



WANXIANG REFRIGERATION
LEADING HEAT TRANSFER



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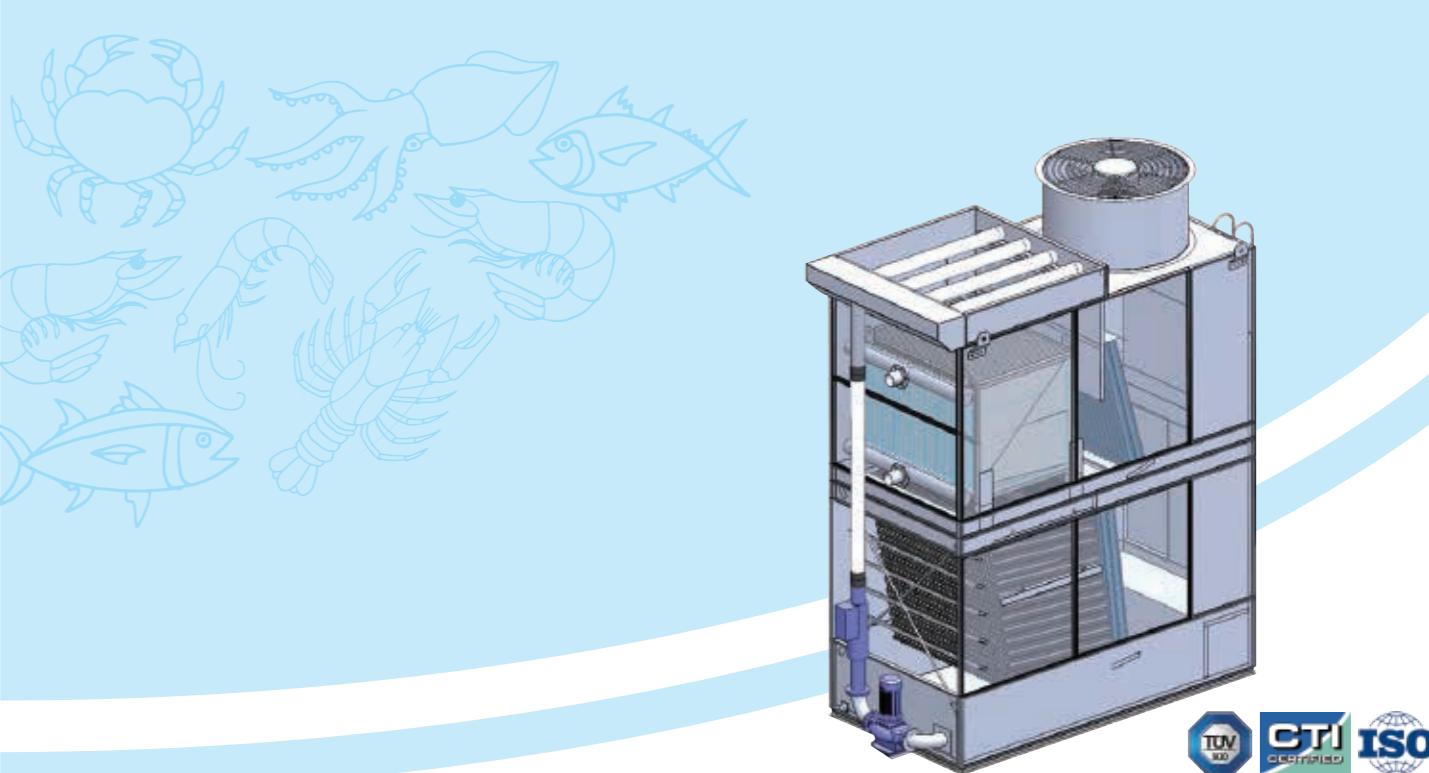
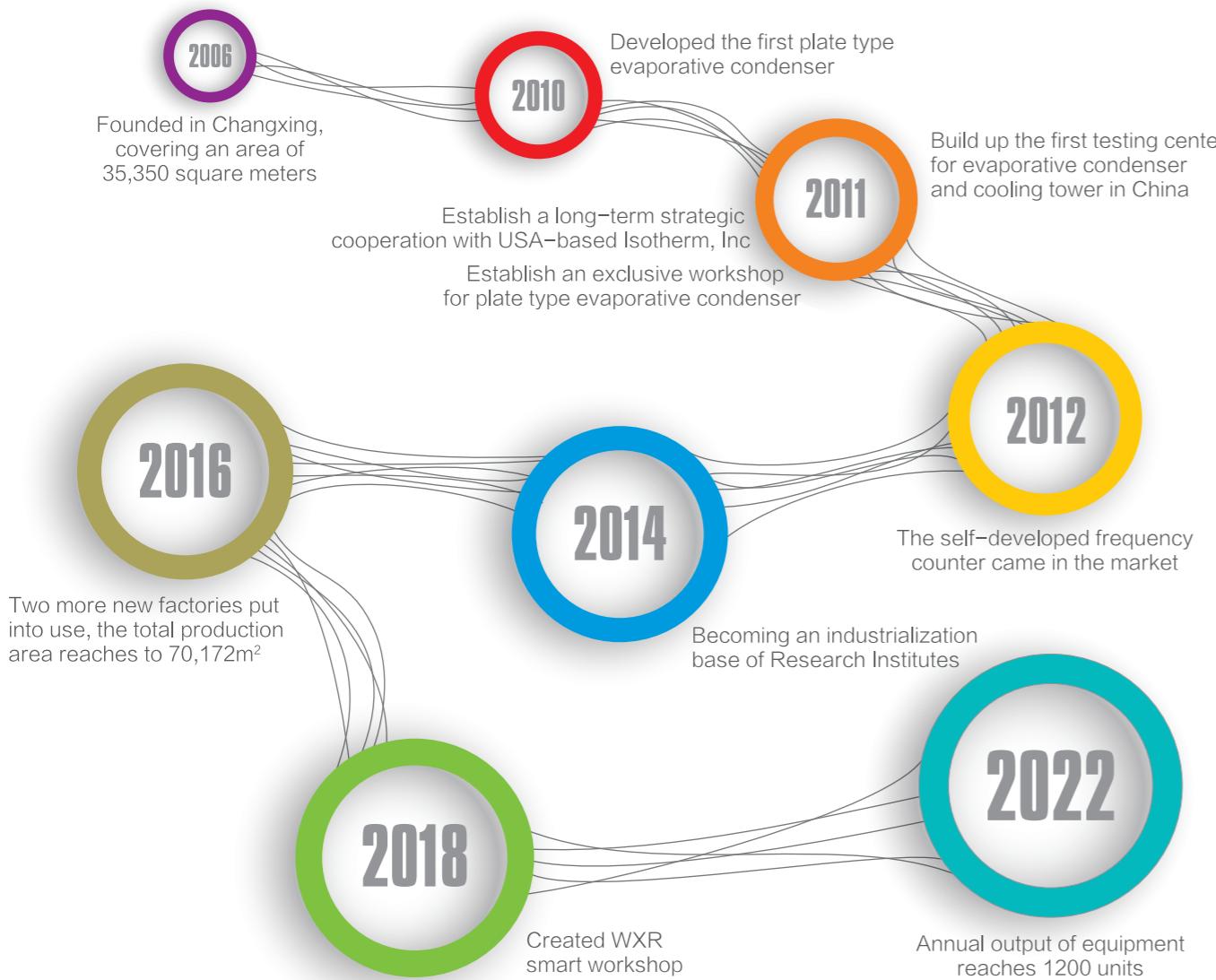
WANXIANG REFRIGERATION (SHANGHAI) CO., LTD.

COMPANY PROFILE

Wanxiang Refrigeration (Shanghai) Co., Ltd. is a leading company specializing in design, R&D and manufacture of refrigeration components & equipment. With a growing global presence, WXR mainly deals in a wide range of evaporative condensers, evaporators, closed cooling towers, integrated evaporative coolers and various kinds of industrial refrigeration products. There are more than 30 products series and over 300 different models.



HISTORY



Standards and Certifications

All standard WXR evaporative condenser and cooling tower can be independently certified by CE or CTI. This ensures published WXR evaporative condenser and cooling tower to accurately reflect actual thermal performance. In addition, WXR obtained the patent for invention patent utility model and passed the ISO9001-2008 for quality in China.



The Solution for Each Application

WXR offers comprehensive line of evaporative heat transfer equipment in the world. There are more than 30 products series and over 300 different models which enable us to provide our customers with optimized, energy efficient solutions to meet their specific application needs.

Research, Design and Engineering

Our design process is streamlined and systematic. It starts with the research of new technologies and ends in providing a quality product to the jobsite. Ongoing investment in research, combined with advanced R&D laboratory in the industry, enables WXR to consistently offer technologically advanced products to exceed both the industry standards and the needs of our customers.

One of the biggest Manufacturing Workshop in China
WXR's comprehensive production facility covers an area of over 70,172 square meters, and it is equipped with advanced production, processing and testing equipment. Our annual production capacity can reach more than 10,000 tons.



WXR Serviced Customers



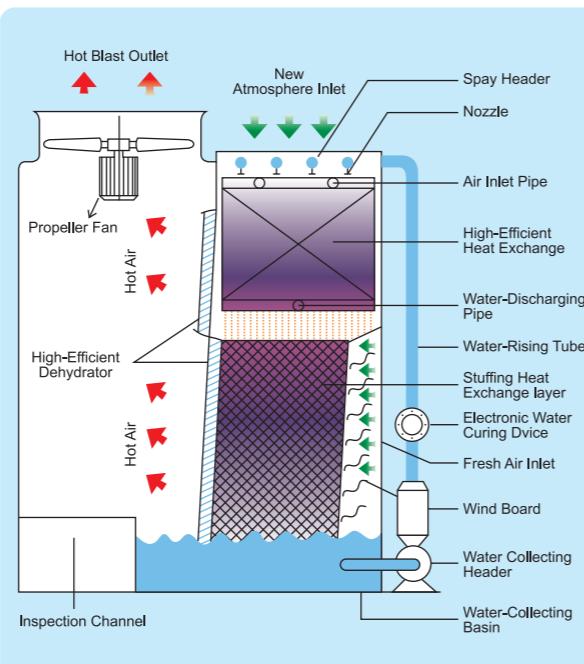
HIGH-EFFICIENT HEAT EXCHANGE EQUIPMENT

WXR MAIN PRODUCTS

- Plate evaporative condenser
- Coil evaporative condenser
- Closed circuit cooling tower
- Evaporator

Operation principle

WXRD/B Series Evaporative Condenser uses water and air as cooling medium. The cooling medium exchanges the heat with high-heat gaseous refrigerant medium and hence the refrigerant medium becomes liquid. Inside, there are water dispatching system, condensing coils/plates, wet padding heat exchange layer and dehydrator and so on. Outside, there are water circulating pump, an electronic water-curing device and propeller fans on the top of condensing coil/plate. The propeller fan strengthens the flow of the air and causes negative pressure inside. When the condenser works, the cooling water is sprayed from water dispatching system to the surface of condensing coils/plate equally to form a thin layer of water film. The high-heat steam of refrigerant medium enters from the top of condensing coil/plate and then the cooled liquid refrigerant medium is discharged from the bottom of the condensing coil/plate. During this process, high-heat refrigerant medium exchanges the heat with the water and air outside the coil/plate and increases the efficiency of medium exchange with the help of wind.



After absorbing the heat of refrigerant medium, some water turns into steam and is discharged by propeller fan. Meanwhile, the moisture in the air is collected by dehydrator to collecting basin, and then the non-gasified cooling water flows into heat exchange layer and its heat is taken away by the airflow. The cooled water converges in the basin to be used circularly by the pump later. In addition, there is a float valve in the basin. When the water is consumed to a certain point, the float valve will automatically open to replenish the cooling water.

HIGH QUALITY PARTS

Propeller Fan with High Strength Fiber Fan Blades



Dismountable Water Eliminator



Use Imported Galvanized Steel Sheet G235



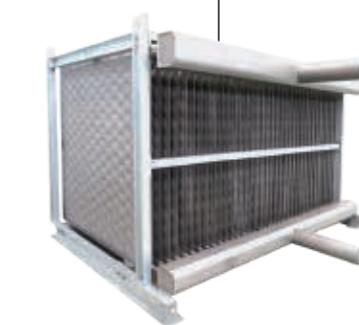
Advanced Water Dispatching System



Electronic Water-Curing Device



Water Circulating Pump



Condensing Plates



PVC Padding



WXRB PLATE EVAPORATIVE CONDENSER

WXRB Plate Evaporative Condenser is a kind of high-efficient heat exchange equipment which comes into being on the basis of absorbing the most advanced foreign heat-exchange technology.

ADVANTAGES

Excellent Heat Transfer Performance

Uniform rounded welding spots on plate continuously agitates the gas internally in the plate, The gas direction & speed continuously change and create strong turbulence causing a high heat transfer rate. Water is uniformly sprayed on the outside of the plate in the same directional flow of wind & water so that heat efficiency is increased.



footprint and construction cost.

Low Transportation Cost

Compact structure and small internal fulfill shipping requirements and reduced transportation cost.

Low Water Consumption

Water-spraying on plate creates a water film reducing water carry over without the use of eliminators. Side by side design of the plates reduces wind resistance therefore reducing fan motor power.

Energy Saving

Compact size results in lower transportation costs.



Convenient Cleaning & Maintenance

Every plate is vertically fixed making them easy to clean scaling by mechanical and chemical methods. Due to their stainless steel construction, resistance to chemical corrosion is minimized.



Low Refrigerant Charge

The plates have a uniform curved surface area, Condensed refrigerant falls directly to the bottom of the plate then drains out of the heat exchanger with sufficient sub cooling.

Low Construction Cost

Gas inlet and air inlet are on the same side allowing several condensers to be installed side by side to save

WXRD COIL EVAPORATIVE CONDENSER

Evaporative Condensers offer energy savings by providing lower system condensing temperatures than conventional air-cooled or water-cooled condensing systems.

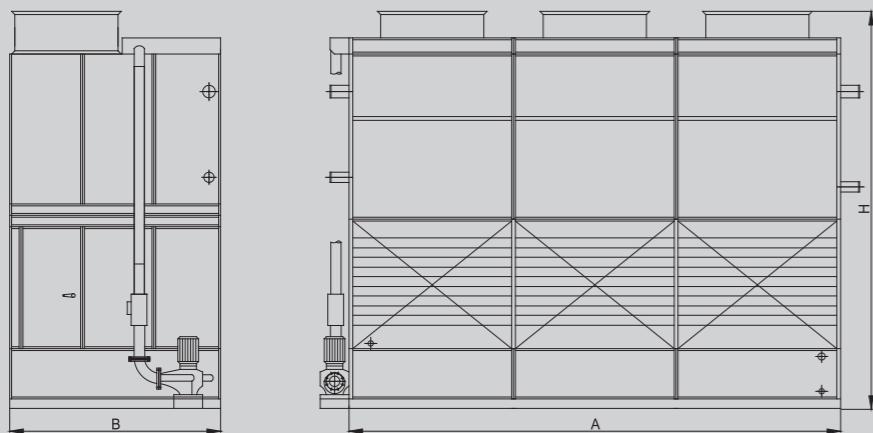


CLOSED CIRCUIT COOLING TOWER

Closed Circuit Cooling Tower uses a clean, closed loop. Internal circulation of the water is completely separated from its exterior environment to effectively prevent circulation of water pollutants and scales. This system avoids problems such as blockage loss, which ensures efficient operation of the main equipment, extends its service life and results in stable operation, reduces chances of faults occurring, improves production efficiency and reduces the overall maintenance cost.



WXR_B PLATE EVAPORATIVE CONDENSER



Technical data

Graph 1

Type	Nominal heat rejection	Propeller fan		Water circulating pump		Ammonia Charge	Weight		Dimension			
		Amount	kW	Unit	m ³ /h		kW	Flow rate	kW	Shipping kg	Operating kg	A mm
WXR _B -300B	300	1	1×52800	4.0	45	1.1	12.0	2050	3000	1265	2230	3935
WXR _B -400	400	1	1×62000	4.0	45	1.1	16.0	2350	3500	1575	2230	3935
WXR _B -500	500	1	1×62000	4.0	65	1.5	20.0	2660	4000	1825	2230	3935
WXR _B -600	600	1	1×62000	4.0	65	1.5	24.0	3000	4600	2155	2230	3935
WXR _B -700	700	1	1×74000	5.5	65	1.5	28.0	3300	5150	2435	2230	3935
WXR _B -800B	800	1	1×88000	7.5	100	2.2	32.0	4180	6150	3380	1625	3955
WXR _B -900B	900	1	1×90000	7.5	100	2.2	36.0	4500	6900	3610	1825	3955
WXR _B -1000	1000	2	2×62000	4.0	100	2.2	40.1	4800	7400	3170	2230	4175
WXR _B -1100	1100	2	2×62000	4.0	100	2.2	44.0	5100	7950	3420	2230	4175
WXR _B -1200	1200	2	2×74000	5.5	150	3.0	48.0	5400	8500	3670	2230	4175
WXR _B -1300	1300	2	2×74000	5.5	150	3.0	52.1	5750	9050	3900	2230	4175
WXR _B -1400	1400	2	2×74000	5.5	150	3.0	56.0	6050	9600	4130	2230	4175
WXR _B -1500	1500	3	3×62000	4.0	150	3.0	60.0	6950	10800	4665	2230	4175
WXR _B -1600	1600	3	3×62000	4.0	150	3.0	64.1	7250	11350	4915	2230	4175
WXR _B -1700	1700	3	3×62000	4.0	180	4.0	68.0	7600	11900	5165	2230	4175
WXR _B -1800	1800	3	3×74000	5.5	180	4.0	72.0	8050	12750	5415	2230	4175
WXR _B -1900	1900	3	3×74000	5.5	180	4.0	76.1	8400	13300	5645	2230	4175
WXR _B -2000	2000	3	3×74000	5.5	238	5.5	80.0	8750	13850	5875	2230	4175
WXR _B -2100	2100	3	3×74000	5.5	238	5.5	84.0	9050	14400	6205	2230	4175
WXR _B -2200	2200	4	4×62000	4.0	238	5.5	88.1	9900	15600	6760	2230	4175
WXR _B -2300	2300	4	4×62000	4.0	238	5.5	92.0	10250	16150	7010	2230	4175
WXR _B -2400	2400	4	4×62000	4.0	238	5.5	96.0	10550	16700	7260	2230	4175
WXR _B -2500	2500	4	4×74000	5.5	238	5.5	100.1	10850	17250	7490	2230	4175
WXR _B -2600	2600	4	4×74000	5.5	238	5.5	104.0	11160	17750	7720	2230	4175
WXR _B -2700	2700	4	4×74000	5.5	2×150	2×3.0	108.0	11500	18300	7950	2230	4175
WXR _B -2800	2800	4	4×74000	5.5	2×150	2×3.0	112.1	11800	18850	8180	2230	4175
WXR _B -2900	2900	5	5×62000	4.0	2×150	2×3.0	116.0	12800	20200	8755	2230	4175
WXR _B -3000	3000	5	5×62000	4.0	2×150	2×3.0	120.0	13000	20650	9005	2230	4175
WXR _B -3100	3100	5	5×74000	5.5	2×150	2×3.0	124.1	13350	21200	9235	2230	4175
WXR _B -3200	3200	5	5×74000	5.5	2×150	2×3.0	128.0	13650	21700	9465	2230	4175
WXR _B -3300	3300	5	5×74000	5.5	2×150	2×3.0	132.0	14000	22200	9695	2230	4175
WXR _B -3400	3400	5	5×74000	5.5	2×150	2×3.0	136.1	14250	22750	9925	2230	4175
WXR _B -3500	3500	5	5×74000	5.5	2×150	2×3.0	140.0	14600	23300	10155	2230	4175
WXR _B -3600	3600	6	6×62000	4.0	2×180	2×4.0	144.0	15500	24600	10750	2230	4175
WXR _B -3700	3700	6	6×74000	5.5	2×180	2×4.0	148.1	15800	25150	10980	2230	4175
WXR _B -3800	3800	6	6×74000	5.5	2×180	2×4.0	152.0	16250	25800	11210	2230	4175
WXR _B -3900	3900	6	6×74000	5.5	2×180	2×4.0	156.0	16550	26350	11440	2230	4175
WXR _B -4000	4000	6	6×74000	5.5	2×180	2×4.0	160.0	16900	26850	11670	2230	4175

Model selection

- Determine the required refrigerant, condensing temperature and wet bulb temperature.
- Calculate total heat rejection that goes through system to condenser.
- Refer to Graph 2 or Graph 3 to select correction factor.
- Multiply by correction factor.
- Look up Graph 1 and select model which one size up or equal.

For example

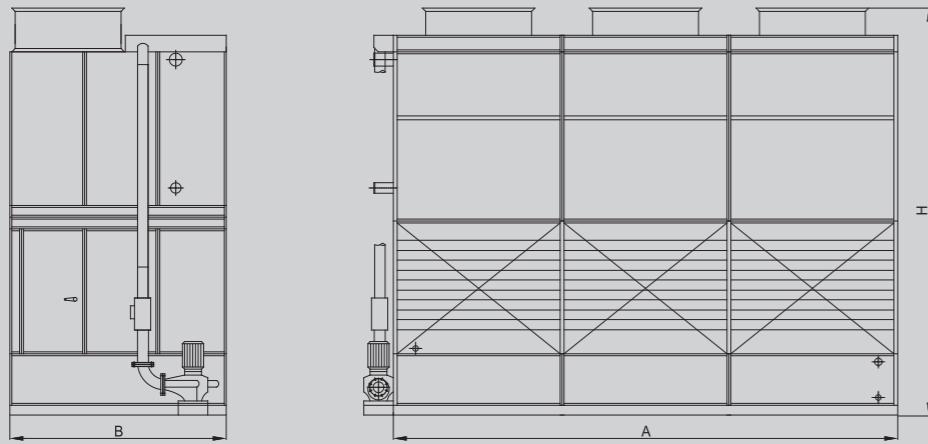
- Refrigerant R717, condensing temp. 36 degree, wet bulb temp. 29 degree.
- Total heat rejection 940kW.
(including compressor cooling capacity and shaft power)
- Refer to graph 2, the correction factor is 1.35.
- Calculate total load of condenser: 940kW*1.35=1269kW.
- Look up Graph 1, evaporative condenser WXR_B-1300 is larger than 1296kW.
Model WXR_B-1300 was selected.

Heat emission correction index for R717

Graph 2

Condensing temperature (°C)	Air inlet wet bulb temperature																			
	10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
29	0.72	0.78	0.86	0.96	1.01	1.09	1.18	1.30	1.43	1.60	1.84	2.16	2.66	-	-	-	-	-	-	-
30	0.68	0.73	0.81	0.88	0.94	1.00	1.07	1.15	1.27	1.40	1.59	1.79	2.13	-	-	-	-	-	-	-
31	0.64	0.68	0.74	0.82	0.86	0.91	0.97	1.04	1.12	1.22	1.36	1.52	1.74	2.06	-	-	-	-	-	-
32	0.61	0.65	0.69	0.74	0.80	0.84	0.89	0.95	1.02	1.10	1.20	1.34	1.49	1.70	2.02	-	-	-	-	-
33	0.57	0.61	0.65	0.70	0.73	0.78	0.82	0.87	0.92	0.99	1.07	1.16	1.29	1.45	1.66					

WXRD COIL EVAPORATIVE CONDENSER



Technical data

Graph 4

Type	Nominal heat rejection	Propeller fan		Water circulating pump		Ammonia charge	Weight		Dimension					
		Amount	kW	Unit	m³/h		kW	Flow rate	kW	kg	Shipping	Operating	A	B
WXRD-300B	300	1	1×52800	4.0	65	1.5	26	2020	3200	1624	2230	4235		
WXRD-400B	400	1	1×60000	5.5	65	1.5	31	2250	3670	1924	2230	4235		
WXRD-500B	500	1	1×60000	5.5	65	1.5	37	2560	4290	2308	2230	4235		
WXRD-600B	600	2	2×52800	4.0	100	2.2	44	3480	5510	2730	2230	4255		
WXRD-700B	700	2	2×52800	4.0	100	2.2	52	3800	6150	3170	2230	4255		
WXRD-800B	800	2	2×52800	4.0	100	2.2	60	3950	6410	3250	2230	4255		
WXRD-900B	900	2	2×60000	5.5	100	2.2	68	4560	7620	4030	2230	4255		
WXRD-1000B	1000	2	2×60000	5.5	150	3.0	73	4910	8270	4384	2230	4255		
WXRD-1100B	1100	2	2×60000	5.5	150	3.0	84	5240	8910	4850	2230	4255		
WXRD-1200B	1200	3	3×60000	5.5	150	3.0	92	6020	10000	5196	2230	4255		
WXRD-1300B	1300	3	3×60000	5.5	150	3.0	100	6340	10630	5616	2230	4255		
WXRD-1400B	1400	3	3×60000	5.5	180	4.0	108	6700	10680	5196	2230	5000		
WXRD-1500B	1500	3	3×60000	5.5	180	4.0	115	7020	11270	5616	2230	5000		
WXRD-1600B	1600	3	3×60000	5.5	180	4.0	123	7340	11860	5876	2230	5000		
WXRD-1700B	1700	3	3×60000	5.5	238	5.5	130	7800	12600	6206	2230	5000		
WXRD-1800B	1800	4	4×60000	5.5	238	5.5	137	8570	13640	6582	2230	5000		
WXRD-1900B	1900	4	4×60000	5.5	238	5.5	143	8890	14230	6942	2230	5000		
WXRD-2000B	2000	4	4×60000	5.5	238	5.5	145	9200	14810	7262	2230	5000		
WXRD-2100B	2100	4	4×60000	5.5	238	5.5	150	9520	15400	7622	2230	5000		
WXRD-2200B	2200	4	4×60000	5.5	238	5.5	159	9830	15990	7982	2230	5000		
WXRD-2300B	2300	4	4×60000	5.5	2150	2×3.0	168	10150	16580	8382	2230	5000		
WXRD-2400B	2400	5	5×60000	5.5	2150	2×3.0	170	10930	17630	8688	2230	5000		
WXRD-2500B	2500	5	5×60000	5.5	2150	2×3.0	178	11240	18220	9108	2230	5000		
WXRD-2600B	2600	5	5×60000	5.5	2150	2×3.0	183	11560	18810	9438	2230	5000		
WXRD-2700B	2700	5	5×60000	5.5	2150	2×3.0	187	11880	19400	9798	2230	5000		
WXRD-2800B	2800	5	5×60000	5.5	2150	2×3.0	190	12040	19700	9958	2230	5000		
WXRD-2900B	2900	6	6×60000	5.5	2180	2×4.0	193	12670	20460	10074	2230	5000		
WXRD-3000B	3000	6	6×60000	5.5	2180	2×4.0	205	13070	21130	10434	2230	5000		
WXRD-3100B	3100	6	6×60000	5.5	2180	2×4.0	217	13380	21720	10754	2230	5000		
WXRD-3200B	3200	6	6×60000	5.5	2180	2×4.0	233	14670	23720	5876	2230×2	5000		
WXRD-3400B	3400	6	6×60000	5.5	2238	2×5.5	239	15590	25820	6206	2230×2	5000		
WXRD-3600B	3600	8	8×60000	5.5	2238	2×5.5	260	17130	27270	6582	2230×2	5000		
WXRD-3800B	3800	8	8×60000	5.5	2238	2×5.5	286	17770	28450	6942	2230×2	5000		
WXRD-4000B	4000	8	8×60000	5.5	2238	2×5.5	290	18400	29620	7262	2230×2	5000		
WXRD-4200B	4200	8	8×60000	5.5	2238	2×5.5	300	19030	30800	7622	2230×2	5000		
WXRD-4400B	4400	8	8×60000	5.5	2238	2×5.5	318	19660	31980	7982	2230×2	5000		
WXRD-4600B	4600	8	8×60000	5.5	4×150	4×3.0	336	20300	33160	8382	2230×2	5000		
WXRD-4800B	4800	10	10×60000	5.5	4×150	4×3.0	340	21850	35260	8688	2230×2	5000		
WXRD-5000B	5000	10	10×60000	5.5	4×150	4×3.0	356	22480	36430	9108	2230×2	5000		
WXRD-5200B	5200	10	10×60000	5.5	4×150	4×3.0	374	23120	37620	9438	2230×2	5000		
WXRD-5600B	5600	10	10×60000	5.5	4×180	4×4.0	386	24080	39390	9958	2230×2	5000		
WXRD-5800B	5800	12	12×60000	5.5	4×180	4×4.0	410	25330	40910	10074	2230×2	5000		
WXRD-6000B	6000	12	12×60000	5.5	4×180	4×4.0	434	26130	42250	10434	2230×2	5000		
WXRD-6200B	6200	12	12×60000	5.5	4×180	4×4.0	466	26760	43430	10754	2230×2	5000		

Model selection

- Determine the required refrigerant, condensing temperature and wet bulb temperature.
- Calculate total heat rejection that goes through system to condenser.
- Refer to Graph 5 or Graph 6 to select correction factor.
- Multiply by correction factor.
- Look up Graph 4 and select model which one size up or equal.

For example

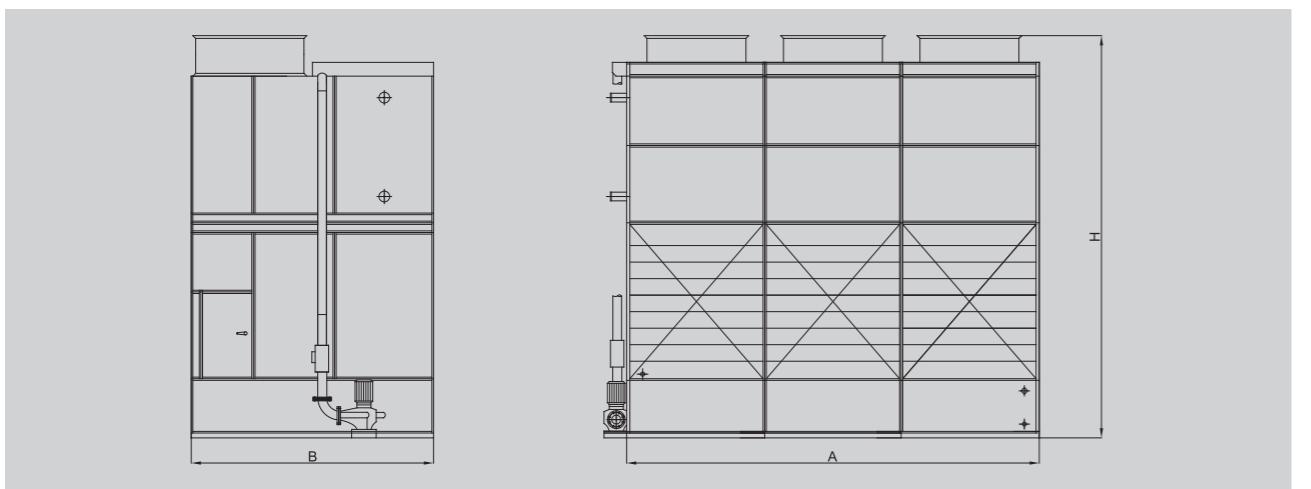
- Refrigerant R717, condensing temp. 36 degree, wet bulb temp. 29 degree.
- Total heat rejection 940kW.
(including compressor cooling capacity and shaft power)
- Refer to graph 5, the correction factor is 1.35.
- Calculate total load of condenser: $940\text{kW} \times 1.35 = 1269\text{kW}$.
- Look up Graph 4, evaporative condenser WXRD-1300B is larger than 1296kW.
Model WXRD-1300B was selected.

Heat emission correction index for R717

Graph 5

Condensing temperature (°C)	Air inlet wet bulb temperature												
	10	12	14	16	1								

WXC CLOSED CIRCUIT COOLING TOWER

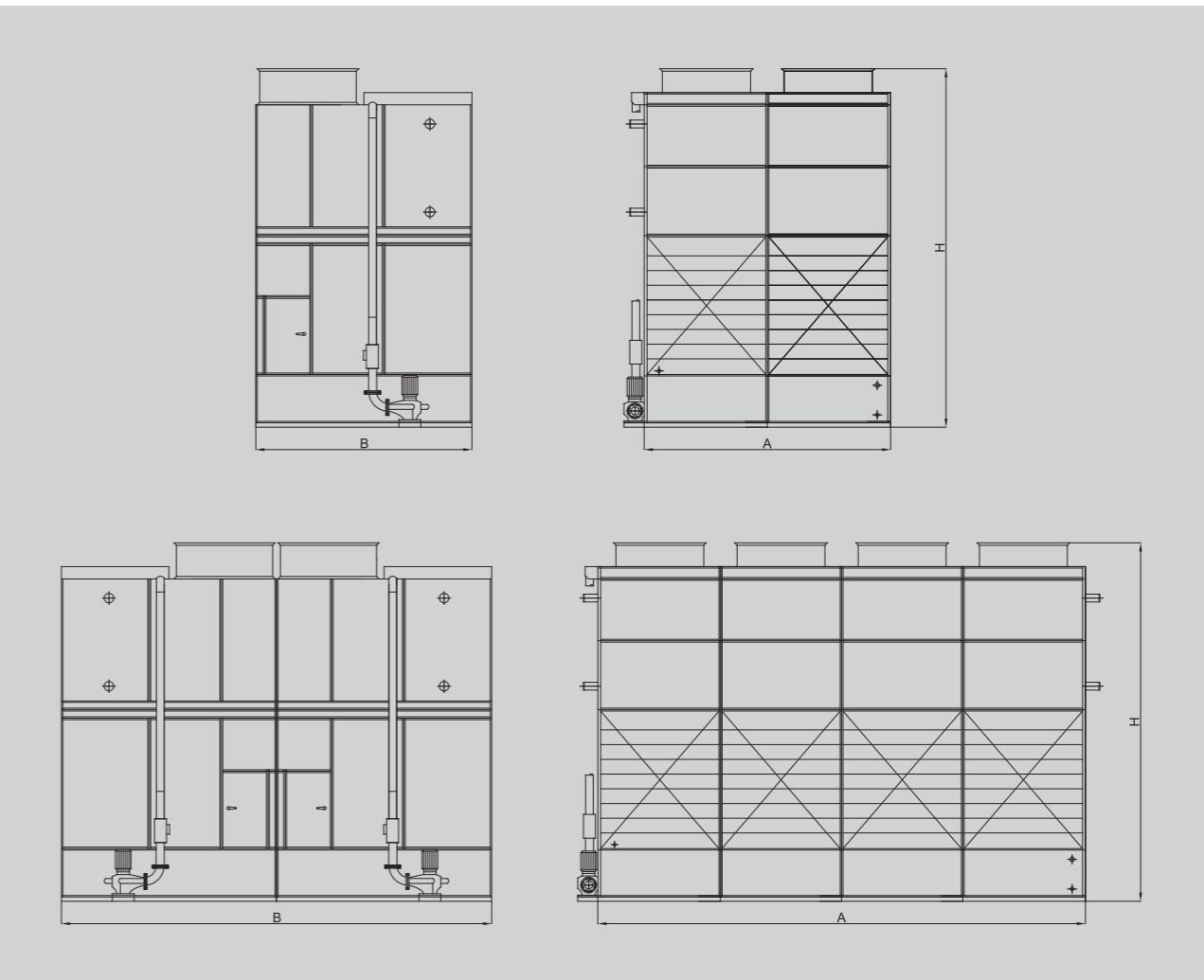


Technical data

Type	Nominal water flow m³/h	Propeller fan		Water circulating pump		Weight		Dimension			
		Amount Unit	Air flow rate m³/h	Power kW	Flow rate m³/h	Power kW	Shipping kg	Operating kg	A mm	B mm	H mm
WXC-036	36	1	1×52800	4.0	65	1.5	2020	3550	1624	2230	4235
WXC-048	48	1	1×60000	5.5	65	1.5	2250	4050	1924	2230	4235
WXC-059	59	1	1×60000	5.5	65	1.5	2560	4750	2308	2230	4235
WXC-063	63	2	2×52800	4.0	100	2.2	3480	5900	2730	2230	4255
WXC-073	73	2	2×52800	4.0	100	2.2	3850	6700	3170	2230	4700
WXC-077	77	2	2×52800	4.0	100	2.2	4000	7000	3250	2230	4700
WXC-105	105	2	2×60000	5.5	100	2.2	4650	8350	4030	2230	4700
WXC-116	116	2	2×60000	5.5	150	3.0	5000	9100	4384	2230	4700
WXC-127	127	2	2×60000	5.5	150	3.0	5350	9800	4850	2230	4700
WXC-137	137	3	3×60000	5.5	150	3.0	6000	10900	5196	2230	4700
WXC-148	148	3	3×60000	5.5	150	3.0	6340	11500	5616	2230	4700
WXC-156	156	3	3×60000	5.5	180	4.0	6650	12160	5876	2230	4700
WXC-166	166	3	3×60000	5.5	238	5.5	7200	13000	6206	2230	4700
WXC-175	175	4	4×60000	5.5	238	5.5	7700	13850	6582	2230	4700
WXC-185	185	4	4×60000	5.5	238	5.5	8000	14500	6942	2230	4700
WXC-194	194	4	4×60000	5.5	238	5.5	8250	15100	7262	2230	4700
WXC-204	204	4	4×60000	5.5	238	5.5	8550	15700	7622	2230	4700
WXC-215	215	4	4×60000	5.5	238	5.5	8850	16300	7982	2230	4700
WXC-223	223	4	4×60000	5.5	2×150	2×3.0	9050	16900	8382	2230	4700
WXC-233	233	5	5×60000	5.5	2×150	2×3.0	9650	17800	8688	2230	4700
WXC-243	243	5	5×60000	5.5	2×150	2×3.0	9910	18410	9108	2230	4700
WXC-252	252	5	5×60000	5.5	2×150	2×3.0	10200	19050	9438	2230	4700
WXC-262	262	5	5×60000	5.5	2×150	2×3.0	10500	19700	9798	2230	4700
WXC-267	267	5	5×60000	5.5	2×150	2×3.0	10650	19970	9958	2230	4700
WXC-271	271	6	6×60000	5.5	2×180	2×4.0	11100	20600	10074	2230	4700
WXC-281	281	6	6×60000	5.5	2×180	2×4.0	11450	21300	10434	2230	4700
WXC-291	291	6	6×60000	5.5	2×180	2×4.0	11750	21900	10754	2230	4700
WXC-312	312	6	6×60000	5.5	2×180	2×4.0	13300	24320	5876	2230×2	4700
WXC-332	332	6	6×60000	5.5	2×238	2×5.5	14400	26000	6206	2230×2	4700
WXC-351	351	8	8×60000	5.5	2×238	2×5.5	15400	27700	6582	2230×2	4700
WXC-370	370	8	8×60000	5.5	2×238	2×5.5	16000	29000	6942	2230×2	4700
WXC-389	389	8	8×60000	5.5	2×238	2×5.5	16500	30200	7262	2230×2	4700

Notes

1. Nominal flow rate is the cooling capacity of closed circuit cooling tower when wet bulb temperature is 28°C, inlet water temperature is 37°C, outlet water temperature is 32°C.
2. Data in table above maybe changes due to the innovation of technology, please refer to the latest details parameters provided by WXR.
3. WXC series closed circuit cooling tower including but not limit to the above models, please contact with us for other requirements.



Technical data

Type	Nominal water flow m³/h	Propeller fan			Water circulating pump		Weight		Dimension		
		Amount Unit	Air flow rate m³/h	Power kW	Flow rate m³/h	Power kW	Shipping kg	Operating kg	A mm	B mm	H mm
WXC-408	408	8	8×60000	5.5	2×238	2×5.5	17100	31400	7622	2230×2	4700
WXC-429	429	8	8×60000	5.5	2×238	2×5.5	17700	32600	7982	2230×2	4700
WXC-447	447	8	8×60000	5.5	4×150	4×3.0	18100	33800	8382	2230×2	4700
WXC-466	466	10	10×60000	5.5	4×150	4×3.0	19300	35600	8688	2230×2	4700
WXC-485	485	10	10×60000	5.5	4×150	4×3.0	19820	36820	9108	2230×2	4700
WXC-504	504	10	10×60000	5.5	4×150	4×3.0	20400	38100	9438	2230×2	4700
WXC-533	533	10	10×60000	5.5	4×180	4×4.0	21300	39940	9958	2230×2	4700
WXC-543	543	12	12×60000	5.5	4×180	4×4.0	22200	41200	10074	2230×2	4700
WXC-562	562	12	12×60000	5.5	4×180	4×4.0	22900	41600	10434	2230×2	4700
WXC-581	581	12	12×60000	5.5	4×180	4×4.0	23500	43800	10754	2230×2	4700

Notes

1. Above data is the final when publication, but updated constantly. Please kindly double check before purchase.
2. Any dimension required for pipe working, please contact with us.
3. Design condition: wet bulb temperature is 28°C, inlet water temperature is 37°C, outlet water temperature is 32°C.