

良機

1962 創業

Cooling Tower

LCC型

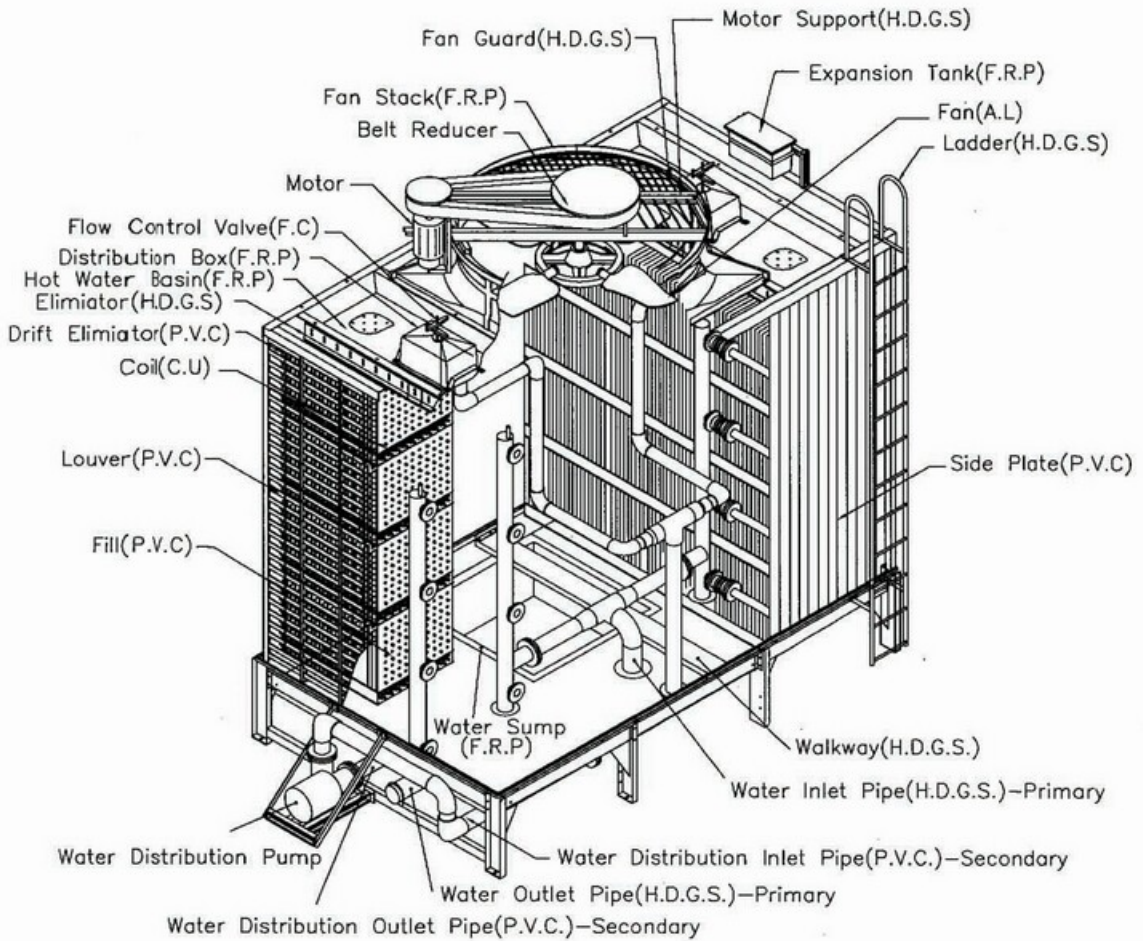
密閉式冷卻塔

良機

良機

良機

Lcc Cooling Tower Parts Ass'y



LCC Closed Circuit Cooling Tower

Construction and Characteristics

Motor:

Totally Enclosed Fan Cooled Outdoor design

Fan:

Axial flow fan with adjustable pitch, V-belt driven speed reducer, multiple groove v-belt with large contact belt surface area, low vibration, stable. V-belts are protected by FRP belt cover, no moisture and no slipping.

Tower Construction:

Tower construction frame work incorporated Hot Dipped Galvanized Steel structure framework, strong and sustainable to wind load and vibration.

Air Plenum:

Cross flow heat transfer flow direction, air is drawn in horizontal from two sides of air inlet and contacted with hot water that is vertically filmed on PVC filling, and is drawn out of cooling tower by fan. Tower provides access door and walkway for ease of cleaning and maintenance.

Water Distribution:

Hot water basins located on top of two sides of cooling tower, water is distributed by gravity into cooling tower, distribution boxes and flow control valves are provided to balance water flow rate of both hot water basins, to regulate inlet water pressure and distribute water on filling and coil evenly, to achieve maximum heat transfer efficiency and avoid splashing of water.

Water Sump:

Constructed of FRP material with outer hot dipped galvanized steel supports. Automatic fill, manual fill, overflow, and drain connections are provided on water sump. Walkway is provided to cleaning and maintenance, when connecting cooling towers are a multiple cells unit, water partition can be provided to allow single cell operation when other units are shut down for cleaning.

PVC Filling:

Vacuum formed PVC material filling, filling is glued with a fixed pitch, provide evenly water distribution and is unlikely to impede, and is convenient for cleaning.

Coil:

Incorporated with high pressure seamless tubes and dioxide copper, provide high heat transfer coefficient and anti-corrosive, supported by stainless steel frame, strong and robust. Coils are designed in modulus units, thus are convenient for installation and maintenance. Expansion tank and air vent are provided on top of hot water basin to help venting air inside coil units, and regulate coil operating condition during winter to avoid coils being damaged from changing water density. Coil units are installed in a multi-level arrangement, heat inside coils can be dissipated rapidly to outer circulating water, and through PVC filling then exit cooling tower, to attain best cooling result.

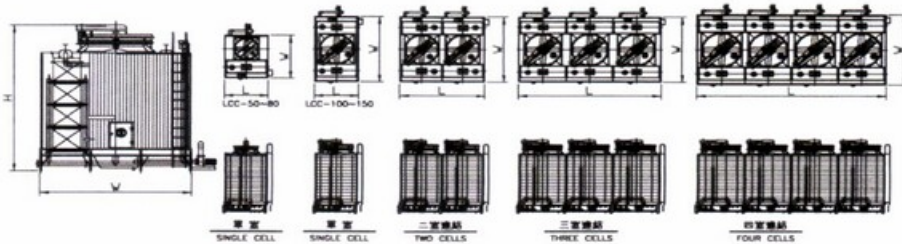
Tower Casing and Inlet Louver:

High quality PVC casing and inlet louver, sustainable to high temperature, anti-corrosive, UV protected, and improbable to deformation.

Piping:

Primary piping is for chiller system water inlet and returning piping, that is gathered at lower part of cooling tower water sump, convenient for piping connection. Secondary piping consists of cooling water pump providing cooling tower water circulation. Cooling tower exterior is tidy and can be blended well with building architectures.

LCC LCC型 外觀尺寸及標準規格

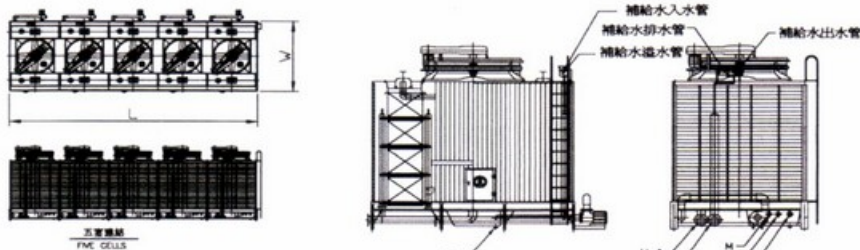


機型 LCC-	項目 循環水量 ℓ / min	外型尺寸			送風裝置			製品 略重 kg	運轉 重量 kg	盤管揚程 (M)		
		寬度 (W) m/m	長度 (L) m/m	高度 (H) m/m	馬力 HP	風葉直徑 D φ mm	風量 M ³ /MIN			循環水量 (LPM)		
										80%	100%	120%
50	650	2745	2360	4510	2x1	1300	700	1150	2950	2	3.5	5
60	780	2895	2660	4500	5x1	1500	840	1450	3350	2	5	7
80	1040	2895	2960	4500	5x1	1500	995	1750	3750	5	8	12
100	1300	4080	2360	4550	7 ¹ / ₂ x1	1700	1135	2000	4400	2	3.5	5
125	1625	4380	2660	4570	7 ¹ / ₂ x1	2000	1380	2400	5200	2	5	7
150	1950	4380	2960	4570	10x1	2000	1690	2600	5600	5	8	12
50-C2	1300	2745	4570	4510	2x2	1300	1400	2220	5820	2	3.5	5
60-C2	1560	2895	5170	4500	5x2	1500	1680	2820	6620	2	5	7
80-C2	2080	2895	5770	4500	5x2	1500	1990	3420	7420	5	8	12
100-C2	2600	4080	4570	4550	7 ¹ / ₂ x2	1700	2270	3900	8700	2	3.5	5
125-C2	3250	4380	5170	4570	7 ¹ / ₂ x2	2000	2760	4700	10300	2	5	7
150-C2	3900	4380	5770	4570	10x2	2000	3380	5100	11100	5	8	12
125-C3	4875	4380	7680	4570	7 ¹ / ₂ x3	2000	4140	7000	15400	2	5	7
150-C3	5850	4380	8580	4570	10x3	2000	5070	7600	16600	5	8	12
125-C4	6500	4380	10190	4570	7 ¹ / ₂ x4	2000	5520	9300	20500	2	5	7
150-C4	7800	4380	11390	4570	10x4	2000	6760	10100	22100	5	8	12
150-C5	9750	4380	14200	4570	10x5	2000	8450	12600	27600	5	8	12

1.設計基準:熱水溫度:37°C 冷水溫度:32°C 外氣濕球溫度:27°C 循環水量:13 LPM/RT

2.水泵揚程:配管壓損+冷凝器壓損+盤管揚程

LCC 型 標準規格及配管尺寸 LCC



項目 機型 LCC-	二次側 循環泵浦	配 管 尺 寸					LPT-20 膨脹水箱配管尺寸			
		一次側 溫水入管	一次側 冷水出管	排水管	溢水管	補給水管	補給水 入水管	補給水 出水管	補給水 溢水管	補給水 排水管
		H-1	C-1	D	O	管徑(吋)規格				
50	2HPx3"	4B (100A)x1	4B (100A)x1	2B (50A)x1	2B (50A)x1	1/2B (15A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
60	2HPx3"	4B (100A)x1	4B (100A)x1	2B (50A)x1	2B (50A)x1	1/2B (15A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
80	2HPx4"	4B (100A)x1	4B (100A)x1	2B (50A)x1	2B (50A)x1	3/4B (20A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
100	3HPx4"	5B (125A)x1	5B (125A)x1	2B (50A)x1	2B (50A)x1	3/4B (20A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
125	3HPx4"	5B (125A)x1	5B (125A)x1	2B (50A)x1	2B (50A)x1	3/4B (20A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
150	5HPx5"	6B (150A)x1	6B (150A)x1	2B (50A)x1	2B (50A)x1	1B (25A)x1	1/2B (15A)x1	1/2B (15A)x1	1B (25A)x1	1/2B (15A)x1
50-C2	2HPx3"	4B (100A)x2	4B (100A)x2	2B (50A)x2	2B (50A)x2	1/2B (15A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
60-C2	2HPx3"	4B (100A)x2	4B (100A)x2	2B (50A)x2	2B (50A)x2	1/2B (15A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
80-C2	2HPx4"	4B (100A)x2	4B (100A)x2	2B (50A)x2	2B (50A)x2	3/4B (20A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
100-C2	3HPx4"	5B (125A)x2	5B (125A)x2	2B (50A)x2	2B (50A)x2	3/4B (20A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
125-C2	3HPx4"	5B (125A)x2	5B (125A)x2	2B (50A)x2	2B (50A)x2	3/4B (20A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
150-C2	5HPx5"	6B (150A)x2	6B (150A)x2	2B (50A)x2	2B (50A)x2	1B (25A)x2	1/2B (15A)x2	1/2B (15A)x2	1B (25A)x2	1/2B (15A)x2
125-C3	3HPx4"	5B (125A)x3	5B (125A)x3	2B (50A)x3	2B (50A)x3	3/4B (20A)x3	1/2B (15A)x3	1/2B (15A)x3	1B (25A)x3	1/2B (15A)x3
150-C3	5HPx5"	6B (150A)x3	6B (150A)x3	2B (50A)x3	2B (50A)x3	1B (25A)x3	1/2B (15A)x3	1/2B (15A)x3	1B (25A)x3	1/2B (15A)x3
125-C4	3HPx4"	5B (125A)x4	5B (125A)x4	2B (50A)x4	2B (50A)x4	3/4B (20A)x4	1/2B (15A)x4	1/2B (15A)x4	1B (25A)x4	1/2B (15A)x4
150-C4	5HPx5"	6B (150A)x4	6B (150A)x4	2B (50A)x4	2B (50A)x4	1B (25A)x4	1/2B (15A)x4	1/2B (15A)x4	1B (25A)x4	1/2B (15A)x4
150-C5	5HPx5"	6B (150A)x5	6B (150A)x5	2B (50A)x5	2B (50A)x5	1B (25A)x5	1/2B (15A)x5	1/2B (15A)x5	1B (25A)x5	1/2B (15A)x5

3.其他未列機型連結亦可提供,請洽本公司業務人員

4.管徑如需變更或需加裝連通管,請事先洽詢本公司業務人員

LCC LCC型 密閉式冷卻塔

適用條件

當冷卻塔運轉時，容易受到週遭環境污染，為了避免冷卻循環水與空氣直接之接觸而造成沉澱及結垢，使熱交換器發生阻塞或腐蝕問題，

尤其在水質較差的地區或冷卻循環水及設備不得有被污染的狀況下，需採用此高效能直流密閉式冷卻塔。

特 長

獨創開發，完善設計

良機 LCC 高效能直流密閉式冷卻塔，係與經濟部工業技術研究院合作，經過不斷創新研究，測試改良所開發之新產品，採方型直流低噪音設計，結構輕盈、規格化的配件組合，現場安裝組立作業簡便。並取得二項專利（專利號碼：新型第 153872 號和新型第 177859 號）

堅固耐用，維修最少

塔內盤管採用無縫脫氧銅管（SEAMLESS TUBES AND DEOXIDIZED COPPER）耐腐蝕性特佳。鐵件採熱浸鍍鋅處理，本體外側浪板採用防紫外線 UPVC 塑膠，風扇、水盤和檢視門採用玻璃纖維強化塑膠（FRP）材質，堅固耐用壽命長。二次側循環水泵採屋外全密閉型馬達，葉輪材質為青銅製造，耐蝕性特佳。

性能效率高，節省空間，配管方便

採新型熱交換器和噴水方式，大幅提高熱交換性能，比簡式機型節省 15% 場地和重量。所有配管之管接頭皆集中於水槽部下方，方便配管。冷卻塔外觀整齊、美觀

運轉成本低，耗電量最省

採高效率低噪音型風扇，配合新型熱交換器，靜壓小、耗電低，長期運轉除了噪音量小，更能大幅降低耗電量，降低成本。

主機效率高，循環水乾淨

冷卻循環水於盤管內循環，未與外界空氣接觸，可永保水質乾淨，並避免主機和管路積垢而影響性能，因此主機效率高，可節省能源，又可免除經常清洗，降低維護費用。

管路配置圖

