

PT. LIANG CHI INDONESIA

SQUARE COUNTER FLOW COOLING TOWER



APPLICATION

Air conditioning, utilities, process and industrial applications.

CONSTRUCTION

The structural materials of LDC counterflow cooling towers are HDSG steel frame and a fiberglass composite makes the tower lightweight but durable. The enclosed nature of a counterflow tower restricts exposure of the water to direct sunlight, thereby retarding the growth of the algae minimizing the time and cost of your maintenance being a cost savings from the moment it is in use.

FEATURES

• Type

LDC is an induced draft counterflow cooling tower where the air moves vertically upward through the fillers, counter to the downward fall of water. The heated air is drafted out from the tower by an axial flow fan mounted on the top of the tower. Standard models are available in various single-cell sizes and multi-cell sizes. LDC is also available in a wide choice of space-efficient single and multi-cell sizes with capacities bigger than the standard sizes in order to meet your specific application requirements.

• FRP Casing, Fan Stack & Basin

The FRP (Fiberglass Reinforced Polyester) is composed of fiberglass mat laminated with unsaturated polyester resin and applied with gelcoat on its surface to form smooth surface. The resin used incorporates an anti ultra violet stabilizer to retard deterioration caused by sunlight. FRP has high structural strength as steel but contrary to steel the material is lightweight and non corrosive.

• Steel Structures and Parts

All steel structures and parts are hot-dip galvanized to resist corrosion and rust.

• Drift Eliminator

Made of PVC by vacuum formed process, its special design makes it very efficient eliminating drift loss to up 0.001% and consequently solves water carryover problem.

• Low Noise

Special design axial fan move large amount of air quietly and efficiently. LDC incorporates belt type speed reducer that ensures a more reduced noise operation. The water from the nozzles falls on a splash mat before entering the basin reducing the noise from the dropping water.

• High Performance Filler

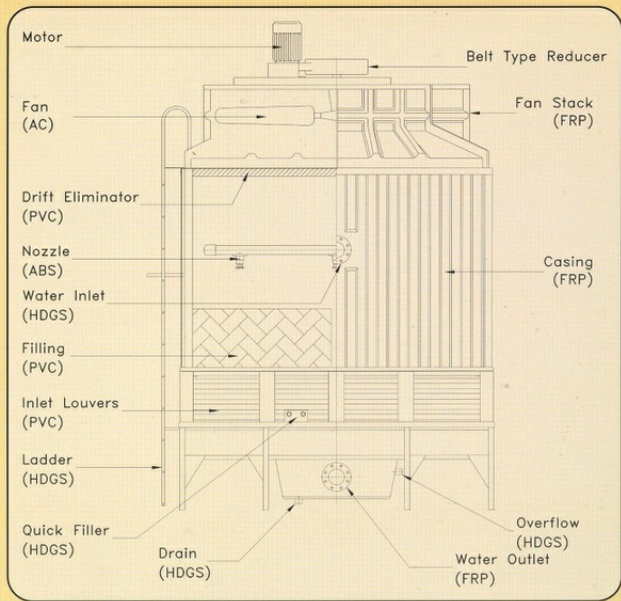
Made of rigid PVC embossed and corrugated by vacuum formed process, its special design provides maximum air to water contact for good thermal transfer efficiency reducing energy consumption.

• Nozzles

Nozzles are made of ABS with big orifice that are non-clogging, easy maintenance and economical.

• Maintenance Platform

Maintenance platform with safety railings are provided for large capacity cooling towers, for smaller models maintenance platforms are optional.



LIANG CHI SPARE PARTS



Nozzle



PVC Filling



Splash Mat



Drift Eliminator



Reducer

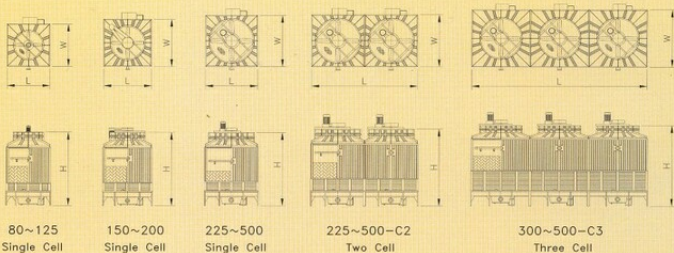


Motor



Fan Assy

LDC-I 80~500-C5 DIMENSIONS & SPECIFICATIONS

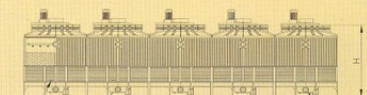
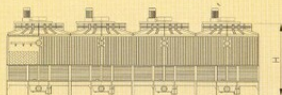
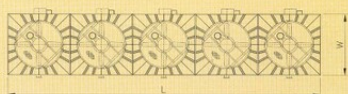
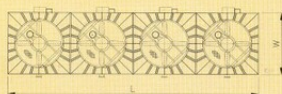


Item Model LDC-I	Water Flow Rate L/min	Dimensions			Transmission		
		Width (W)	Length (L)	Height (H)	Motor HP	Fan Diameter m/m	Air Flow M ³ /MIN/CELL
		m/m	m/m	m/m			
80	1040	2100	2100	3950	2x1	1170	600
100	1300	2100	2100	3950	3x1	1470	800
125	1625	2300	2100	3950	3x1	1470	900
150	1950	2600	2600	4230	5x1	1750	1250
175	2275	2600	2600	4230	5x1	1750	1250
200	2600	2900	2900	4330	5x1	1750	1350
225	2925	2900	2900	4530	7.5x1	2360	1750
250	3250	2900	2900	4530	7.5x1	2360	1750
300	3900	3500	3500	4730	10x1	2360	2200
350	4550	3500	3500	4730	10x1	2360	2200
400	5200	4100	4100	4780	15x1	2970	2600
500	6500	4100	4100	4780	20x1	2970	2600
225-C2	5850	2900	5800	4730	7.5x2	2360	1750
250-C2	6500	2900	5800	4730	7.5x2	2360	1750
300-C2	7800	3500	7000	4930	10x2	2360	2200
350-C2	9100	3500	7000	4930	10x2	2360	2200
400-C2	10400	4100	8200	4980	15x2	2970	2600
500-C2	13000	4100	8200	4980	20x2	2970	2600
300-C3	11700	3500	10500	5030	10x3	2360	2200
350-C3	13650	3500	10500	5030	10x3	2360	2200
400-C3	15600	4100	12300	5080	15x3	2970	2600
500-C3	19500	4100	12300	5080	20x3	2970	2600
400-C4	20800	4100	16400	5180	15x4	2970	2600
500-C4	26000	4100	16400	5180	20x4	2970	2600
500-C5	32500	4100	20500	5280	20x5	2970	2600

1. Design Standard: Hot Water Temperature at 37°C; Cold Water Temperature at 32°C; Wet Bulb Temperature at 27°C; Water Flow at 13 LPM/RT

2. Total Pump Head: piping friction loss + condenser friction loss + tower head

LDC-I 80~500-C5 PIPING SPECIFICATIONS



400~500-C4
Four Cell

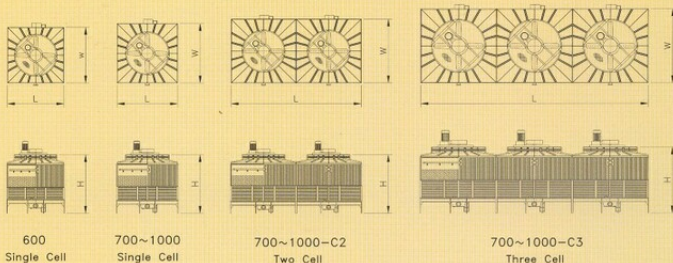
400~500-C5
Five Cell

Item Model LDC-I	Dry Weight Kg	Operating Weight Kg	Tower Head M	Pipe Connections				
				Inlet	Outlet	Drain	Overflow	Make-up
				(I)	(C)	(D)	(O)	Auto(A) / Quick (M)
80	650	1770	6.7	4B(100A)x1	4B(100A)x1	2B(50A)x1	1B(25A)x1	1B(25A)x1
100	730	1870	7.9	4B(100A)x1	4B(100A)x1	2B(50A)x1	1B(25A)x1	1B(25A)x1
125	850	2230	7.9	5B(125A)x1	5B(125A)x1	2B(50A)x1	2B(50A)x1	1B(25A)x1
150	900	2720	5.8	5B(125A)x1	5B(125A)x1	2B(50A)x1	2B(50A)x1	1B(25A)x1
175	990	3020	7	5B(125A)x1	5B(125A)x1	2B(50A)x1	2B(50A)x1	1B(25A)x1
200	1100	3800	7	6B(150A)x1	6B(150A)x1	2B(50A)x1	2B(50A)x1	1½B(32A)x1
225	1260	4050	8.5	6B(150A)x1	6B(150A)x1	2B(50A)x1	2B(50A)x1	1½B(32A)x1
250	1290	4200	10.1	6B(150A)x1	6B(150A)x1	2B(50A)x1	2B(50A)x1	1½B(32A)x1
300	1500	5500	7.4	8B(200A)x1	8B(200A)x1	2B(50A)x1	2B(50A)x1	1½B(32A)x1
350	1620	5980	9	8B(200A)x1	8B(200A)x1	2B(50A)x1	2B(50A)x1	1½B(32A)x1
400	2050	8150	8.9	8B(200A)x1	8B(200A)x1	2B(50A)x1	4B(100A)x1	2B(50A)x1
500	2400	8880	7.2	10B(250A)x1	10B(250A)x1	2B(50A)x1	4B(100A)x1	2B(50A)x1
225-C2	2400	7980	8.7	6B(150A)x2	6B(150A)x2	2B(50A)x2	2B(50A)x2	1½B(32A)x2
250-C2	2460	8280	10.4	6B(150A)x2	6B(150A)x2	2B(50A)x2	2B(50A)x2	1½B(32A)x2
300-C2	2860	10860	7.6	8B(200A)x2	8B(200A)x2	2B(50A)x2	2B(50A)x2	1½B(32A)x2
350-C2	3100	11820	9.2	8B(200A)x2	8B(200A)x2	2B(50A)x2	2B(50A)x2	1½B(32A)x2
400-C2	3940	16140	9.1	8B(200A)x2	8B(200A)x2	2B(50A)x2	4B(100A)x2	2B(50A)x2
500-C2	4640	17600	7.4	10B(250A)x2	10B(250A)x2	2B(50A)x2	4B(100A)x2	2B(50A)x2
300-C3	4220	16220	7.7	8B(200A)x3	8B(200A)x3	2B(50A)x3	2B(50A)x3	1½B(32A)x3
350-C3	4580	17660	9.3	8B(200A)x3	8B(200A)x3	2B(50A)x3	2B(50A)x3	1½B(32A)x3
400-C3	5830	24130	9.2	8B(200A)x3	8B(200A)x3	2B(50A)x3	4B(100A)x3	2B(50A)x3
500-C3	6880	26320	7.5	10B(250A)x3	10B(250A)x3	2B(50A)x3	4B(100A)x3	2B(50A)x3
400-C4	7720	32120	9.3	8B(200A)x4	8B(200A)x4	2B(50A)x4	4B(100A)x4	2B(50A)x4
500-C4	9120	35040	7.6	10B(250A)x4	10B(250A)x4	2B(50A)x4	4B(100A)x4	2B(50A)x4
500-C5	11360	43760	7.7	10B(250A)x5	10B(250A)x4	2B(50A)x5	4B(100A)x5	2B(50A)x5

3. For other multi-cell towers that are not listed here, please contact with our sales engineers.

4. If there is any change of piping size or additional equalizer pipe connection needed, please consult with our sales engineers in advance.

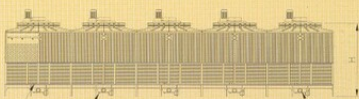
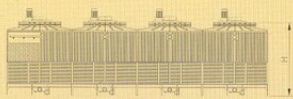
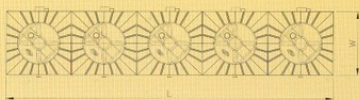
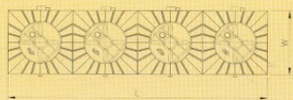
LDC-I 600~1000-C5 DIMENSIONS & SPECIFICATIONS



Item Model LDC-I	Water Flow Rate	Dimensions			Transmission		
		Width (W)	Length (L)	Height (H)	Motor	Fan Diameter	Air Flow
	L/min	m/m	m/m	m/m	HP	m/m	M ³ /MIN/CELL
600	7800	4730	4730	5160	20x1	3380	3600
700	9100	5230	5230	5135	20x1	3580	4200
800	10400	5730	5730	5235	30x1	3580	4800
900	11700	6230	5230	5535	30x1	4270	5400
1000	13000	6730	6730	5635	30x1	4270	6000
600-C2	15600	4730	9460	5360	20x2	3380	3600
700-C2	18200	5230	10460	5435	20x2	3580	4200
800-C2	20800	5730	11460	5535	30x2	3580	4800
900-C2	23400	6230	12460	5835	30x2	4270	5400
1000-C2	26000	6730	13460	5935	30x2	4270	6000
600-C3	23400	4730	14190	5360	20x3	3380	3600
700-C3	27300	5230	15690	5435	20x3	3580	4200
800-C3	31200	5730	17190	5535	30x3	3580	4800
900-C3	35100	6230	18690	5835	30x3	4270	5400
1000-C3	39000	6730	20190	5935	30x3	4270	6000
600-C4	31200	4730	18920	5560	20x4	3380	3600
700-C4	36400	5230	20920	5635	20x4	3580	4200
800-C4	41600	5730	22920	5735	30x4	3580	4800
900-C4	46800	6230	24920	6035	30x4	4270	5400
1000-C4	52000	6730	26920	6135	30x4	4270	6000
600-C5	39000	4730	23650	5560	20x5	3380	3600
700-C5	45500	5230	26150	5635	20x5	3580	4200
800-C5	52000	5730	28650	5735	30x5	3580	4800
900-C5	58500	6230	31150	6035	30x5	4270	5400
1000-C5	65000	6370	31850	6135	30x5	4270	6000

- Design Standard: Hot Water Temperature at 37°C; Cold Water Temperature at 32°C; Wet Bulb Temperature at 27°C; Water Flow at 13 LPM/RT
- Total Pump Head: piping friction loss + condenser friction loss + tower head

LDC-I 600~1000-C5 PIPING SPECIFICATIONS



700~1000-C4
Four Cell

700~1000-C5
Five Cell

A/M D C (Near)
Q (Far)

Item Model LDC-I	Dry Weight Kg	Operating Weight Kg	Tower Head M	Pipe Connections				
				Inlet	Outlet	Drain	Overflow	Make-up
				(I)	(C)	(D)	(O)	Auto(A) / Quick (M)
600	3300	9500	7.2	10B(250A)x1	10B(250A)x1	2B(50A)x1	4B(100A)x1	2B(50A)x1
700	4050	11550	6.9	10B(250A)x1	10B(250A)x1	3B(80A)x1	4B(100A)x1	2B(50A)x1
800	4750	13800	6.6	12B(300A)x1	12B(300A)x1	3B(80A)x1	4B(100A)x1	2B(50A)x1
900	5550	16450	6.2	12B(300A)x1	12B(300A)x1	3B(80A)x1	4B(100A)x1	2B(50A)x1
1000	6300	19050	5.8	12B(300A)x1	12B(300A)x1	3B(80A)x1	4B(100A)x1	2B(50A)x1
600-C2	6400	18800	7.4	10B(250A)x2	10B(250A)x2	2B(50A)x2	4B(100A)x2	2B(50A)x2
700-C2	7900	22900	7.2	10B(250A)x2	10B(250A)x2	3B(80A)x2	4B(100A)x2	2B(50A)x2
800-C2	9300	27400	6.9	12B(300A)x2	12B(300A)x2	3B(80A)x2	4B(100A)x2	2B(50A)x2
900-C2	10900	32700	6.5	12B(300A)x2	12B(300A)x2	3B(80A)x2	4B(100A)x2	2B(50A)x2
1000-C2	12400	37900	6.1	12B(300A)x2	12B(300A)x2	3B(80A)x2	4B(100A)x2	2B(50A)x2
600-C3	9500	28100	7.4	10B(250A)x3	10B(250A)x3	2B(50A)x3	4B(100A)x3	2B(50A)x3
700-C3	11750	34250	7.2	10B(250A)x3	10B(250A)x3	3B(80A)x3	4B(100A)x3	2B(50A)x3
800-C3	13850	41000	6.9	12B(300A)x3	12B(300A)x3	3B(80A)x3	4B(100A)x3	2B(50A)x3
900-C3	16250	48950	6.5	12B(300A)x3	12B(300A)x3	3B(80A)x3	4B(100A)x3	2B(50A)x3
1000-C3	18500	57150	6.1	12B(300A)x3	12B(300A)x3	3B(80A)x3	4B(100A)x3	2B(50A)x3
600-C4	12600	37400	7.6	10B(250A)x4	10B(250A)x4	2B(50A)x4	4B(100A)x4	2B(50A)x4
700-C4	15600	45600	7.4	10B(250A)x4	10B(250A)x4	3B(80A)x4	4B(100A)x4	2B(50A)x4
800-C4	18400	54600	7.1	12B(300A)x4	12B(300A)x4	3B(80A)x4	4B(100A)x4	2B(50A)x4
900-C4	21600	65200	6.7	12B(300A)x4	12B(300A)x4	3B(80A)x4	4B(100A)x4	2B(50A)x4
1000-C4	24600	75600	6.3	12B(300A)x4	12B(300A)x4	3B(80A)x4	4B(100A)x4	2B(50A)x4
600-C5	15700	46700	7.6	10B(250A)x5	10B(250A)x5	2B(50A)x5	4B(100A)x5	2B(50A)x5
700-C5	19450	56950	7.4	10B(250A)x5	10B(250A)x5	3B(80A)x5	4B(100A)x5	2B(50A)x5
800-C5	22950	68200	7.1	12B(300A)x5	12B(300A)x5	3B(80A)x5	4B(100A)x5	2B(50A)x5
900-C5	26950	81450	6.7	12B(300A)x5	12B(300A)x5	3B(80A)x5	4B(100A)x5	2B(50A)x5
1000-C5	30700	94450	6.3	12B(300A)x5	12B(300A)x5	3B(80A)x5	4B(100A)x5	2B(50A)x5

3. For other multi-cell towers that are not listed here, please contact with our sales engineers.

4. If there is any change of piping size or additional equalizer pipe connection needed, please consult with our sales engineers in advance.



PT LIANG CHI INDONESIA

Head Office :

GRHA PRABA SAMANTA

Jl. Daan Mogot Km. 12 No. 9 Jakarta 11730

**Telp : 62-21 6193099, 6193212, 6196349
6196962, 6196963, 54380039 (Hunting)**

Fax : 62-21 6196341

Email : liangchiindonesia@oas.co.id

Surabaya :

Telp : 62-31-8432836, 8497888

Fax : 62-31-8497438, 8497433

Email : lci@sby.oas.co.id

Semarang :

Telp : 62-24-7613839, 7611102

Fax : 62-24-7613842

Email : lci_smg@telkom.net

Bandung :

Telp : 62-22-6124001, 6124002, 6024175

Fax : 62-22-6124001, 6124002

Email : oasbdg@rad.net.id

Medan :

Telp : 62-61-7862123

Fax : 62-61-7861960, 7861940

**Email : seltechi@indosat.net.id
hengky@seltech.co.id**