	50	20	40
MSC-150	2740	3080	100x2	150	50	25	40
MSC-175	2740	3080	100x2	150	50	25	40
MSC-200	2740	3080	100x3	200	80	25	40
MSC-250	2740	3680	100x3	200	80	25	40

MSC系列横流式侧出风冷却塔基础、配管图 FOUNDATION AND PIPING CONNECTION DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED COOLING TOWER

MSC-6-40



MSC-50-250



MSC系列横流式侧出风双风机冷却塔性能参数表

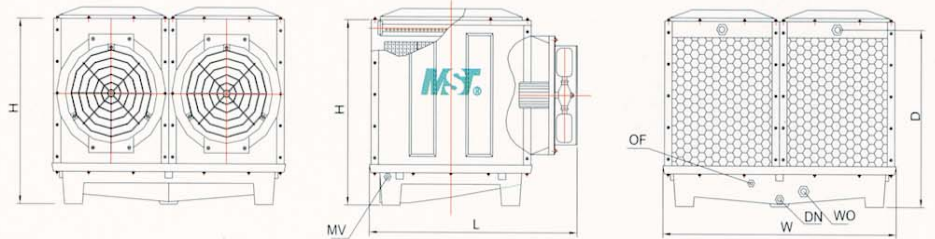
SPECIFICATION FOR MSC CROSS FLOW SIDE DISCHARGED DOUBLE FAN COOLING TOWER

设计工况参数: 大气压力-P=99400Pa 湿球温度-WBT=28℃ 进水温度-T₁=37℃ 出水温度-T₂=32℃ 水温降ΔT_s=5℃
 Design Condition: P=99400Pa Wet Bulb Temp=28℃ Inlet Water Temp-T₁=37℃ Outlet Water Temp-T₂=32℃ Temperature DifferenceΔT_s=5℃

型号 MODEL	循环水量 CAPACITY		风、电机 FAN MOTOR		外形尺寸 TOWER DIMENSION				重量 WEIGHT		进塔水压 WATER PRESURE	噪音 NOISE
	(m ³ /h)		直径 diameter	功率 motor	长 length H	宽 width W	高 height H	进水高 inlet height D	干重 dry weight	运行重 wet weight		
	27℃	28℃	mm	Kw	L	W	H	D	Kg	Kg	Kpa	dB (A)
MSC-20D	23	20	584×2	0.37×2	1460	1880	1260	1140	174	546	20	62
MSC-25D	28.8	25	760×2	0.37×2	1695	1970	1420	1290	192	640	24	62
MSC-30D	34.5	30	760×2	0.75×2	1695	1970	1420	1290	216	780	24	63
MSC-40D	46	40	760×2	0.75×2	1800	2720	1690	1590	340	850	26	63
MSC-50D	57.5	50	884×2	1.1×2	1800	2720	1940	1840	430	1060	26	64
MSC-60D	69	60	884×2	1.1×2	2000	3120	2290	2190	620	1420	30	64
MSC-80D	92	80	884×2	1.5×2	2000	3120	2290	2190	780	1760	30	65

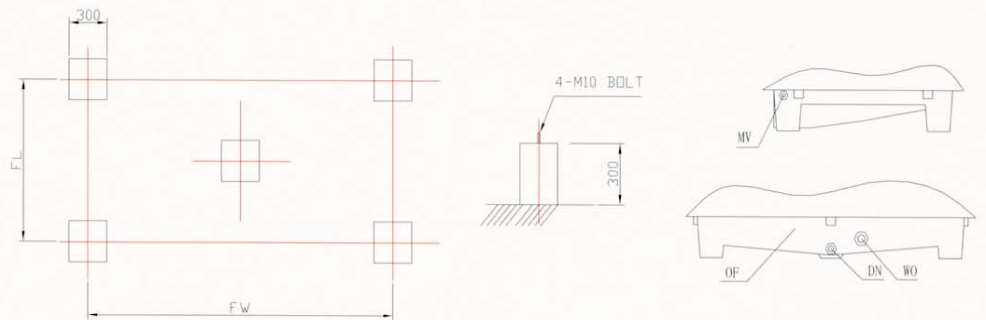
MSC系列横流式侧出风双风机冷却塔外形图

DIMENSION DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED DOUBLE FAN COOLING TOWER



MSC系列横流式侧出风双风机冷却塔基础及配管图

FOUNDATION AND PIPING SIZE DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED DOUBLE FAN COOLING TOWER



MSC系列横流式侧出风双风机冷却塔基础、配管尺寸表

FOUNDATION AND PIPING SIZE FOR MSC CROSS FLOW SIDE DISCHARGED DOUBLE FAN COOLING TOWER

型号 MODEL	基础尺寸 FOUNDATION DIENSION				配管尺寸 PIPING SIZE			
	FL	FW	WI	WO	OF	FV	DN	
	mm	mm	mm	mm	mm	mm	mm	
MSC-20D	810	1560	50×2	80	25	15	25	
MSC-25D	1060	1670	50×2	80	25	15	25	
MSC-30D	1060	1670	50×2	80	25	15	25	
MSC-40D	1160	2400	50×2	80	25	15	25	
MSC-50D	1160	2400	50×4	100	40	20	25	
MSC-60D	1360	2800	50×4	100	40	20	25	
MSC-80D	1360	2800	50×4	125	40	20	25	

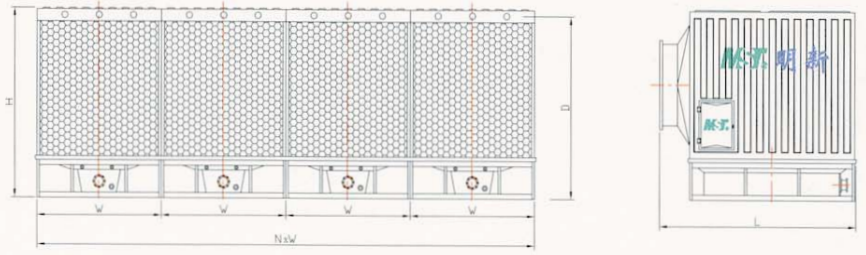
MSC系列横流侧出风组合式冷却塔性能参数表 SPECIFICATION FOR MSC CROSS FLOW SIDE DISCHARGED MULTI CELLS COOLING TOWER

设计工况参数: 大气压力-P=99400Pa 湿球温度-WBT=28℃ 进水温度-T₁=37℃ 出水温度-T₂=32℃ 水温降ΔT_s=5℃
Design Condition: P=99400Pa Wet Bulb Temp=28℃ Inlet Water Temp-T₁=37℃ Outlet Water Temp-T₂=32℃ Temperature DifferenceΔT_s=5℃

型号 MODEL	循环水量 CAPACITY		风、电机 FAN MOTOR		外形尺寸 TOWER DIMENSION				重量 WEIGHT		进塔水压 WATER PRESURE	噪音 NOISE
	(m ³ /h)		直径 diameter	功率 motor	长 length H	宽 width W	高 height H	进水高 inlet height D	干重 dry weight	运行重 wet weight	Kpa	dB (A)
	27℃	28℃	mm	Kw	L	W	H	D	Kg	Kg		
MSC-50×N	57.5×N	50×N	1184	1.5×N	2330	1940×N	2380	2280	540×N	1180×N	34	64
MSC-60×N	69×N	60×N	1470	2.2×N	2330	1940×N	2800	2700	600×N	1380×N	35	64
MSC-80×N	92×N	80×N	1600	3×N	3280	2140×N	2900	2800	680×N	1460×N	35	65
MSC-100×N	115×N	100×N	1780	4×N	3280	2640×N	2900	2800	800×N	2080×N	35	66
MSC-125×N	143.8×N	125×N	1780	4×N	3280	2640×N	3400	3300	880×N	2300×N	40	67
MSC-150×N	172.5×N	150×N	2080	5.5×N	3280	3150×N	3430	3320	980×N	2450×N	40	67
MSC-175×N	201.3×N	175×N	2080	5.5×N	3280	3150×N	3930	3820	1080×N	3150×N	45	68
MSC-200×N	230×N	200×N	2360	7.5×N	3280	3150×N	3930	3820	1150×N	3320×N	45	68
MSC-250×N	287.5×N	250×N	2360	11×N	3280	3750×N	3930	3820	1320×N	3550×N	45	69

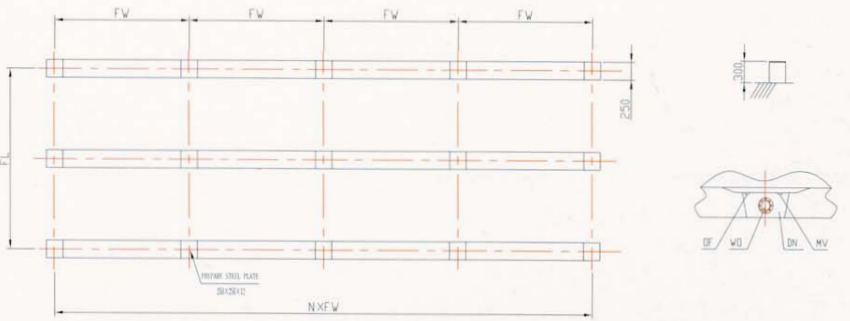
MSC系列横流侧出风组合式冷却塔外形尺寸图

DIMENSION DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED MULTI CELLS COOLING TOWER



MSC系列横流侧出风组合式冷却塔基础及配管图

FOUNDATION AND PIPING CONNECTION DRAWING FOR MSC CROSS FLOW SIDE DISCHARGED MULTICELLS COOLING TOWER



MSC系列横流侧出风组合式冷却塔基础、配管尺寸表 FOUNDATION AND PIPING SIZE FOR MSC CROSS FLOW SIDE DISCHARGED MULTI CELLS COOLING TOWER

型号 MODEL	基础尺寸 FOUNDATION DIENSION		配管尺寸 PIPING SIZE				
	FL (×N)	FW (×N)	WI (×N)	WO (×N)	OF (×N)	FV (×N)	DN (×N)
	mm	mm	mm	mm	mm	mm	mm
MSC-50×N	1840	1880×N	80×2×N	100×N	40×N	20×N	40×N
MSC-60×N	1840	1880×N	80×2×N	100×N	40×N	20×N	40×N
MSC-80×N	2740	2080×N	80×2×N	125×N	50×N	20×N	40×N
MSC-100×N	2740	2580×N	80×3×N	150×N	50×N	20×N	40×N
MSC-125×N	2740	2580×N	80×3×N	150×N	50×N	20×N	40×N
MSC-150×N	2740	3080×N	100×2×N	150×N	50×N	25×N	40×N
MSC-175×N	2740	3080×N	100×2×N	150×N	50×N	25×N	40×N
MSC-200×N	2740	3080×N	100×3×N	200×N	80×N	25×N	40×N
MSC-250×N	2740	3680×N	100×3×N	200×N	80×N	25×N	40×N



MESAN Cooling Tower Ltd.

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Web Site: <http://www.mesan.com.hk>

To Whom It May Concern:

Hong Kong, October 29th 2003,

CERTIFICATE OF DISTRIBUTORSHIP & LICENSED MANUFACTURING

We confirm that:

**OMRAN TAHVIEH INDUSTRIAL Co.
#1.2, 1st floor, Nr. 108 Iranshahr Avenue
Teheran
IRAN**

has been appointed as licensed manufacturer for MST[®] brand name Cooling Towers for industrial applications in the Islamic Republic of Iran.

This Certificate confirms the Licenced Manufacturers & Distributors Contract as signed on 12 September 2003.

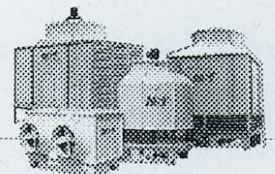
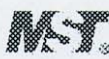
This agreement will come into force on 01st of October 2003 and be valid until 31th December 2004.

Yours sincerely

MESAN Cooling Tower Ltd.



Henk Janssen
Asst. General Manager
Overseas Division





COOLING TOWER
OMRAN TAHVIEH



OMRAN TAHVIEH

Heating , Ventilation And Air Conditioning

Central Office : # 1.2 , 1st floor , No . 108 , Iranshahr Ave., Tehran - Iran , Tel : (98 - 21) 8847372 - 3 , 8318850 - 2 Tel & Fax : (98 - 21) 8318852.

All data and specification subject to change without notice .

