WORLD-PATENT NEWTECHNOLOGY NO MECHANICAL NOISE

LIANG CHI FANLESS HI-TECH COOLING TOWER

(LFC MODEL)

FANLESS - MOTORLESS - REDUCERLESS ➡ NO MECHANICAL MAINTENANCE

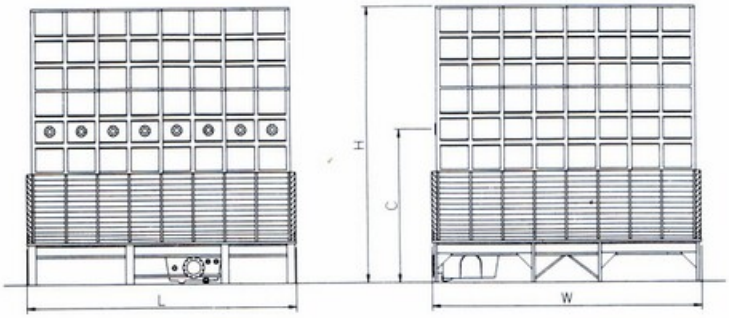
NO NOISE - NO VIBRATION ➡ NO POLLUTION CONCERN

LOW DRIFT LOSS ➡ WATER SAVING

TRADITIONAL COOLING TOWER

FANNED - MOTORED - REDUCER ➡ MECHANICAL MAINTENANCE REQUIRED
HIGH NOISE- SIGNIFICANT VIBRATION ➡ POLLUTION CONCERN
HIGH DRIFT LOSS ➡ HIGH WATER CONSUMPTION

DIMENSIONS & STANDARD SPECIFICATIONS



MODEL NO.	COOLING CAPACITY (RT)			DIMENSIONS (mm)				WEIGHT (kg)	
LFC-	①	②	③	W	L	H	C	DRY	OPERATION
25RT-120W	25	22.5	20	1480	1480	3980	1700	380	780
30RT-120W	30	27	24	1480	2080	3980	1700	500	970
40RT-120W	40	36	32	1480	2080	3980	1700	500	970
50RT-240W	50	45	40	2680	1480	3980	1700	620	1190
60RT-120W	60	54	48.5	1480	3280	3980	1700	770	1400
70RT-240W	70	63	56.6	2680	2080	4420	2140	850	1770
80RT-240W	80	72	64.7	2680	2080	4420	2140	850	1770
100RT-240W	100	90	81	2680	2680	4420	2140	1000	2090
125RT-240W	125	112.5	101	2680	3280	4520	2140	1250	2500
150RT-240W	150	135	121	2680	3880	4520	2240	1460	2860
175RT-240W	175	157.5	141.6	2680	4480	4520	2240	1660	3230
200RT-240W	200	180	160	2680	5080	4520	2240	1840	3570
225RT-240W	225	202.5	182	2680	5680	4520	2240	2040	3930
250RT-480W	250	225	202	5100	3300	5180	2880	2740	4900
300RT-480W	300	270	243	5100	3900	5180	2880	3110	5610
350RT-480W	350	315	282	5100	4500	5180	2880	3530	6380
400RT-480W	400	360	324	5100	5100	5180	2880	3890	7080
450RT-480W	450	405	364	5100	5700	5180	2880	4270	7810
500RT-480W	500	450	405	5100	6300	5480	3180	4810	8700
600RT-480W	600	540	486	5100	7500	5480	3180	5600	10610
700RT-480W	700	630	567	5100	8700	5480	3180	6400	12100
800RT-480W	800	720	648	5100	9900	5480	3180	7230	13610
900RT-480W	900	810	729	5100	11100	5480	3180	7960	15040
1000RT-480W	1000	900	810	5100	12300	5480	3180	8760	16520

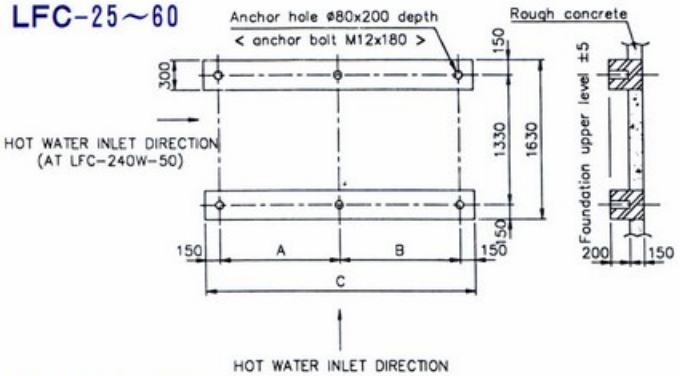
- The above cooling capacity is under the nominal temperature condition at 37°C inlet, 32°C outlet, and wet bulb temperature for 27°C, 28°C and 29°C.
  - ① above is the cooling capacity for wet bulb temperature at 27°C and the minimum tower head required, from hot water inlet, are 11M for model 120W, 12M for model 240W and 13M for model 480W.
  - ② above is the cooling capacity for wet bulb temperature at 28°c and the minimum tower head required, from hot water inlet, are 13M for model 120W, 14M for model 240W and 15M for model 480W.
  - ③ above is the cooling capacity for wet bulb temperature at 29°C and the minimum tower head required, from hot water inlet, is 14M for model 120W, 15M for model 240W and 16M for model 480W.
- The total pump head includes the friction loss of piping and heat exchanger, tower head required and the height of C.
- Y type filter is required for Hot Water Inlet.
- Above specification and dimensions are subject to change without notice.
- The nominal water rate is defined as 13 LPM/RT for cooling tower.
- Foundation leveling is required when proceeding the foundation construction.

RECOMMENDED CONCRETE FOUNDATION

LFC-25～60

Unit:mm

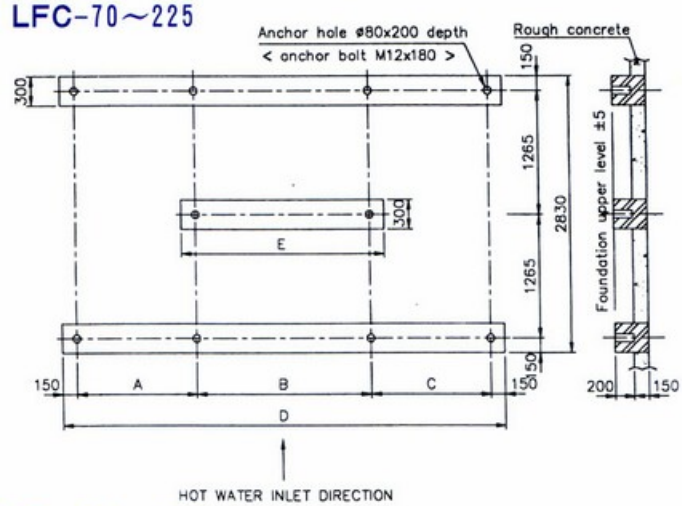
MODEL	A	B	C
LFC-25-120W	1280	0	1580
LFC-30-120W	1880	0	2180
LFC-40-120W	1880	0	2180
LFC-50-240W	1240	1240	2780
LFC-60-120W	1840	1240	3380



LFC-70～225

Unit:mm

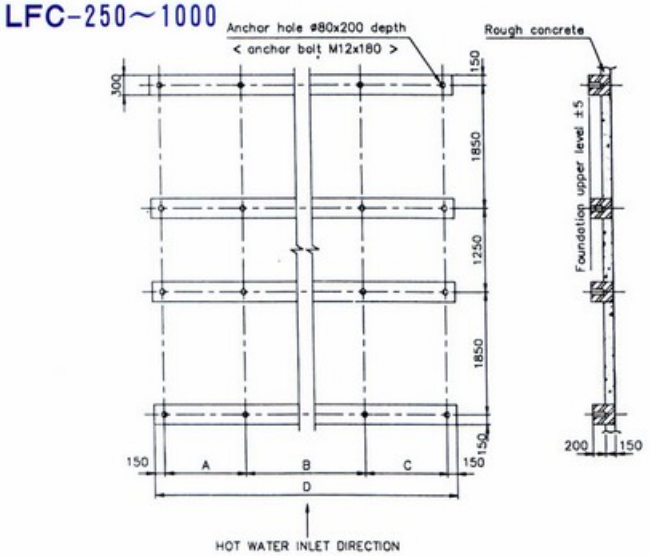
MODEL	A	B	C	D	E
LFC-70-240W	1880	0	0	2180	0
LFC-80-240W	1880	0	0	2180	0
LFC-100-240W	1240	0	1240	2780	300
LFC-125-240W	1840	0	1240	3380	300
LFC-150-240W	1840	0	1840	3980	300
LFC-175-240W	1240	1800	1240	4580	2100
LFC-200-240W	1840	1800	1240	5180	2100
LFC-200-240W	1840	1800	1840	5780	2100



LFC-250～1000

Unit:mm

MODEL	A	B	C	D
LFC-250-480W	1850	0	1250	3400
LFC-300-480W	1850	0	1850	4000
LFC-350-480W	1250	1800	1250	4600
LFC-400-480W	1850	1800	1250	5200
LFC-450-480W	1850	1800	1850	5800
LFC-500-480W	1250	1800x2	1250	6400
LFC-600-480W	1850	1800x2	1850	7600
LFC-700-480W	1850	1800x3	1250	8800
LFC-800-480W	1250	1800x4	1250	10000
LFC-900-480W	1850	1800x4	1850	11200
LFC-1000-480W	1850	1800x5	1250	12400



SUPERB LOW NOISE

Method of Measurement

(1) LFC tower's noise orientation measurement is in compliance with Japan Industry specification of B8609. (Testing of cooling tower ventilation)

(2) The horizontal distance from air inlet (casing) to the measuring point (1) is equal to the width or length of tower. The height is 1.5 meters above the ground level. (Note: if the width or length of tower is less than 1.5 meters, then the minimum distance of 1.5 meters is herein taken granted.)

(3) The distance of 45 degree for measuring point (5) is measured from the edge of the top with the width or length of the tower. (Note: if the width or length of the tower is less than 1.5 meters, then the minimum distance of 1.5 meters is herein taken granted)

(4) The noise levels measured should not be disturbed by ambient environemnt.

(5) The noise levels of scale A should be considered to be the measuring standards.

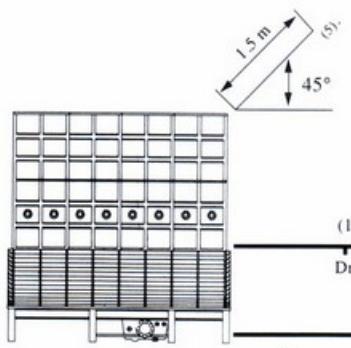
(6) The noise should be rectified according to the specification of Japan Industry Z8731.

Sound Pressure Level

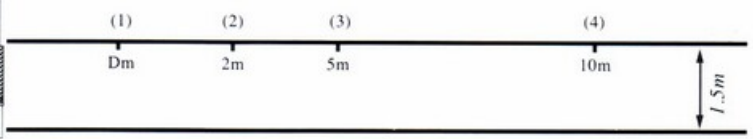
Unit:dB(A)

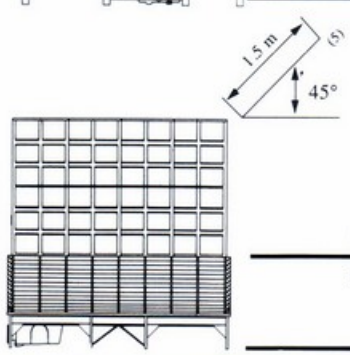
Measuring point / Measuring distance / Measuring side / Model		(1) Dm	(2) 2m	(3) 5m	(4) 10m	(5) 45° Upper	Measuring point (1) DM
LFC-25-120W	W/L	60/60	58/58	54/54	48.5/48.5	59/59	1.5/1.5
LFC-30-120W	W/L	60/60	58/59	54.5/55.5	49.5/50	59/57.5	1.5/1.8
LFC-40-120W	W/L	60/60	58/59	54.5/55.5	49.5/50	59/57.5	1.5/1.8
LFC-50-240W	W/L	59/60	60/59	56/55.5	50.5/50.5	57.5/59.5	2.4/1.5
LFC-60-120W	W/L	60/58	58.5/60	54.5/55.5	49/51.5	59/56.5	1.5/3
LFC-70-240W	W/L	59/60	60.5/60	56/55.5	50.5/50	57.5/57.5	2.4/1.8
LFC-80-240W	W/L	59/60	60.5/60	56/55.5	50.5/50	57.5/57.5	2.4/1.8
LFC-100-240W	W/L	59/59	61/61	56/56	50.5/50.5	57.5/57.5	2.4/2.4
LFC-125-240W	W/L	59/58.5	61/61.5	56/56.5	50.5/51.5	57.5/57	2.4/3
LFC-150-240W	W/L	59/58.5	61/61.5	56/57	50.5/51.5	57.5/55.5	2.4/3.6
LFC-175-240W	W/L	59/58	61/62	56.5/57	51/52	57.5/55	2.4/4.2
LFC-200-240W	W/L	59/57	61/63	56.5/57	51/52	57.5/54	2.4/4.8
LFC-225-240W	W/L	59/57	61/63	56.5/57	51/52	57.5/54	2.4/5.4
LFC-250-480W	W/L	57.5/59.5	63/62.5	57.5/57.5	53/52	56.5/58	4.8/3
LFC-300-480W	W/L	57.5/58.5	63/62.5	57.5/57.5	53/52.5	56.5/58	4.8/3.6
LFC-350-480W	W/L	57.5/58	63/63	57.5/57.5	53/52.5	56.5/57	4.8/4.2
LFC-400-480W	W/L	57.5/57.5	63/63	57.5/57.5	53/53	56.5/56.5	4.8/4.8
LFC-450-480W	W/L	57.5/57.5	63/64	57.5/58	53/53	56.5/56.5	4.8/5.4
LFC-500-480W	W/L	58/57	63/64.5	57.5/58	53.5/53.5	56.5/56	4.8/6
LFC-600-480W	W/L	58/56.5	63/65	57.5/58	53.5/53.5	56.5/56	4.8/7.2
LFC-700-480W	W/L	58/56.5	63/65.5	57.5/58	53.5/53.5	56.5/55	4.8/8.4
LFC-800-480W	W/L	58/54.5	63/66	57.5/58.5	53.5/54	56.5/55	4.8/9.6
LFC-900-480W	W/L	58/53	63/66.5	57.5/58.5	53.5/54	56.5/54	4.8/10.8
LFC-1000-480W	W/L	58/52	63/66.5	57.5/59	53.5/54	56.5/53	4.8/12

Satisify the super low-noise standard levels specified by Japan Cooling Tower Institure.

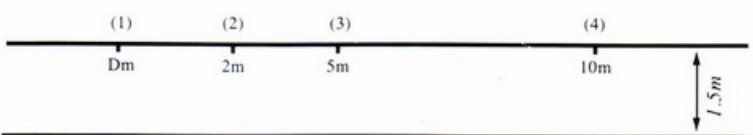


MEASURING DIRECTION W SIDE





MEASURING DIRECTION L SIDE



COMPARISONS BETWEEN LFC COOLING TOWER AND FAN MOTOR TOWER

Type / Item	LFC Fanless Type	Fan Motor Type
Silent Design	Without fan motor, reducer and moving parts, noise level is lower than super low noise type of cooling tower.	With fan motor, reducer, and mechanical transmission; higher noise and vibration.
Cooling Method	Exhausting is enforced by cooling water ejection and mechanical driven force is not required.	Cooling exhausting by fan, motor and reducer.
Vibration	Vibration free; vibration isolating device not required.	Higher vibration during operation; vibration proof measures required.
Drift Loss and Dust Proof	Five-pass type eliminator on the top of tower is for splitting air and liquid. Besides dust proof, it keeps the drift loss between 0.001% and 0.009% (depending on ejection pressure); water loss is 90% less than that of traditional tower; decreases the contagion of legionnaire symptom.	Install no eliminator on the top so dusts will enter easily; Reducing air outlet renders big air volume and causes larger drift loss. Pollution is therefore present.
Structure	Cellular design is stable for the performance. High resistance to corrosion and water-wear makes long life cycle possible. The inclusion of LFC tower in the integral plan of building renders the beauty of regularity.	Traditional type is designed with independent outline so it could not integrally regularize with building.
Consumption of Power	Fan is not required but larger pump head is needed. Total power consumption is less than traditional cooling tower.	Fan is required but small pump head is needed. The total power consumed is higher.
Operation and Maintenance	All the tower parts are of non-moving parts and of anti-corrosive material. No. consumable parts are needed and, plus lower power consumption, so the total cost is reduced.	The electric motor is required. The consumable parts are needed, and plus the high power, so the total cost is higher.

PATENT STATUS
(1) REPUBLIC OF CHINA, TAIWAN : PATENT NO. 117483
(2) MAINLAND CHINA : PATENT NO. 95238193.1
(3) UNITED STATES OF AMERICA : PATENT NO. 5639286
The patent registrations in other countries are still under processing.