YLGH 豫冷高华®
COOLING TOWER SYSTEM

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YLGH 豫冷高华®
COOLING TOWER SYSTEM

COOPERATION

EVAPORATIVE CONDENSER & EVAPORATIVE COOLER

洛 阳 高 华 环 保 冷 却 科 技 有 限 公 司

LUOYANG GAOHUA ENVIRONMENTAL COOLING TECHNOLOGY CO., LTD.

COMPANY PROFILE

Luoyang Gaohua Environmental Cooling Technology Co., Ltd. is a professional and modern enterprise integrating R & D, production and marketing of cooling technology and products. We focus on continuous innovation around customer's requirements, upgrade product quality. Meanwhile, we keep an open cooperation with partners, supplying solutions for customer in power, metallurgy, coal chemical, petrochemical, refrigeration and other industries. With a strong refrigeration and thermal technology professional team, we are committed to providing our clients with competitive products, effective solutions and services, to continuously enhance customer's experience and create maximum value for them. Our main products are: evaporative condensers, evaporative cooler, closed cooling tower, "air cooling + evaporative cooling" composite closed cooling system, anti-white mist efficient cooling system, etc.

Luoyang Gaohua covers an area of 13,500m^2, has machining workshop, assembly workshop , standard parts warehouse , welding material warehouse, and holds the certificates of ISO 9001, OHSAS18001, ISO14001. Our products are sold in about 30 provinces, cities or autonomous regions of china, also exported to Turkey, India, Southeast Asia, Africa , European and other countries.

ABOUT US

COMPANY FAITH

Our products and services meet our customers' needs punctually and consistently. We are committed to maintaining and improving the quality of our products and services. We Adhering to the principal of "Involving Our People+Customer Focus". We know that our people are the essence of our organization, and their total participation allows them to develop useful skills for both the company, and their own personal development. The clients are our foundation. We will go the extra mile in order to meet even exceed their expectations.

BUSINESS PHILOSOPHY

Being a member of the world cooling tower manufacturing industry to provide energy-saving and environmental protection cooling equipment for users is our proud. We insist on continuous innovation to impress customers with product quality and service. An accurately designed cooling system will perform better and will enable that the fuel used will produce the maximal yield. Making the the customers satisfied is our goal.

CERTIFICATIONS

COMPANY CULTURE

MISSION

We are a manufacturer of high quality, innovative products, effective solutions and services that develop through our core principle of treating people right. We shine through expert technology and passionate dedication to customer service. We maintain the value of innovation, cooperation, responsibility and respect with our clients.

VISION

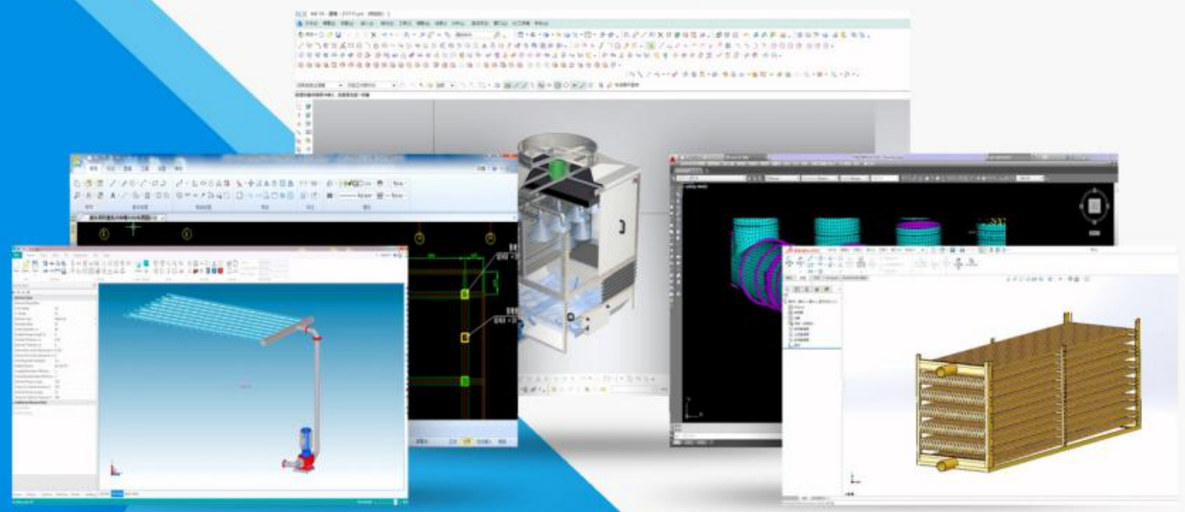
We are dedicated to designing and manufacturing the energy-saving, environmental protection, high-quality and efficient product, providing satisfied service for the clients around the globe, and contribute to the energy conservation of the earth.

ABILITY TO DESIGN

The company relies on a strong technical research and development team, covering thermal process calculation, pipeline design, steel structure, electrical and other professional; Professional heat transfer technology software is used for simulation design. The company has industry-leading analysis and design software that can cooperate with the design unit to determine the overall layout, which can simulate the cooling system according to the local terrain and geomorphological conditions to minimize the adverse impact of the external environment on the system operation.

R & D CAPABILITIES

The company has professional engineers in the fields of HVAC, mechanical design and manufacturing, thermal energy and power engineering, chemical machinery, metal welding, etc., and has rich industry experience. Our company cooperates with the personnel of domestic universities and industry design institutes, and is committed to the research directions of water saving, high efficiency and energy saving, anti-fog, anti-wind, and anti-freezing and etc.



MANUFACTURING CAPACITY

CNC Pipe Bending Machine

8/4000 Shearing Machine
125/4000 Bending Machine

Rocker Drilling Machine

Automatic Welding Equipment

CNC Laser Cutting Machine

CNC Machining Center

PRODUCT INTRODUCTION

REFRIGERATION AND AIR CONDITIONING INDUSTRY

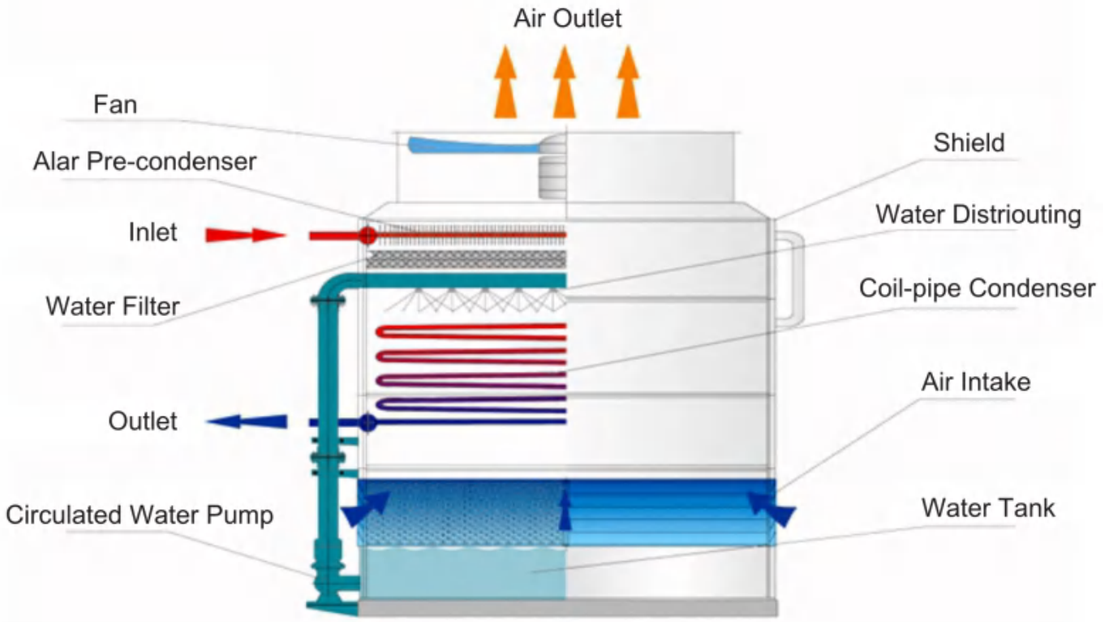
Evaporative Condenser

The evaporative condensers is a energy-saving, water-saving, high-efficiency and eco-friendly condensation device which uses evaporation and condensation as the main mode of heat exchange. The vapor to be condensed is circulated through a condensing coil, which is continually wetted on the outside by a recirculating water system. Air is pulled over the coil, causing a small portion of the recirculating water to evaporate. The evaporation removes heat from the vapor in the coil, causing it to condense. It takes up a small area and is easy to operate and maintain.

NZL Series Evaporative Condenser

NZL series evaporative condenser, the fresh air intakes from bottom air inlet, and will become saturated hot air mixed with spraying water as they flow in reverse direction. The heat will be exhausted out by fans , but the water will be collected to water basin for secondary spraying by its special designed drift eliminator. As no filling inside, NZL series combined flow evaporative condenser has much space to enlarge its coil unit heat rejection area, more compact structure and requires less footprint. It can be widely used in food freezing, refrigeration, coal chemical industry, petrochemical industry, etc.

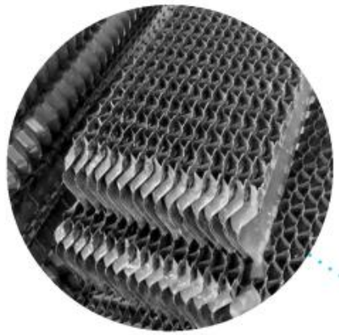
Working Process



Technical Data

NZL Series Evaporative Condenser											
Item	Model No.	Heat Output KW	Fan		Spray Pump		Weight		Height mm	Connection Size	
			Power KW	Air Volume m^3/h	Power KW	Flow m^3/h	Net KG	Operation KG		Inlet	Outlet
1	NZL100	118	1.1	15000	0.75	25	1460	2110	3506	DN80	DN80
2	NZL170	174	1.1	15000	0.75	25	1710	2460	3756	DN80	DN80
3	NZL230	232	1.5	18500	0.75	25	1920	2670	4006	DN80	DN80
4	NZL300	301	1.1×2	15000×2	1.1	35	2320	3850	3506	DN80	DN80
5	NZL400	405	1.1×2	15000×2	1.1	35	2669	4369	3756	DN80	DN80
6	NZL430	439	1.5×2	18500×2	1.1	35	2673	4373	3756	DN80	DN80
7	NZL460	463	2.2×2	26000×2	1.1	35	2783	4483	3936	DN80	DN80
8	NZL510	518	1.5×2	18500×2	2.2	60	3064	4764	4006	DN80	DN80
9	NZL570	577	2.2×2	26000×2	2.2	60	3125	4825	4086	DN80	DN80
10	NZL660	669	4.0	55000	2.2	60	4372	7695	3861	2-DN80	2-DN80
11	NZL690	690	5.5	78000	2.2	60	4426	7749	3861	2-DN80	2-DN80
12	NZL860	865	5.5	78000	2.2	60	5106	8451	4111	2-DN80	2-DN80
13	NZL920	923	5.5	90000	2.2	60	5124	8468	4111	2-DN80	2-DN80
14	NZL1000	1014	5.5	90000	3.0	87	5803	9169	4361	2-DN80	2-DN80
15	NZL1090	1098	7.5	100000	3.0	87	5823	9189	4361	2-DN80	2-DN80
16	NZL1050	1056	5.5	90000	3.0	87	6482	9869	4611	2-DN80	2-DN80
17	NZL1240	1244	7.5	100000	3.0	87	6502	9889	4611	2-DN80	2-DN80
18	NZL1270	1271	7.5	100000	4.0	120	6840	10840	4361	2-DN100	2-DN80
19	NZL1360	1360	11.0	125000	4.0	120	6864	10860	4486	2-DN100	2-DN80
20	NZL1380	1386	7.5	100000	4.0	120	7669	11669	4611	2-DN100	2-DN80
21	NZL1530	1530	11.0	125000	4.0	120	7692	11692	4736	2-DN100	2-DN80
22	NZL1600	1613	5.5×2	75000×2	5.5	135	8605	12505	4361	2-DN125	2-DN100
23	NZL1670	1673	7.5×2	85000×2	5.5	135	8655	12555	4361	2-DN125	2-DN100
24	NZL1840	1843	5.5×2	75000×2	5.5	135	9698	13598	4611	2-DN125	2-DN100
25	NZL1900	1902	7.5×2	85000×2	5.5	135	9748	13648	4611	2-DN125	2-DN100
26	NZL1950	1958	5.5×2	78000×2	7.5	172	10581	15681	4361	3-DN100	3-DN80
27	NZL2070	2074	7.5×2	90000×2	7.5	172	10631	15731	4361	3-DN100	3-DN80
28	NZL2190	2190	5.5×2	78000×2	7.5	172	11832	16932	4351	3-DN100	3-DN80
29	NZL2300	2301	7.5×2	90000×2	7.5	172	11882	16982	4651	3-DN100	3-DN80
30	NZL2470	2475	4.0×4	55000×4	4.0×2	120×2	12451	19152	4381	3-DN125	3-DN100
31	NZL2640	2646	5.5×4	75000×4	4.0×2	120×2	12522	19222	4381	3-DN125	3-DN100
32	NZL2850	2855	4.0×4	55000×4	4.0×2	120×2	13921	20621	4631	3-DN125	3-DN100
33	NZL2990	2995	5.5×4	75000×4	4.0×2	120×2	14100	20800	4631	3-DN125	3-DN100
34	NZL3200	3224	5.5×3	90000×3	5.5×2	135×2	16559	25431	4412	5-DN100	5-DN80
35	NZL3400	3409	7.5×3	100000×3	5.5×2	135×2	16634	25506	4412	5-DN100	5-DN80
36	NZL3560	3568	5.5×3	90000×3	5.5×2	135×2	19468	27390	4662	5-DN100	5-DN80
37	NZL3790	3798	7.5×3	100000×3	5.5×2	135×2	18543	27465	4662	5-DN100	5-DN80
38	NZL3900	3915	5.5×4	78000×4	5.5×2	135×2	19230	30178	4452	6-DN100	6-DN80
39	NZL4146	4146	7.5×4	90000×4	5.5×2	135×2	19400	30278	4452	6-DN100	6-DN80
40	NZL4370	4371	5.5×4	78000×4	5.5×2	135×2	21642	32595	4702	6-DN100	6-DN80
41	NZL4600	4605	7.5×4	90000×4	5.5×2	135×2	21742	32695	4702	6-DN100	6-DN80

Above data is for reference



Drift Eliminator

The use of high-quality PVC material, unique multi-empty and multi-curved structure, can effectively and evenly collect the moisture in the humid air, so that the flow rate of water is less than 0.001%, and it is anti-aging, light weight, easy to clean and maintain.

Axial Fan

Axial flow fan adopts hollow aluminum alloy impeller (standard configuration) dedicated for evaporation and condensation, with forward-tilted structure design of the blade, low wind resistance, large air volume, low noise, good performance, high efficiency, and direct connection, reducing transmission Components, the motor uses a fully enclosed self-cooled motor, protection grade IP55, the shell is sprayed with static electricity, acid and alkali resistance, corrosion resistance.

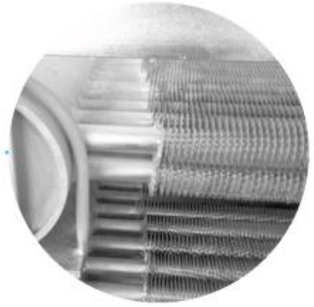
Condensation Coil

The condensing coil is the key part of the unit. In order to improve the heat transfer coefficient inside and outside the tube, the condensing coil adopts elliptical high conductivity tube (standard product configuration) or circular internal and external thread high-efficiency heat exchange tube (patented product, optional configuration), and through the overall high-temperature hot-dip zinc at 487 ℃, to ensure the overall anti-corrosion ability. The design pressure of the coil is 2.0MPa. After three times of pressure test (2.5MPa) and the last 24 hours of pressure maintenance, the air tightness and strength of the coil are guaranteed. Each process pipeline is inclined at a certain angle along the flow direction, which facilitates the outflow of liquid refrigerant and ensures minimum flow resistance. The coil is fixed on the frame for easy maintenance.

(According to customer needs, stainless steel corrugated tube can be used for condensing coil)

Circulating Water Pump

The circulating water pump adopts a large flow, low head, low power evaporative cooling special pump, and the shaft seal adopts a special mechanical seal ring produced by German Bergmann forced circulation without restriction of steering, without leakage and long life. And choose dust-proof, splash-proof motor, has the advantages of low power, large flow, low noise and so on.



Dry Fin Cooling Coil

Copper tube structure with aluminum fins can improve cooling capacity and reduce or eliminate white mist

Water Distribution System

The nozzle has the characteristics of large flow rate, uniform spraying, no clogging, and easy cleaning, which makes the cooling water film wrap the outer wall of the coil to the maximum extent, eliminating the "dry point" of the water film on the condensation tube wall, increasing water vaporization and improving Heat transfer coefficient. The nozzle and the spray branch pipe are connected by a thread, which is convenient for disassembling and flushing the nozzle and the entire branch pipe

Air Intake

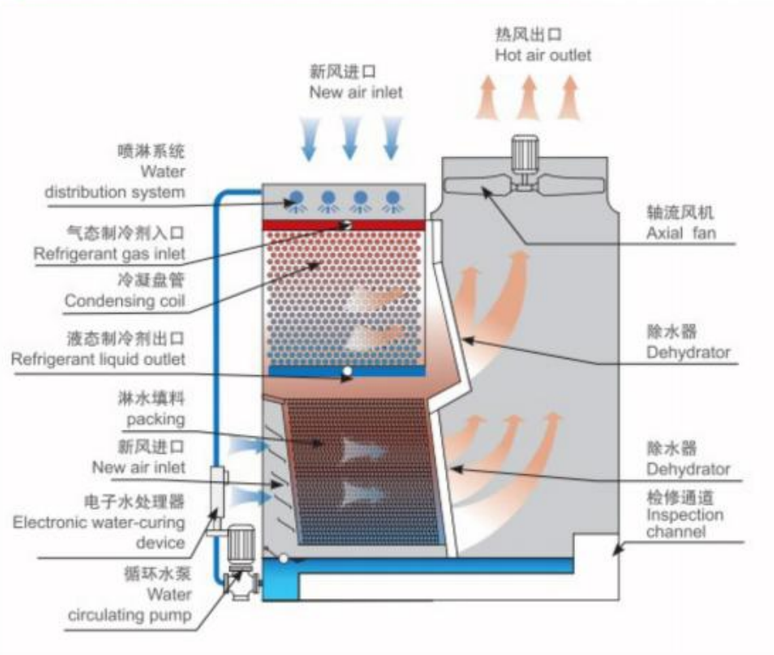
Steel shutters, Electrostatic spray, Anti-corrosion

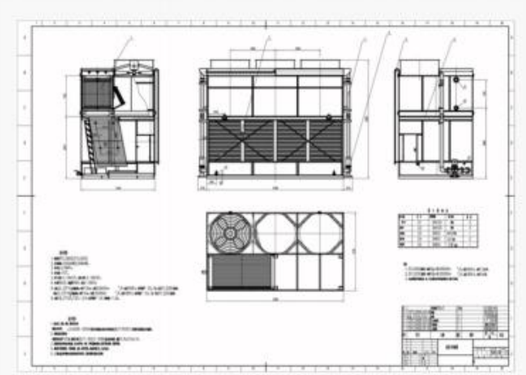
SZL Series Evaporative Condenser

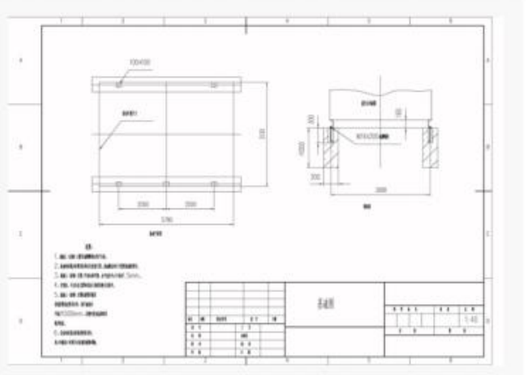
SZL series evaporative condenser uses heat exchange tube bundles and PVC fins for compound heat exchange, which increases the spray water cooling process, suitable for operating in clean air environment, and is widely used in food freezing and refrigeration, central air conditioning and other systems.

SZL series evaporative condenser belongs to induced draft cross-flow condenser. During working operation, the dry cool air inlet through wide louvers on one side of the condenser, passes through the spray water, cooling coil and the filler, becomes hot and humid air, and is finally discharged into atmosphere by the fan on the top. During this process, a part of heat from the fluids inside the closed loop is transferred efficiently, and removed continuously. The cooling medium is not in contact with the outside during the cooling process, ensuring the cleanliness of the cooling medium and greatly improving the service life of the cooled host device.

Working Process







Technical Data

SZL Series Evaporative Condenser									
Item	Model No.	Heat Output KW	Fan		Spray Pump		Weight		Height mm
			Power KW	Air Volume m^3/h	Power KW	Flow m^3/h	Net KG	Operation KG	
1	SZL420	425	4	55000	1.1	50	2693	4132	4364
2	SZL460	460	5	60000	1.1	50	2703	4142	4364
3	SZL510	517	5.5	60000	1.1	50	2960	4405	4614
4	SZL570	575	7.5	75000	1.1	50	2970	4415	4614
5	SZL660	667	4.0×2	55000×2	2.2	100	3707	5889	4364
6	SZL730	736	5.5×2	60000×2	2.2	100	3727	5909	4364
7	SZL850	851	5.5×2	60000×2	2.2	100	4093	6283	4614
8	SZL950	954	7.5×2	65000×2	2.2	100	4113	6303	4614
9	SZL1170	1173	5.5×2	78000×2	2.2×2	100×2	5698	9184	5088
10	SZL1260	1265	7.5×2	90000×2	2.2×2	100×2	5738	9224	5088
11	SZL1420	1426	5.5×2	78000×2	2.2×2	100×2	6237	9739	5338
12	SZL1520	1529	7.5×2	90000×2	2.2×2	100×2	6277	9779	5338
13	SZL1600	1610	7.5×2	90000×2	2.2×2	100×2	6833	10351	5588
14	SZL1770	1771	5.5×3	90000×3	3×2	120×2	8597	14281	5088
15	SZL2000	2001	7.5×3	100000×3	3×2	120×2	9697	14341	5088
16	SZL2300	2300	7.5×3	100000×3	3×2	120×2	9620	15329	5338
17	SZL2500	2530	11×3	120000×3	3×2	120×2	9695	15404	5338
18	SZL2720	2725	7.5×3	100000×3	3×2	120×2	10354	16537	5338
19	SZL2870	2875	11×3	120000×3	3×2	120×2	10429	16612	5338
20	SZL3100	3105	11×3	120000×3	3×2	120×2	11481	17692	5588
21	SZL3450	3450	5.5×4	90000×4	4×2	120×2	13015	21152	5338
22	SZL3680	3680	7.5×4	100000×4	4×2	120×2	13095	21232	5338
23	SZL4140	4140	7.5×4	100000×4	4×2	120×2	14328	22502	5588
24	SZL4340	4347	11×4	120000×4	4×2	120×2	14423	22597	5588

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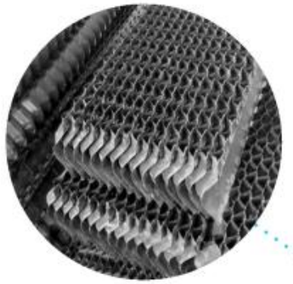

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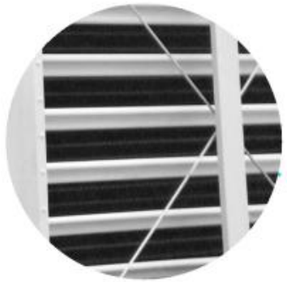


Air Intake

Steel shutters,
Electrostatic spray,
Anti-corrosion

Condensation Coil

The condensing coil is the key part of the unit. In order to improve the heat transfer coefficient inside and outside the tube, the condensing coil adopts elliptical high conductivity tube (standard product configuration) or circular internal and external thread high-efficiency heat exchange tube (patented product, optional configuration), and through the overall high-temperature hot-dip zinc at 487 ℃, to ensure the overall anti-corrosion ability. The design pressure of the coil is 2.0MPa. After three times of pressure test (2.5MPa) and the last 24 hours of pressure maintenance, the air tightness and strength of the coil are guaranteed. Each process pipeline is inclined at a certain angle along the flow direction, which facilitates the outflow of liquid refrigerant and ensures minimum flow resistance. The coil is fixed on the frame for easy maintenance.

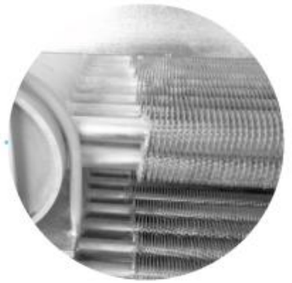
(According to customer needs, stainless steel corrugated tube can be used for condensing coil)

Circulating Water Pump

The circulating water pump adopts a large flow, low head, low power evaporative cooling special pump, and the shaft seal adopts a special mechanical seal ring produced by German Bergmann forced circulation without restriction of steering, without leakage and long life. And choose dust-proof, splash-proof motor, has the advantages of low power, large flow, low noise and so on.

Axial Fan

Axial flow fan adopts hollow aluminum alloy impeller (standard configuration) dedicated for evaporation and condensation, with forward-tilted structure design of the blade, low wind resistance, large air volume, low noise, good performance, high efficiency, and direct connection, reducing transmission Components, the motor uses a fully enclosed self-cooled motor, protection grade IP55, the shell is sprayed with static electricity, acid and alkali resistance, corrosion resistance.



Dry Fin Cooling Coil

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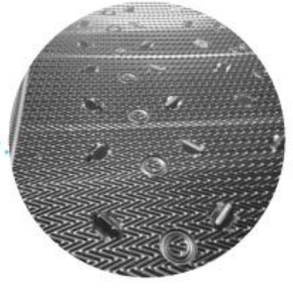
Water Distribution System

The nozzle has the characteristics of large flow rate, uniform spraying, no clogging, and easy cleaning, which makes the cooling water film wrap the outer wall of the coil to the maximum extent, eliminating the "dry point" of the water film on the condensation tube wall, increasing water vaporization and improving Heat transfer coefficient. The nozzle and the spray branch pipe are connected by a thread, which is convenient for disassembling and flushing the nozzle and the entire branch pipe



PVC Filling

PVC heat exchange layer adopts the overall cross-flow structure. Its unique design makes the water flow form a large area of flowing water film on the surface of the filler, and prolongs the residence time of water in the filler, so that the air can quickly remove the heat in the water and improve the cooling effect. At the same time, the filler has the advantages of high temperature resistance, good flame retardance, small wind resistance coefficient, anti-aging, anti-ultraviolet, and not easy to deform.

PRODUCT INTRODUCTION

METALLURGICAL INDUSTRY

Closed Circuit Cooling System

The application of evaporative cooler in metallurgical industry

- Cooling of soft or desalted water in the closed circulating of blaster furnaces and convertors;
- Cooling of circulating water in casting, forging and welding equipment;
- Cooling of public circulating water in factory;
- Cooling of circulating oil in medium frequency furnaces and transformers.

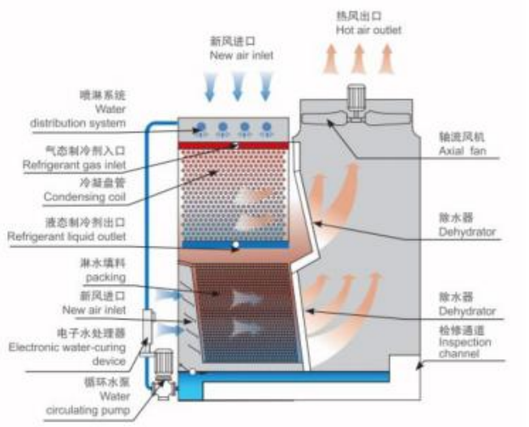
Evaporative Cooler (Closed Cooling Tower)

Compared with the traditional open cooling tower, the closed system uses a evaporative cooler (closed cooling tower) as the main heat exchange equipment to isolate the cooling water from the outside world. In the heat exchange process, the environment, water body and equipment are highly clean, and it has the advantages of water saving, energy saving, low maintenance cost and intelligent operation.

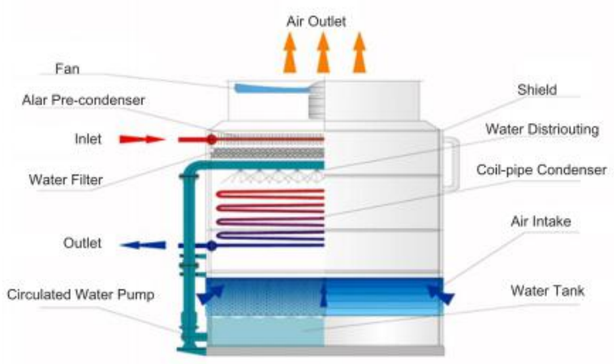
Working Flow

The air is drawn into the evaporative cooler by the axial fan through the grille, and the heat is discharged through the heat exchange tube bundle. The bleacher under the fan is to prevent water droplets from being carried away by the air.

The spray water falls into the water tank from the top of the evaporative cooler and is recycled through the spray water pump. When it falls, the spray water absorbs heat from the tube and evaporates at the same time. The evaporated spray water is automatically replenished through the water compensation valve.



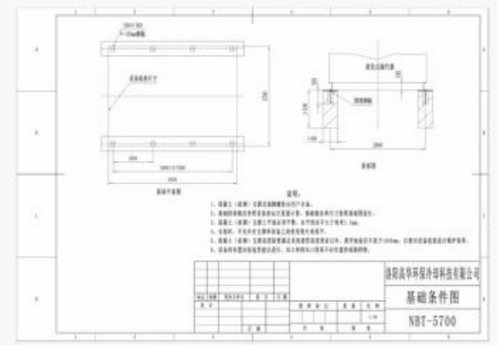
SLT Series Evaporative Cooler

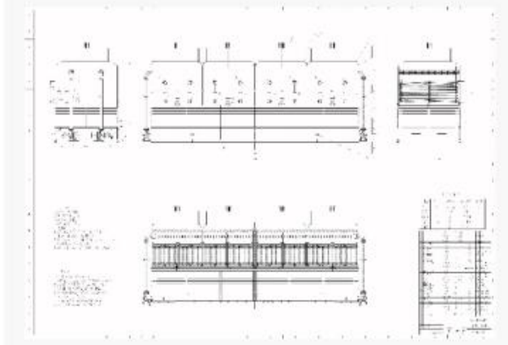


NBT Series Evaporative Cooler

Application

The evaporative cooler can be used in steel plants and foundries; it can also be used for industrial fluid cooling of central air conditioning, chemical, pharmaceutical, hydraulic machinery, etc.





Technical Data

SLT Series Evaporative Cooler

Model	Heat Exchanger Specifications	Size W×L, mm	Axial Fan			Pump		Connection Size	
			Fan Model	Power KW	Air volume m^3/h	Pump Model	Flow m^3/h	Inlet	Outlet
SLT-27	1430×1180	3300×5780	16#	7.5×3	100000×3	T125/125-3/4	120×2	DN150	DN150
SLT-36	1430×1180	3300×5780	16#	11×3	120000×3	T125/125-3/4	120×2	DN150	DN150
SLT-45	1430×1180	3300×5780	16#	11×3	120000×3	T125/125-3/4	120×2	DN150	DN150
SLT-48	2600×1430	3300×7580	15#	5.5×4	90000×4	125/160-4/4	120×2	DN150	DN150
SLT-72	2600×1430	3300×7580	16#	7.5×4	100000×4	125/160-4/4	120×2	DN150	DN150
SLT-96	2600×1430	3300×7580	16#	7.5×4	100000×4	125/160-4/4	120×2	DN150	DN150
SLT-120	2600×1430	3300×7580	16#	11×4	120000×4	125/160-4/4	120×2	DN150	DN150

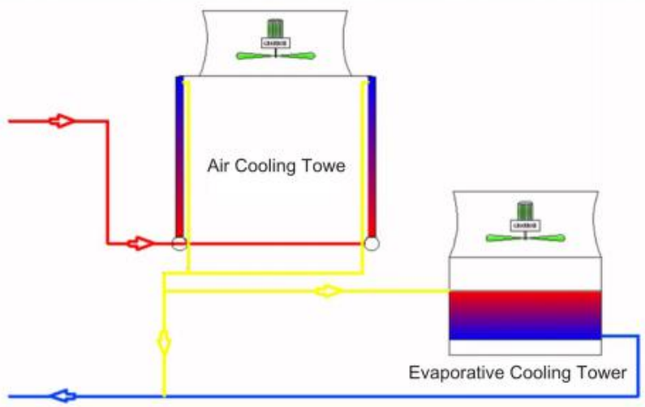
NBT Series Evaporative Cooler

Model	Heat Exchanger Specifications	Axial Fan			Pump		Connection Size	
		Fan Model	Power KW	Air volume m^3/h	Pump Model	Flow m^3/h	Inlet	Outlet
NBT-453	3190×6530	16#	5.5×3	80000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-604	3190×6530	16#	5.5×3	80000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-755	3190×6530	16#	7.5×3	100000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-906	3190×6530	16#	7.5×3	100000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-544	3190×8010	15#	5.5×3	78000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-725	3190×8010	15#	5.5×3	78000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-906	3190×8010	15#	7.5×3	90000×3	125/200-5.5/4	135×2	DN150	DN150
NBT-1088	3190×8010	15#	7.5×3	90000×3	125/200-5.5/4	135×2	DN150	DN150

Dry and Wet Combined Closed Cooling System

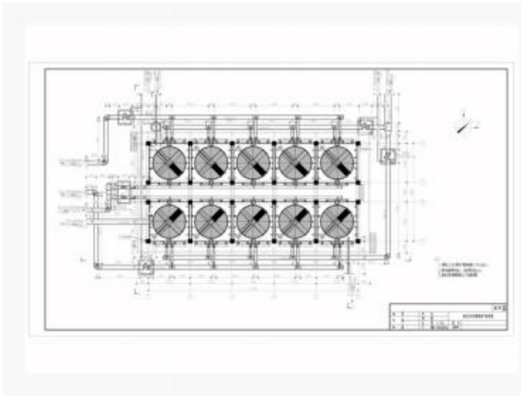
The air cooling and evaporative cooling are combined and optimized, and the air cooling part and the evaporative cooling part are rationally proportioned according to the ambient temperature and process cooling characteristics. If the temperature is higher than the designed temperature to cut off water supply, evaporative cooling is the principal part for heat exchange and air cooling is the assistant part, and so most of thermal load is borne by evaporative cooling. If the temperature is lower than the designed temperature to cut off water supply, air cooling is the principal part for heat exchange and evaporative cooling is the assistant part, and so most of thermal load is borne by air cooling. The system can save water and electricity for users to the greatest extent, and achieve the purpose of comprehensive energy saving.

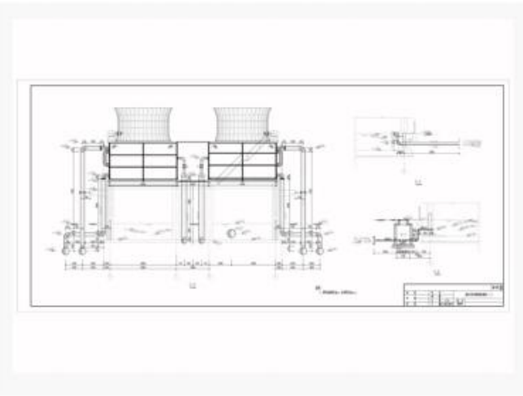
Working Process



Technical Data

Finned tube bundle parameters			
Temperature Range:	-60~110 ℃	Design pressure:	0.6MPa
Fin Dimension:	600mm×133mm×0.3mm	Fin spacing:	2.5~3.5mm
Aluminum Tube Size:	φ25×1mm×5000-5500mm	Fin ratio:	60~70





System Characteristics

- The air cooling tower is vertically arranged with a cooling triangle, and the evaporative cooling section is modularly and centrally arranged with serpentine coils, all using large fan units, the whole machine is well integrated, the system design is simple, and the operation is safe and reliable.
- Using large-diameter axial fans, the overall investment is small, the mechanical failure rate is reduced, and the management and maintenance costs are low.
- The air-cooled tube bundles are arranged vertically, which improves the space utilization rate and effectively prevents the occurrence of freezing problems in winter.
- The water-saving effect is remarkable, and air cooling is the principal part for heat exchange in winter, eliminating white fog.
- Reduce sewage discharge

PRODUCT INTRODUCTION

POWER INDUSTRY

Power Plant Evaporative Condenser

The evaporative condenser is mainly composed of four parts: heat exchange system, water circulation system, axial fan, and support frame.

The saturated steam discharged from the steam turbine enters the heat exchange tube to condense and release heat; the spray water outside the tube absorbs the steam in the tube to condense, and after vaporization, it is discharged into the atmosphere under the action of the fan; The condensed water is collected in the condensed water tank through the pipeline. The non-condensable gas is discharged by the vacuum device

Power Plant Evaporative Condenser

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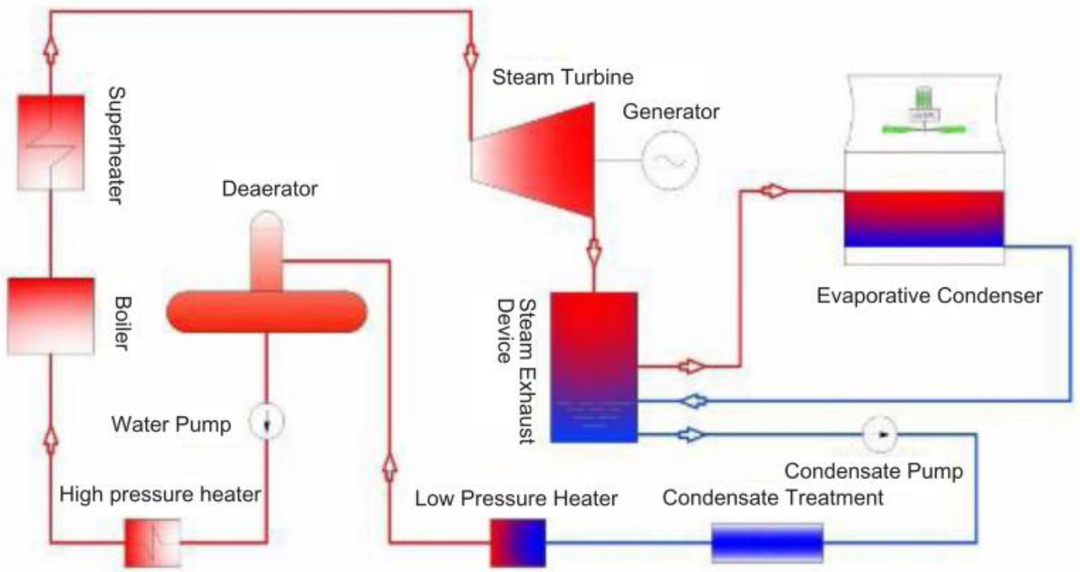
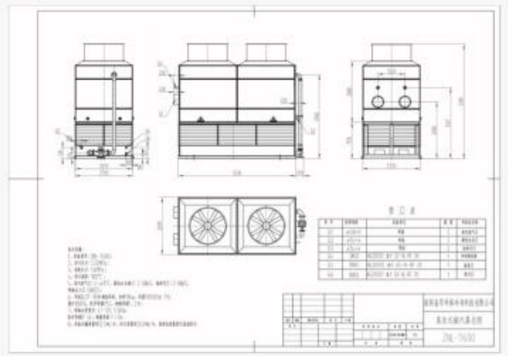
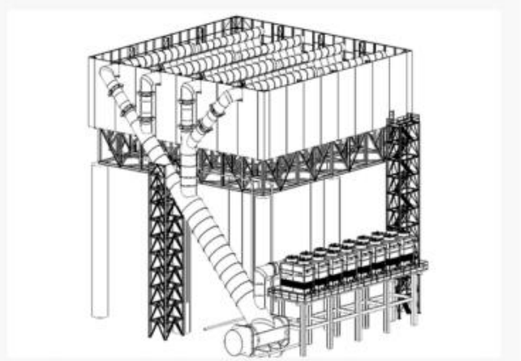
Working Process







System Features

The major difference between a cooling tower and an evaporative condenser lies in the number of stages required to achieve their cooling effects.

For chiller systems that utilize a cooling tower, heat transfer from the cooling process involves two stages. The heat generated by an industrial or commercial process is first transferred to the circulating chiller fluid by the condenser unit before atmospheric heat rejection at the cooling tower. Thus, using chillers and cooling towers together require two levels of heat exchange.

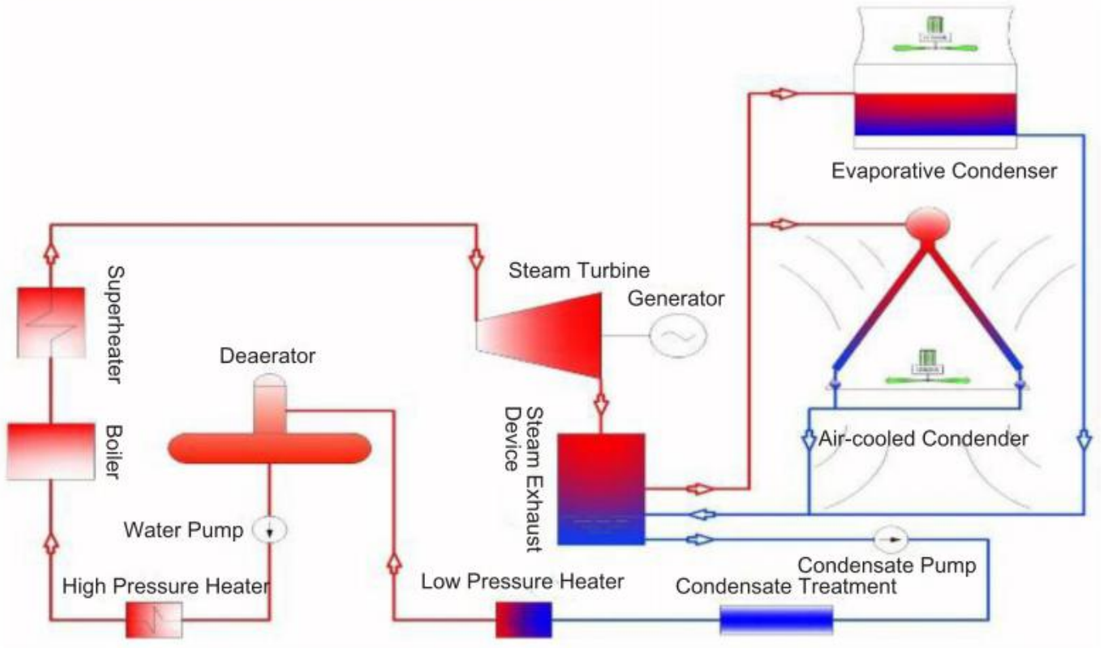
On the other hand, chillers with evaporative condensers achieve similar results by a single heat rejection process which involves the evaporation of heated water from the external surface of the coolant tubing, saveing water 30%~50%, save electricity 10%~20%.

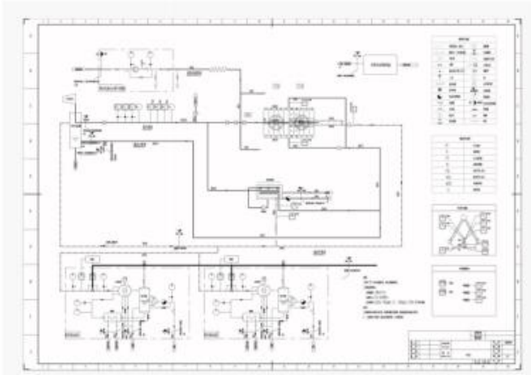
Compound-type Air Cooling Condensation System

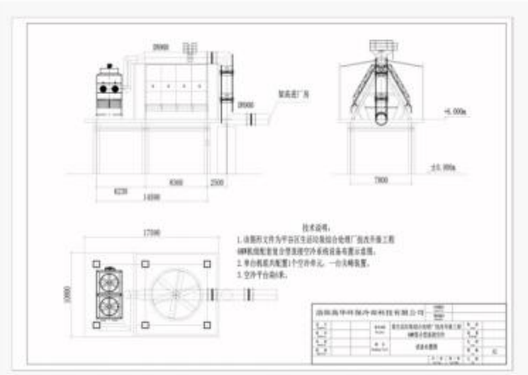
The partial tube bundle in the traditional direct air cooling system is replaced with an evaporative condenser. Mainly air-cooled heat exchangers, supplemented by evaporative condensers, to ensure power generation and operating back pressure in high-temperature environments in summer.

The exhaust steam of the steam turbine enters the air-cooled tube bundle and the evaporative condenser through the main exhaust pipe to condense, and the condensation water is collected in the condensation water tank and is sent through the regenerative system through condenser water pump for cycling. The non-condensable gas is discharged into the atmosphere by the vacuum system. The air cooling system has a condensing back pressure of 35Kpa in summer and an evaporative condensing back pressure of 8-15Kpa. The combination of the two can reduce the back pressure of the direct air cooling system by 5-15Kpa to ensure the power generation of the summer system.

Working Process







System Features

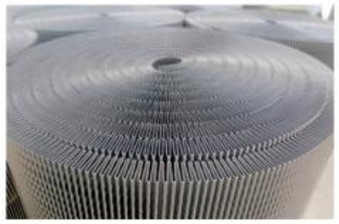
The single-row tube is brazed by a large flat tube rolled by a single-sided aluminum-clad plate and aluminum serpentine fins. The two are closely combined. The root has a large welding foot. The single-row tube controlled cooling tube bundle should have the following characteristics:

1.High heat transfer efficiency

The steam measuring area is large, the pressure loss is low, and it has a high heat transfer efficiency;
Aluminum fins are rolled and raised to increase the heat transfer area;
Enhance the degree of turbulence in the air circulation and enhance the heat exchange effect .

2.Strong corrosion resistance

The base tube and fins are completely covered by aluminum, which has good corrosion resistance after brazing



3.Good antifreeze effect

The section of the base pipe has a large aspect ratio, which reduces the supercooling of condensate and improves the antifreeze performance in winter operation

PRODUCT INTRODUCTION

OTHERS

Air Cooled Heat Exchanger

An air-cooled heat exchanger, or called air cooler, is an industrial heat exchanger that uses Ambient air as cooling medium, where the fan forces air cross the Finned pipes to cool the high-temperature processing medium within the pipes. The air cooler is mainly composed of three basic parts: tube bundle, fan and structure, and auxiliary parts like louver and platform handrails.

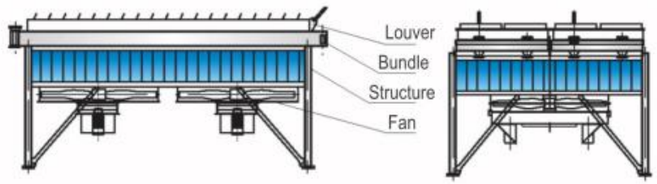
It uses natural air as cooling medium saving precious water, reducing the discharge of industrial wastewater and protecting the natural environment

Typically, an air-cooled heat exchanger for process use consists of a finned-tube bundle with rectangular box headers on both ends of the tubes. Cooling air is provided by one or more fans. Usually, the air blows upwards through a horizontal tube bundle. The fans can be either forced or induced draft, depending on whether the air is pushed or pulled through the tube bundle. The space between the fan(s) and the tube bundle is enclosed by a plenum chamber which directs the air. The whole assembly is usually mounted on legs or a piperack.

System Features

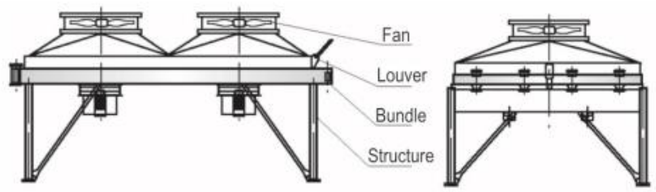
Forced-draft Horizontal Air Cooler

Forced-draft: The bundle is on the exhaust side of the fan to facilitate maintenance. The fan motor is always in cooler air to allow for treatment of high temperature processing medium and thus maintain a long service life.



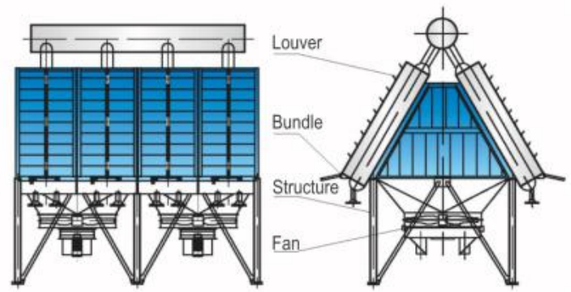
Induced-draft Horizontal Air Cooler

Induced-draft: The bundle is on the intake side of the fan. The induced-draft horizontal air cooler features a stable performance of heat exchange as the air duct isolates finned pipes from sunshine, wind rain and snow. It also has even air volume, slight thermal circulation, low loss and low noise.



Sloped-top Air Cooler

The bundle is set into an A shape.
It is compact, occupying a small area.
The resistance within the pipe is less than that of a horizontal cooler. Its antifreezing performance is also excellent.



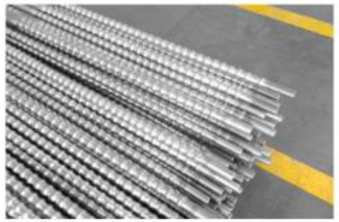
Parts

The cooling tower is mainly composed of fan, coil, circulating water pump, water distribution system, drift eliminator, and fill.The most common fans are direct-connected axial fans. There are three types coil can be choosed: finned coil, corrugated tube, and condensation coil. The function of the water distribution system is to improve the heat exchange effect, whose nozzle can be made of plastic nozzle or stainless steel. PVC fill is mostly used in the cross flow cooling towers. Drift eliminators can be made of PVC or FRP material, the most efficient cooling tower drift eliminators will keep your loss of drift to lower than 0.001% drift rate.

Product Features

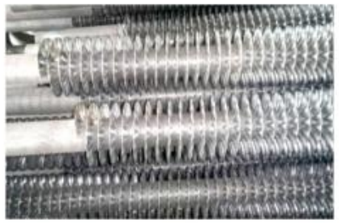
1. Corrugated Tube

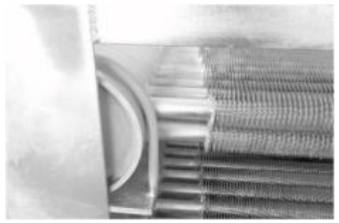
- High heat transfer efficiency
- Uniform stress distribution
- Strong corrosion resistance



2. Finned Tube

- Made of aluminum, steel or hot-dip galvanized steel.
- High heat transfer efficiency
- Simple maintenance and long service life





3. Axial Fan

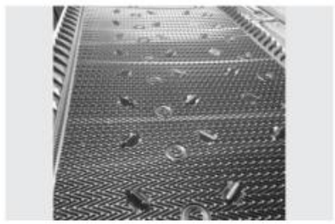
- Hollow aluminum alloy impeller
- Direct connection,low wind resistance, large air volume, low noise, good performance and high efficiency
- IP 55

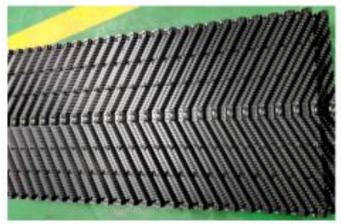
4. Circulating Water Pump

- Large flow, low head, low power
- German mechanical seal
- High-quality motor

5. PVC Filling

- High temperature resistance, good flame retardancy
- Low drag coefficient
- Anti-aging, anti-ultraviolet





6. Condensation Coil

- Hot-dip galvanized after fabrication
- Good corrosion resistance
- Easy to maintain

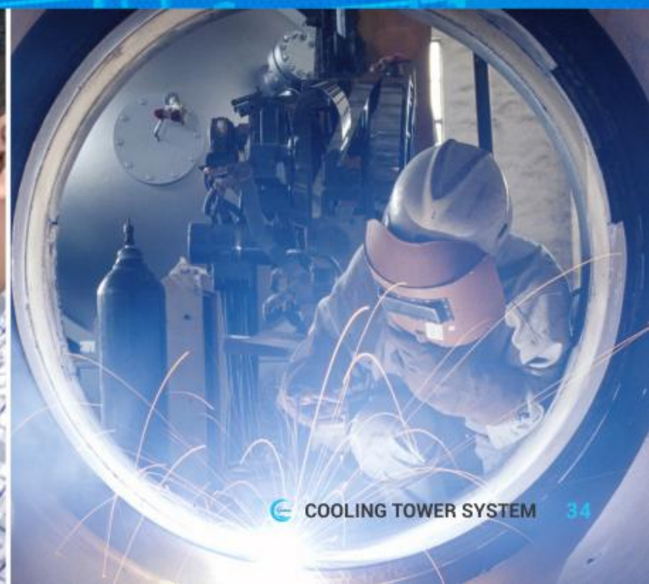
7. Drift Eliminator

- Polyvinyl chloride (PVC)
- Impervious to rot, decay, and biological attack
- Assembled in easy to handle sections

TECHNICAL SUPPORT AND SERVICE

We can provide anti-corrosion, renovation, repair, installation, diagnosis, after-sales, technical support services

In order to obtain the best use effect and the longest service life, the installation, commissioning, use and maintenance of the equipment are very important. Therefore, a reasonable set of maintenance testing procedures should be formulated, including equipment startup, operation, shutdown and maintenance cycle. If the operating environment is hard, the number of equipment maintenance should be appropriately increased. Only by fully understanding the equipment performance, function, etc. can inspection and maintenance be carried out. For every maintenance work, it must be carried out in strict accordance with the instruction manual.



COMPANY PROFILE

PROJECT CASES

With a strong refrigeration and thermal technology professional team, we are committed to providing our clients with competitive products, effective solutions and services, to continuously enhance customer's experience and create maximum value for them. Our main products are:,Evaporative condensers, evaporative cooler, close cooling tower, "air cooling + evaporative cooling" composite closed cooling system, anti-white mist efficient cooling system, etc.

Gaohua

YLGH 豫冷高华®

COOLING TOWER SYSTEM