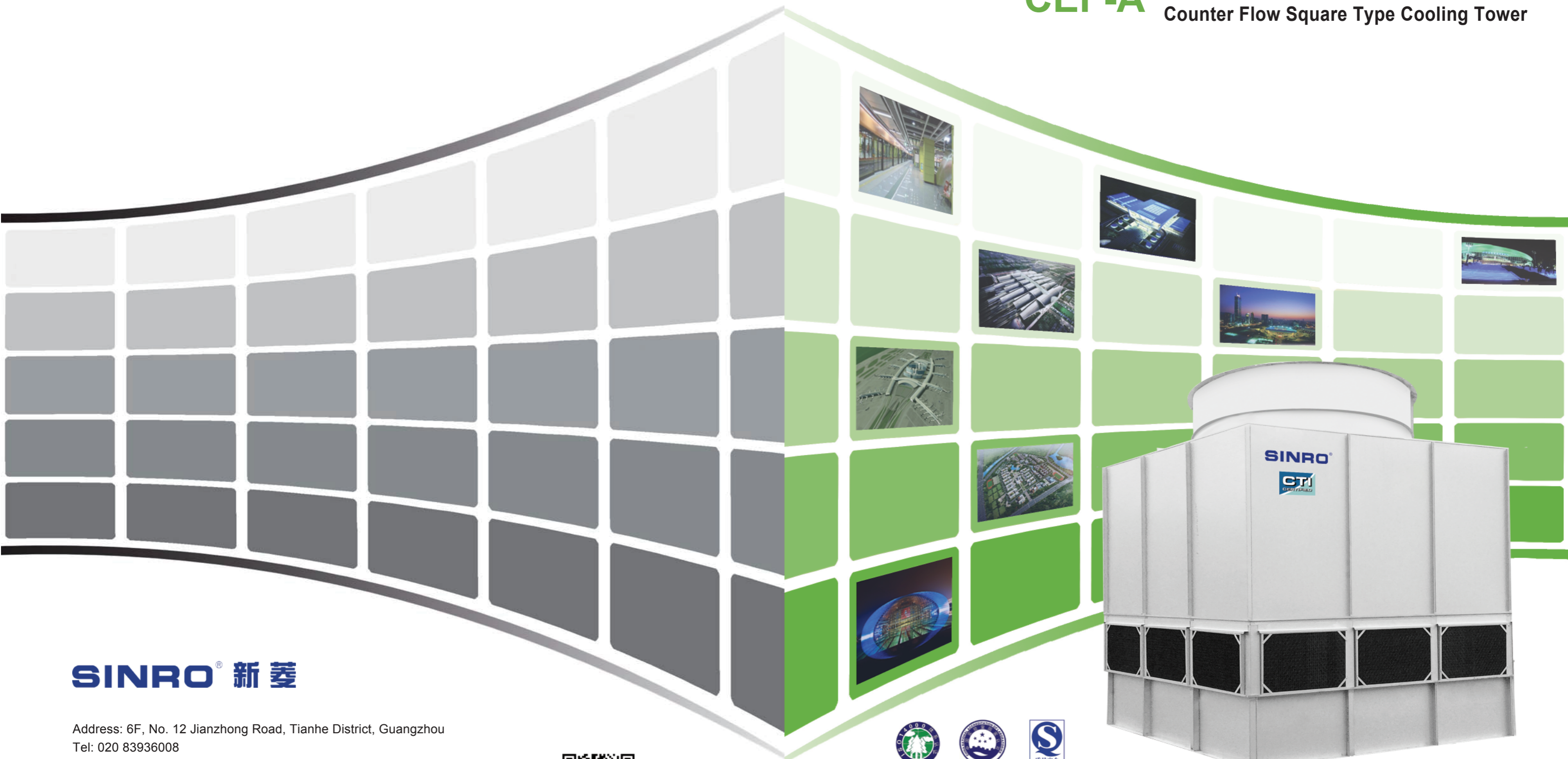


CEF-A 逆流方形冷却塔  
Counter Flow Square Type Cooling Tower



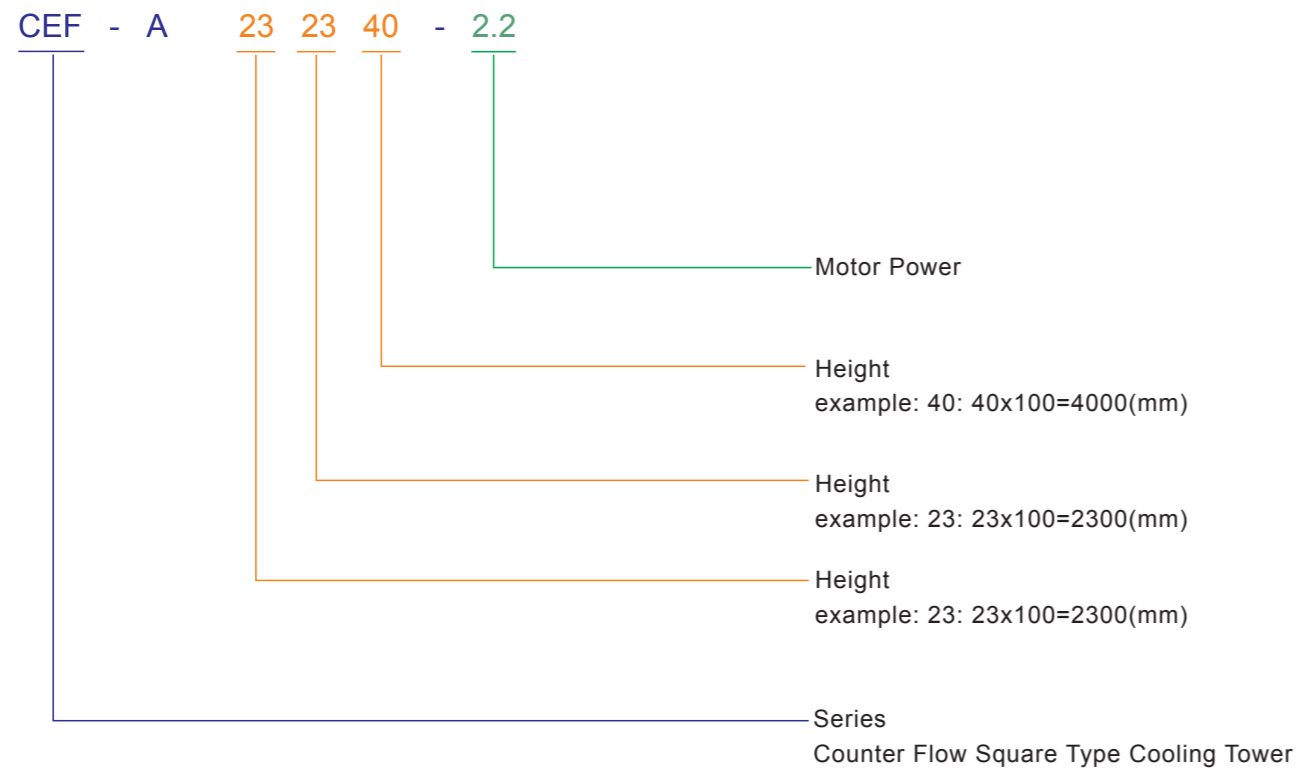
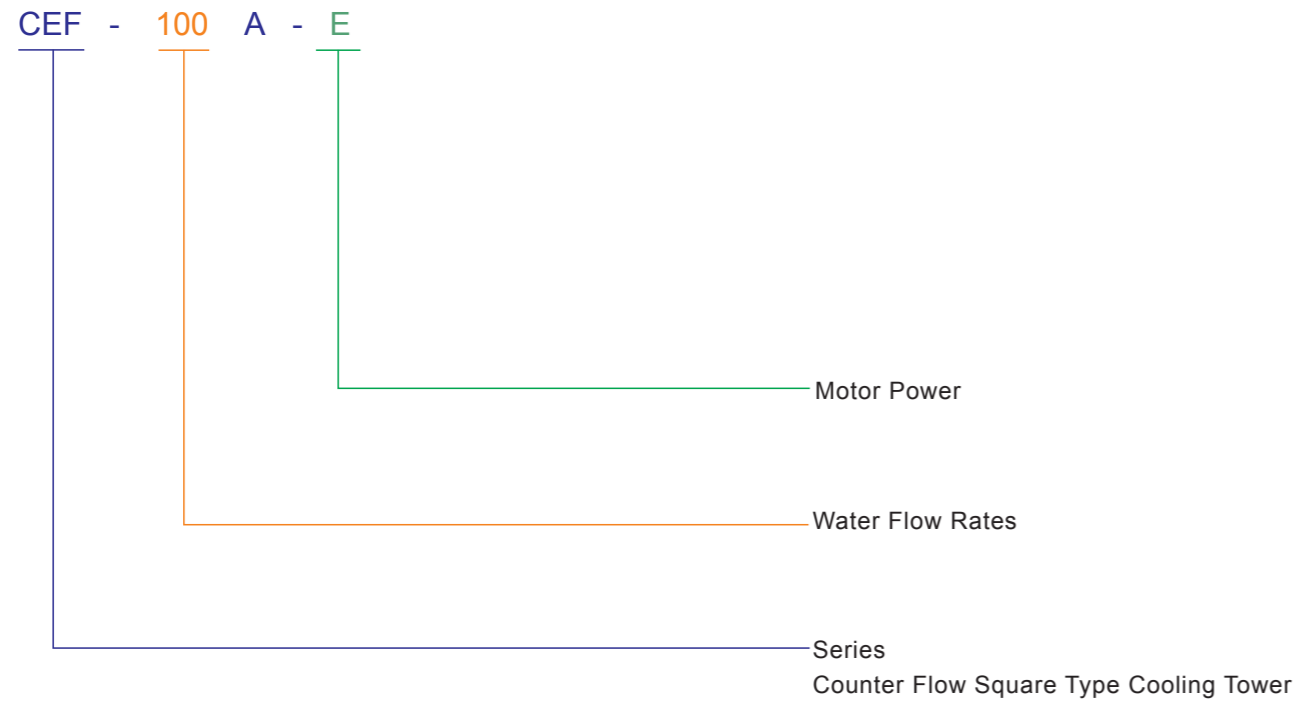
SINRO® 新菱

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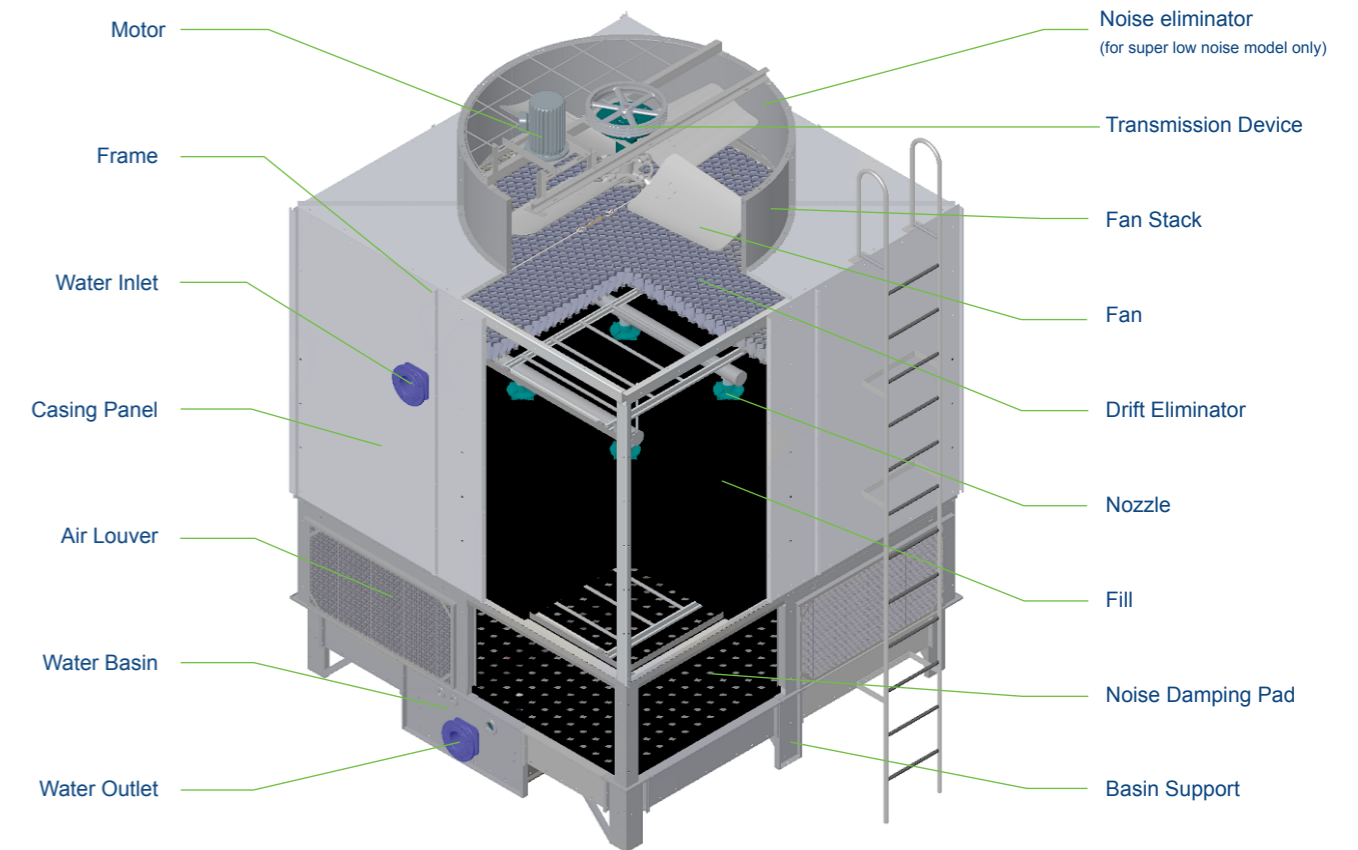


## Model

## Materials



### The Structure of CEF-A Counter Flow Square Type Cooling Tower



### The Material Sheet of CEF-A Counter Flow Square Type Cooling Tower

Model	CEF-XXXX	CEF-XXXX-S	CEF-XXXX-SS
Frame	Galvanized Steel	Stainless Steel	SS316
Bolt & Nut			
Ladder			
Inner Structure			
Motor Rack	Galvanized Steel		
Nozzle	Quality ABS		
Fill	Quality Modified PVC		
Drift Eliminator	Quality Modified PVC		
Casing Panel	Z700 Galvanized Steel		
Water Basin			
Fan Stack			
Water In/Out Flange	Cast Iron		
Noise Damping Pad	Corrosion Resistant Nylon		
Noise Damping Fan Stack (For Super Low Noise Model)	Z700 Galvanized Steel		

# Characteristics

## Product Profile

CEF-A series counter flow square type cooling tower is an excellent product designed with the advanced thermal exchange technology, scientific management on production and the environmental friendly principle by SINRO, after decades of experience in the design, manufacture, application and maintenance.

CEF-A series cooling tower is not only having high efficiency in heat exchanging but also having great reform in the structure of the cooling tower. In particular, it adopts the honeycomb air intake design, which can effectively prevent debris from entering the water system, reduce the noise generated by the water drop from spreading outward, avoid the direct sunlight and restrain the breed of algous bacteria and Legionella.

The modular design of the CEF-A can be single cell or multi-cell combination at site. The sufficient distance between the air inlet and the air outlet reduces the thermal reflux to achieve the design performance.

CEF-A series cooling tower has artistic appearance, multiple assembly, effective heat exchange, low noise, small floor space, light weight, environmental friendly, energy saving, easy maintenance, long life and various application.

### ■ Casing Panel

The panels made of Z700 galvanized steel manufactured in high quality standardized mold have outstanding and smooth appearance clean and bright for a long time. The reinforce structure design improves the ability of resisting wind pressure and earthquake.



### ■ Frame Structure

Modular frame structure made of high quality galvanize steel processed by the mechanical equipments, which ensures the standardization of the product and the stable quality, has strong structural rigidity, anti-corrosion and long service life.



### ■ Air Louver (Patented Technology)

The honeycomb air intake design can effectively prevent debris from entering the water system, reduce the noise generated by the water drop from spreading outward, avoid the direct sunlight and restrain the breed of algous bacteria and Legionella. It is made of high quality modified PVC which is thermoplastic molded and anti-UV light and anti-corrosion.



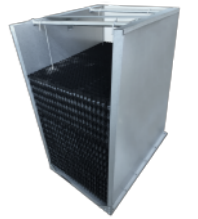
### ■ YKN Series Nozzle

The effective variable water flow nozzle designed by SINRO, uniformly distributes the cooling water to the fill. Large orifice design without movable accessories inside is free of clogging, easy maintenance, low resistance and improves the efficiency of heat exchanging.



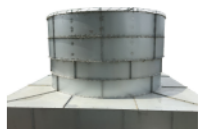
### ■ Suspending Fill for Counter Flow Cooling Tower

Adopting high quality modified flame retardant PVC and anti-ultraviolet agent as raw materials, the fill is formed by vacuum suction plastic. The hanging structure without glue is environment friendly and easy to disassemble and clean; The continuous structure effectively maintains the thickness of water film and has better heat transfer efficiency.



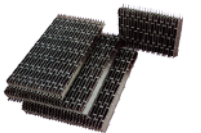
### ■ Fan Stack

The fan stack with SINRO's unique diffusion air outlet design has more uniform air flow. The precise air gap between the duct wall and the blades reduces the air resistance and energy consumption as well as raises the heat exchanging efficiency.



### ■ SRN-S Series Drift Eliminator

The labyrinth type drift eliminator on top of the cooling tower has small air flow resistance and effectively reduces the drift loss to 0.001% of the circulating water flow rates.



### ■ Axial Fan

The axial fan special for cooling tower with wide blades has low rotation speed, high efficiency, stable operation and low noise.



### ■ Water Basin

The water basin is designed for high water level and huge capacity and prevents the the water evacuation which will affect the operation of the system.



### ■ Motor

The TEAO motor special for cooling tower with IP55 protection is able to operate continuously in a hot and humid environment with characteristics of high efficiency, low noise, long service life and reliability.



### ■ Transmission Device

The belt drive reducer adopts fully enclosed shell with double sealing rings waterproof structure and galvanized main shaft which works stably and quietly and has good performance in anti-corrosion and waterproof.



## CEF-A Counter Flow Square Type Cooling Tower Specification

Specification Model No.	Item	Water Flow (m³/h)	Capacity x10³ (kcal/h)	Motor Power (kw)	Fan Diameter (ømm)	Head (mH <sub>2</sub> O)	Makeup Water (m³/h)	Dimension(mm)			Weight(kg)	
								L	W	H	Unit Weight	Operation Weight
CEF-100A-E		100	500	5.5	1768	4.6	1.1	2580	2580	3650	1235	2285
CEF-125A-F		125	625	7.5	2360	4.6	1.4	3120	3120	3650	1456	2846
CEF-150A-G		150	750	11	2360	4.6	1.7	3120	3120	3650	1625	3605
CEF-175A-G		175	875	11	2560	4.6	1.9	3420	3420	3770	1776	3870
CEF-200A-G		200	1000	11	2954	4.7	2.2	3900	3900	3940	2184	4284
CEF-250A-H		250	1250	15	2954	4.7	2.8	3900	3900	3940	2626	5806
CEF-300A-I		300	1500	18.5	3340	4.7	3.3	4260	4260	3940	3211	6361
CEF-350A-I		350	1750	18.5	3340	4.9	4.1	4650	4650	4090	3354	7404
CEF-400A-J		400	2000	22	3744	4.9	4.4	5100	5100	4120	3640	7705
CEF-450A-K		450	2250	30	3744	5	5	5100	5100	4120	3926	8006
CEF-500A-K		500	2500	30	4140	5.2	6.6	5820	5820	4470	4654	9294
CEF-600A-L		600	3000	37	4140	5.2	7.7	5820	5820	4470	5720	11020
CEF-700A-L		700	3500	37	4140	5.2	8.8	6360	6360	4470	6240	11640
CEF-800A-M		800	4000	45	4830	5.3	9.9	7620	7620	4670	6890	14090
CEF-900A-N		900	4500	55	4830	5.3	11	7620	7620	4670	7410	14910
CEF-A232340-2.2		85	423	2.2	1468	4.8	0.9	2300	2300	4000	1000	1950
CEF-A232340-3		95	476	3	1468	4.8	1.0	2300	2300	4000	1038	1988
CEF-A232340-4		101	503	4	1468	4.8	1.1	2300	2300	4000	1057	2007
CEF-A232340-5.5		106	529	5.5	1468	4.8	1.2	2300	2300	4000	1068	2018
CEF-A262640-3		108	541	3	1768	4.8	1.2	2600	2600	4000	1100	2150
CEF-A262640-4		122	608	4	1768	4.8	1.3	2600	2600	4000	1142	2192
CEF-A262640-5.5		128	642	5.5	1768	4.8	1.4	2600	2600	4000	1161	2211
CEF-A262640-7.5		135	676	7.5	1768	4.8	1.5	2600	2600	4000	1172	2222
CEF-A303040-4		144	720	4	2439	4.8	1.6	3000	3000	4000	1280	2670
CEF-A303040-5.5		162	810	5.5	2439	4.8	1.8	3000	3000	4000	1334	2724
CEF-A303040-7.5		171	855	7.5	2439	4.8	1.9	3000	3000	4000	1353	2743
CEF-A303040-11		180	900	11	2439	4.8	2.0	3000	3000	4000	1364	2754
CEF-A343440-5.5		197	985	5.5	2743	4.8	2.2	3400	3400	4000	1470	3564
CEF-A343440-7.5		214	1069	7.5	2743	4.8	2.4	3400	3400	4000	1534	3628
CEF-A343440-11		225	1127	11	2743	4.8	2.5	3400	3400	4000	1553	3647

Specification Model No.	Item	Water Flow (m³/h)	Capacity x10³ (kcal/h)	Motor Power (kw)	Fan Diameter (ømm)	Head (mH <sub>2</sub> O)	Makeup Water (m³/h)	Dimension(mm)			Weight(kg)	
								L	W	H	Unit Weight	Operation Weight
CEF-A343440-15		237	1185	15	2743	4.8	2.6	3400	3400	4000	1564	3658
CEF-A383844-5.5		231	1155	5.5	3200	5.2	2.5	3800	3800	4400	1630	3730
CEF-A383844-7.5		260	1300	7.5	3200	5.2	2.9	3800	3800	4400	1698	3798
CEF-A383844-11		274	1372	11	3200	5.2	3.0	3800	3800	4400	1717	3817
CEF-A383844-15		289	1444	15	3200	5.2	3.2	3800	3800	4400	1728	3828
CEF-A424244-7.5		282	1411	7.5	3200	5.2	3.1	4200	4200	4400	2020	2020
CEF-A424244-11		318	1588	11	3200	5.2	3.5	4200	4200	4400	2088	2088
CEF-A424244-15		335	1676	15	3200	5.2	3.7	4200	4200	4400	2107	2107
CEF-A424244-18.5		353	1764	18.5	3200	5.2	3.9	4200	4200	4400	2118	2118
CEF-A484844-11		401	2004	11	3658	5.2	4.4	4800	4800	4400	2700	6750
CEF-A484844-15		426	2131	15	3658	5.2	4.7	4800	4800	4400	2778	6828
CEF-A484844-18.5		449	2246	18.5	3658	5.2	4.9	4800	4800	4400	2797	6847
CEF-A484844-22		472	2362	22	3658	5.2	5.2	4800	4800	4400	2808	6858
CEF-A525244-11		433	2163	11	3658	5.2	4.8	5200	5200	4400	2980	7045
CEF-A525244-15		487	2434	15	3658	5.2	5.4	5200	5200	4400	3064	7129
CEF-A525244-18.5		514	2569	18.5	3658	5.2	5.7	5200	5200	4400	3085	7150
CEF-A525244-22		541	2704	22	3658	5.2	5.9	5200	5200	4400	3096	7161
CEF-A606052-15		576	2880	15	4140	6	6.3	6000	6000	5200	3700	8340
CEF-A606052-18.5		648	3240	18.5	4140	6	7.1	6000	6000	5200	3784	8424
CEF-A606052-22		684	3420	22	4140	6	7.5	6000	6000	5200	3805	8445
CEF-A606052-30		720	3600	30	4140	6	7.9	6000	6000	5200	3816	8456
CEF-A686852-22		788	3940	22	4540	6	8.7	6800	6800	5200	5355	10755
CEF-A686852-30		832	4162	30	4540	6	9.2	6800	6800	5200	5450	10850
CEF-A686852-37		879	4393	37	4540	6	9.7	6800	6800	5200	5510	10910
CEF-A686852-45		925	4624	45	4540	6	10.2	6800	6800	5200	5541	10941
CEF-A767652-30		924	4621	30	4830	6	10.2	7600	7600	5200	5580	12780
CEF-A767652-37		1040	5198	37	4830	6	11.4	7600	7600	5200	5694	12894
CEF-A767652-45		1097	5487	45	4830	6	12.1	7600	7600	5200	5715	12915
CEF-A767652-55		1155	5776	55	4830	6	12.7A	7600	7600	5200	5736	12936

- ※ 1. The capacity is designed on the condition: water in temp. = 37°C, water out temp. = 32°C, WB = 28°C, atmospheric pressure = 99.4 kPa.  
 2. Options of condition: water in temp. = 42 °C, water out temp. = 32 °C or water in temp. = 60 °C, water out temp. = 35 °C  
 3. Options of cells: single cell or multiple cells

## CEF-A Counter Flow Square Type Cooling Tower Dimension

Specification Model	Item	Pipe Connection(DN)					
		Water Inlet	Water Outlet	Overflow Outlet	Automatic Makeup	Rapid Makeup	Drain Outlet
CEF-100A-E		150	150	80	25	25	50
CEF-125A-F		150	150	80	25	25	50
CEF-150A-G		150	150	80	25	25	50
CEF-175A-G		150	150	80	25	25	50
CEF-200A-G		200	200	80	25	25	50
CEF-250A-H		200	200	80	25	25	50
CEF-300A-I		200x2	250	80	50	50	50
CEF-350A-I		200x2	250	100	50	50	80
CEF-400A-J		200x2	250	100	50	50	80
CEF-450A-K		200x2	250	100	50	50	80
CEF-500A-K		250x2	300	100	50	50	80
CEF-600A-L		250x2	300	100	50	50	80
CEF-700A-L		125x6	300	100	50	50	80
CEF-800A-M		125x6	300	100	50	50	80
CEF-900A-N		125x6	300	100	50	50	80
CEF-A232340-2.2		125	125	50	25	25	40
CEF-A232340-3		125	125	50	25	25	40
CEF-A232340-4		125	125	50	25	25	40
CEF-A232340-5.5		125	125	50	25	25	40
CEF-A262640-3		125	125	50	25	25	40
CEF-A262640-4		125	125	50	25	25	40
CEF-A262640-5.5		125	125	50	25	25	40
CEF-A262640-7.5		125	125	50	25	25	40
CEF-A303040-4		150	150	50	25	25	40
CEF-A303040-5.5		150	150	50	25	25	50
CEF-A303040-7.5		150	150	50	25	25	50
CEF-A303040-11		150	150	50	25	25	50
CEF-A343440-5.5		200	200	80	25	25	50
CEF-A343440-7.5		200	200	80	25	25	50
CEF-A343440-11		200	200	80	25	25	50
CEF-A343440-15		200	200	80	25	25	50
CEF-A383844-5.5		200	200	80	25	25	50
CEF-A383844-7.5		200	200	80	25	25	50
CEF-A383844-11		200	200	80	25	25	50
CEF-A383844-15		200	200	80	25	25	50
CEF-A424244-7.5		150x2	250	80	25	25	50
CEF-A424244-11		150x2	250	80	25	25	50
CEF-A424244-15		150x2	250	80	25	25	50
CEF-A424244-18.5		150x2	250	80	25	25	50
CEF-A484844-11		200x2	250	100	50	50	80
CEF-A484844-15		200x2	250	100	50	50	80
CEF-A484844-18.5		200x2	250	100	50	50	80
CEF-A484844-22		200x2	250	100	50	50	80
CEF-A525244-11		200x2	300	100	50	50	80

Specification Model	Item	Pipe Connection(DN)					
		Water Inlet	Water Outlet	Overflow Outlet	Automatic Makeup	Rapid Makeup	Drain Outlet
CEF-A525244-15		200x2	300	100	50	50	80
CEF-A525244-18.5		200x2	300	100	50	50	80
CEF-A525244-22		200x2	300	100	50	50	80
CEF-A606052-15		200x2	300	100	50	50	80
CEF-A606052-18.5		200x2	300	100	50	50	80
CEF-A606052-22		200x2	300	100	50	50	80
CEF-A606052-30		200x2	300	100	50	50	80
CEF-A686852-22		200x3	350	100	50	50	80
CEF-A686852-30		200x3	350	100	50	50	80
CEF-A686852-37		200x3	350	100	50	50	80
CEF-A686852-45		200x3	350	100	50	50	80
CEF-A767652-30		200x3	350	100	50	50	80
CEF-A767652-37		200x3	350	100	50	50	80
CEF-A767652-45		200x3	350	100	50	50	80
CEF-A767652-55		200x3	350	100	50	50	80

## CEF-A Counter Flow Square Type Cooling Tower Pipe Connection

