EBARA

SERIES CLOSED
TYPE COOLING TOWER

EBARA- ALWAYS BENEFITING THE EARTH

EBARA REFRIGERATION EQUIPMENT & SYSTEMS（CHINA）CO.,LTD.

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EBARA
ALL AROUND THE WORLD

AN ENVIRONMENTAL FRIENDLY COMPREHENSIVE ENGINEERING COMPANY

Ebara All Around The World

EBARA Corporation

Ebara Corporation is one of the world's largest manufacturers of pumps, compressors, fans, heat pumps and other HVAC and refrigeration equipment. Since its establishment in 1912, Ebara Corporation has been fully dedicated to protecting the environment with a comprehensive and contemporary commitment. “Ebara-Always Benefiting the Earth” is the philosophy that guides Ebara corporate strategy.

ERSC Company Profile

EBARA refrigeration equipment & systems（china）co.,ltd. established in 1996, is the only overseas production base of Ebara Japan for manufacturing air conditioning equipment including absorption heat pumps, absorption chiller, centrifugal chiller (heat pump), screw chiller(heat pump), cross-flow (closed) type cooling tower, etc. Its products are exported to JAPAN and all over the world. ERSC always keep up with the products and technology development of Ebara Japan.

TRUST & EXPECTATION

BEYOND BOUNDARIES

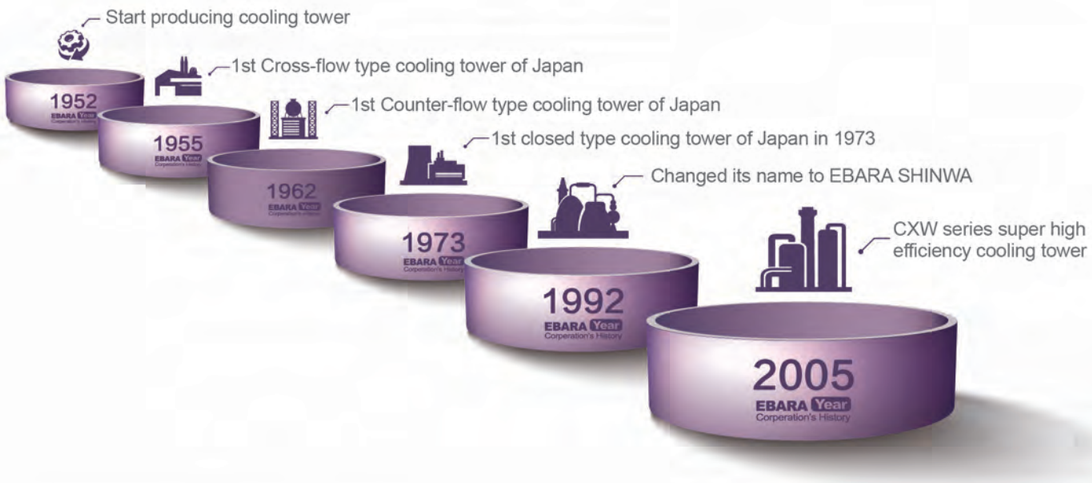
Product Development Mile Stones

1952
Start producing cooling tower in 1952. known as the Japan cooling tower industry's leading company

1989
1st Cross-flow type cooling tower of Japan in 1989

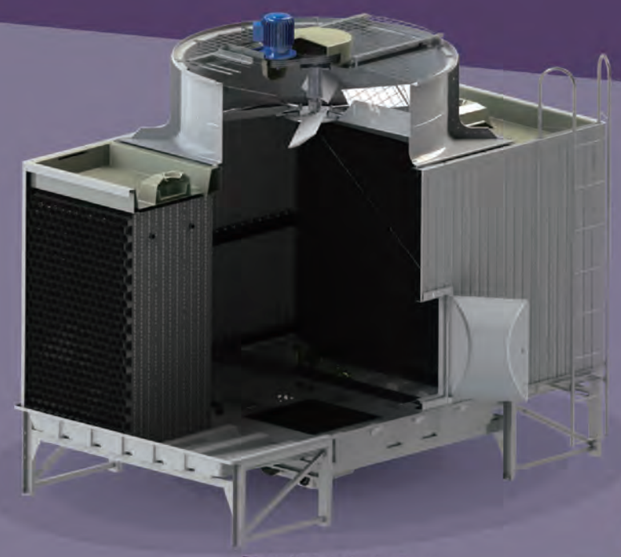
1973
1st closed type cooling tower of Japan in 1973

1999
CXW series super high efficiency cooling tower in 1999.



CXW PRODUCT FEATURES

Product Features

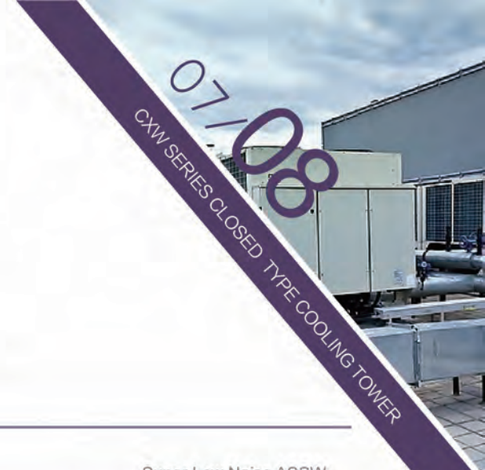


CDW Series Cooling Tower

High cooling water quality	Cooling water closed system, to make suer cooling water quality is higher, extend chiller life time
High Quality Filling	The filling is whole piece hanging design, and patented corrugated sheet, which can maximize the heat transfer efficiency of water and air, water floating rate is low.
Unique Water Distribution Structure	Gravity dropping type water distribution design, originated in the Ebara Japan Shinwa design, which can maximize the filling performance.
High Performance & Low Noise Axial Flow Fan System	The Axial flow fan is designed by Ebara Japan Shinwa advanced technology. Use the low noise motor specially designed from cooling tower, and combine with the belt driven system, realize the super low noise level.
High Efficient & Compact Belt Driven System	Use the SRS model belt driven system designed by Ebara Japan Shinwa unique technology, high efficiency. Durable V type belt and belt wheel, easy adjustment, high safety.
Short Construction Period	Each module can be made as a whole unit or split into two parts at factory.Cooling tower is designed as modules and easy for shipment and installation.
Simple Maintenance	The speed reduction belt wheel is 4 holes bushing design, easy dismounting for maintenance. Motor and speed reduction wheel gears are both original imported and maintenance free.

Nomenclature

CXW	-90	ASSW	×n
Square Closed Cooling Tower	Model	Low Noise	Module Quantity



CXW TECHNICAL DATA SHEET

Performance Data

Super Low Noise ASSW

Model(CXW-)	Cooling Water Flowrate (m³/h) W.B.28℃	W.B.27℃	Dimension L(mm	W(mm)	H(mm)	Head	Fan diameter mm	Motor input kW	Pump input kW	Net Weight kg	Operating Weight kg
CXW-90ASSW	90	102	4440	2350	2680	9.6	2100	5.5	2.2	1900	4400
CXW-100ASSW	100	114	4440	2350	3200	9.6	2100	7.5	3.7	2100	4710
CXW-110ASSW	110	125	4440	2350	3200	9.6	2100	7.5	3.7	2200	4780
CXW-120ASSW	120	136	4440	2450	3650	9.6	2200	7.5	4	2600	5550
CXW-130ASSW	130	148	4440	2450	3650	9.6	2200	11	4	2700	6000
CXW-140ASSW	140	159	4440	2450	3920	9.6	2200	11	4	2900	6500
CXW-150ASSW	150	171	4440	2450	4410	9.6	2200	11	4	3080	6770
CXW-160ASSW	160	182	4440	2450	4410	9.6	2200	11	4	3120	7200
CXW-90ASSW×n	90×n	102×n	4440	2350×n	2680	9.6	2100×n	5.5×n	2.2×n	1900×n	4400×n
CXW-100ASSW×n	100×n	114×n	4440	2350×n	3200	9.6	2100×n	7.5×n	3.7×n	2100×n	4710×n
CXW-110ASSW×n	110×n	125×n	4440	2350×n	3200	9.6	2100×n	7.5×n	3.7×n	2200×n	4780×n
CXW-120ASSW×n	120×n	136×n	4440	2450×n	3650	9.6	2200×n	7.5×n	4×n	2600×n	5550×n
CXW-130ASSW×n	130×n	148×n	4440	2450×n	3650	9.6	2200×n	11×n	4×n	2700×n	6000×n
CXW-140ASSW×n	140×n	159×n	4440	2450×n	3920	9.6	2200×n	11×n	4×n	2900×n	6500×n
CXW-150ASSW×n	150×n	171×n	4440	2450×n	4410	9.6	2200×n	11×n	4×n	3080×n	6770×n
CXW-160ASSW×n	160×n	182×n	4440	2450×n	4410	9.6	2200×n	11×n	4×n	3120×n	7200×n

Notes:
1. Standard design condition is inlet water temperature 37℃, outlet water temperature 32℃, outdoor wet bulb temperature 28℃.
2. The cooling tower is multi-module design, N means the quantity;
3. All module are water tank connected, to balance the water level;
4. Please contact with Ebara for non-standard design conditions.

Performance Data

Super Low Noise ASSW

Model(CXW-)	Cooling Water Flowrate (m³/h) W.B.28℃	W.B.27℃	Dimension L(mm	W(mm)	H(mm)	Head	Fan diameter mm	Motor input kW	Net Weight kg	Operating Weight kg
CXW-350ASSW	344	385	6470	4700	4650	9.6	4300	30	9000	18700
CXW-400ASSW	413	462	6470	4700	5310	9.6	4300	30	9400	19700
CXW-450ASSW	447	500	6470	4700	5640	9.6	4300	37	9700	20700
CXW-500ASSW	500	567	6470	4700	5640	13.7	4300	37	10000	22700
CXW-550ASSW	558	634	6470	4700	5640	19	4300	37	10300	25700
CXW-350ASSW×n	344×n	385×n	6470	4700×n	4650	9.6	4300×n	30×n	9000×n	18700×n
CXW-400ASSW×n	413×n	462×n	6470	4700×n	5310	9.6	4300×n	30×n	9400×n	19700×n
CXW-450ASSW×n	447×n	500×n	6470	4700×n	5640	9.6	4300×n	37×n	9700×n	20700×n
CXW-500ASSW×n	500×n	567×n	6470	4700×n	5640	13.7	4300×n	37×n	10000×n	22700×n
CXW-550ASSW×n	558×n	634×n	6470	4700×n	5640	19	4300×n	37×n	10300×n	25700×n

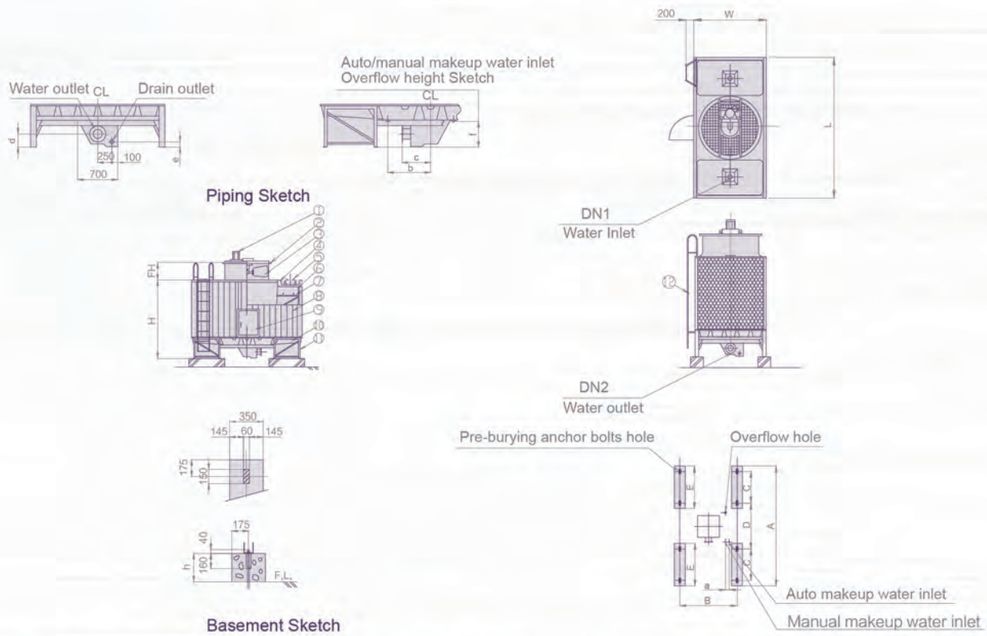
Notes:
1. Standard design condition is inlet water temperature 37℃, outlet water temperature 32℃, outdoor wet bulb temperature 28℃;
2. The cooling tower is multi-module design, N means the quantity;
3. All module are water tank connected, to balance the water level;
4. Please contact with Ebara for non-standard design conditions.

For special conditions, please fill in below table and consult Ebara

Inlet Water Temperature	℃		Set Condition	L: m	W: m / H: m
Outlet Water Temperature	℃		Noise Level	dB(A)	
Outdoor Wet Bulb Temperature	℃		Water Quality	from tap water, reclaimed water, industrial water	
Circulating Water Flowrate	m³/h		Application	Air conditioning use, industrial use, etc	
Power	Voltage: V	Frequency: Hz	Special Requirements		

CXW DIMENSION & FOUNDATION DRAWING

Dimension & Foundation

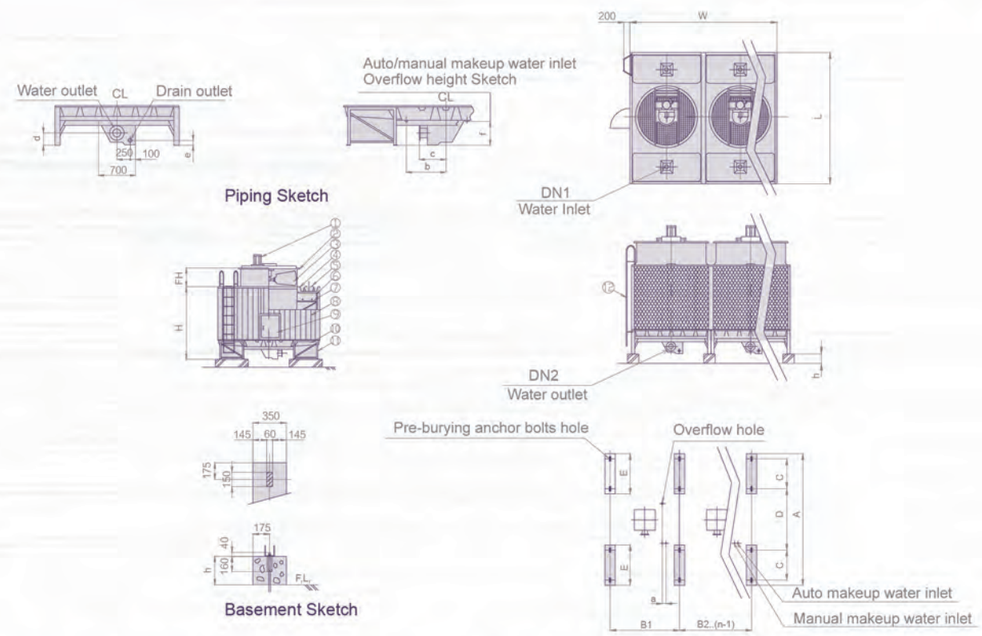


1.Motor 2.Fan shell 3.Fan 4.Upper bulk tank 5.Bulk tank 6.Frame 7.Filling
8.Shell plate 9.Maintenance door 10. Bottom bulk tank 11.Bottom frame 12.Ladder

CXW	W	H	A	B	C1	C2	D	E	F	DN1	DN2
180ASSW	4700	2680	1720	192	2250	2350	2300	2080	4470	125x2	125x2
200ASSW	4700	3200	1720	192	2250	2350	2300	2080	4470	125x2	125x2
220ASSW	4700	3200	1720	192	2250	2350	2300	2080	4470	125x2	125x2

Notes: 1.The Height of the basement depend on pipe distribution, margin is +/- 5mm;
2.The basement should be horizontal;
3.The basement can be steel structure according to the field conditions.

Dimension & Foundation



1.Motor 2.Fan shell 3.Fan 4.Upper bulk tank 5.Bulk tank 6.Frame 7.Filling
8.Shell plate 9.Maintenance door 10. Bottom bulk tank 11.Bottom frame 12.Ladder

CXW	W	H	A	B	C1	C2	D	E	F	DN1	DN2
120×2ASSW	4900	3650	1820	203.5	2350	2450	2400	2080	4510	150×2	150×2
130×2ASSW	4900	3650	1820	203.5	2350	2450	2400	2080	4510	150×2	150×2
140×2ASSW	4900	3920	1820	203.5	2350	2450	2400	2080	4510	150×2	150×2
150×2ASSW	4900	4410	1820	203.5	2350	2450	2400	2080	4510	150×2	150×2
160×2ASSW	4900	4410	1820	203.5	2350	2450	2400	2080	4510	150×2	150×2

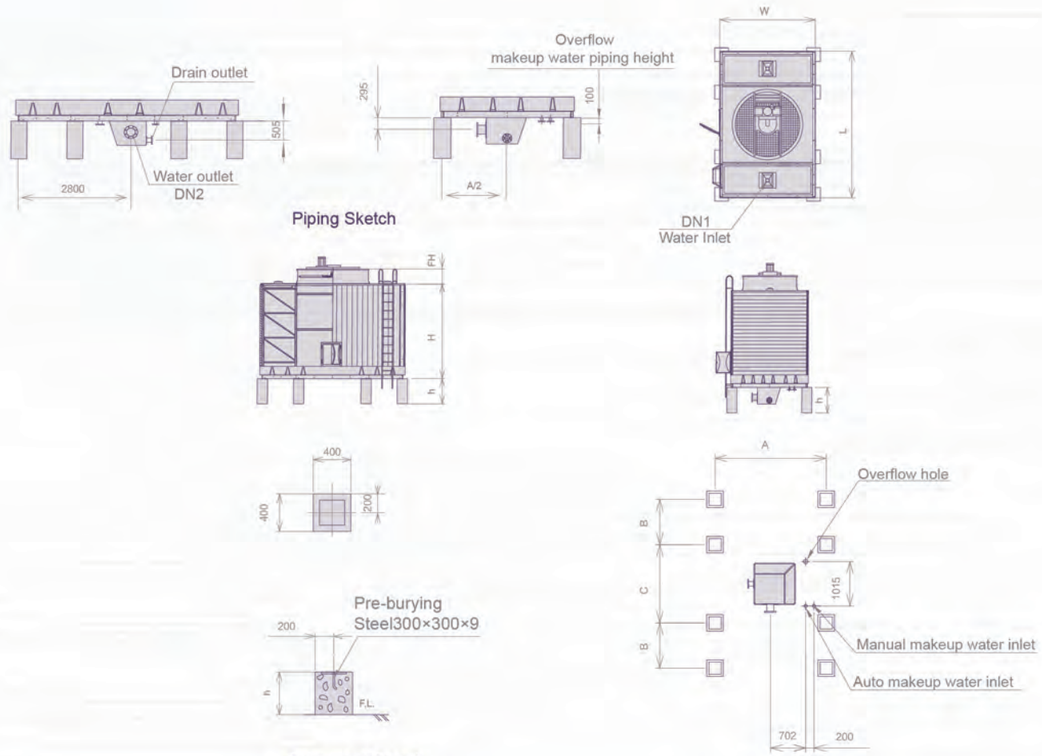
Notes: 1.The Height of the basement is depend on pipe distribution, margin is +/- 5mm;
2.The basement should be horizontal;
3.The basement can be steel structure according to the field conditions.

CXW

DIMENSION & FOUNDATION

DRAWING

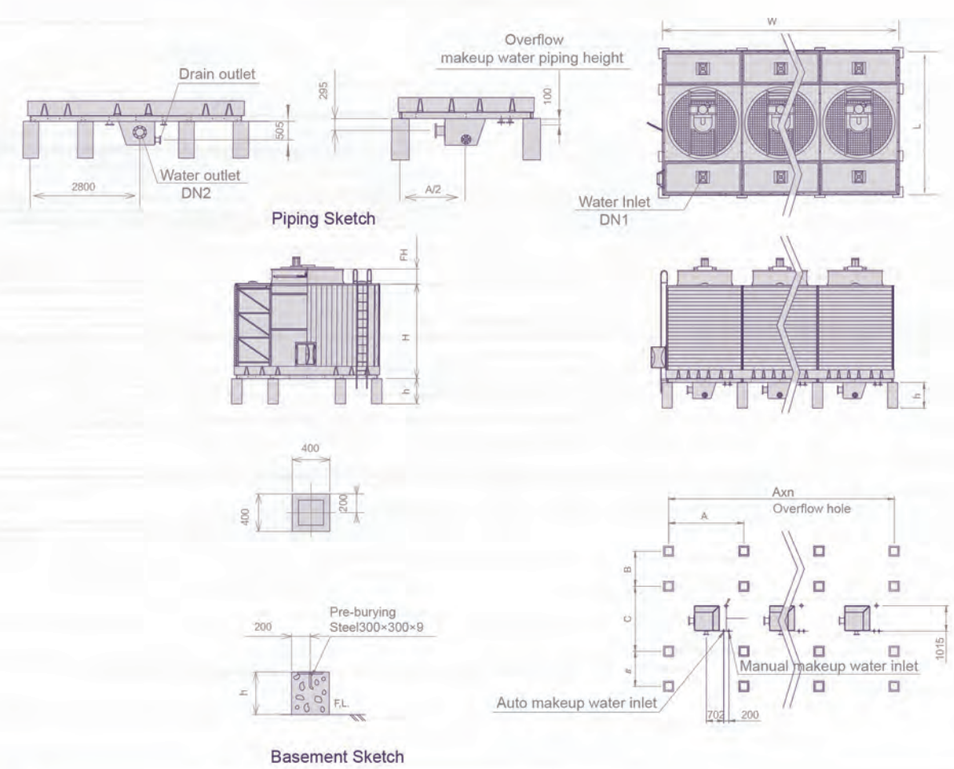
Dimension & Foundation



CXW	DN1	DN2	DN3	DN4	H	H1
350ASSW	150×2	150×2	150×4	200×2	4650	3810
400ASSW	150×2	150×2	150×4	200×2	5310	4470
450ASSW	200×2	200×2	150×4	200×2	5640	4800
500ASSW	200×2	200×2	150×4	200×2	5640	4800
550ASSW	200×2	200×2	150×4	200×2	5640	4800

Notes:
1.The basement should be horizontal;
2.The water outlet flange should be 1 MPa, other pipe connection is screw connection;
3.The height of the basement should be no less than 500mm plus the height of the water outlet,margin is +/- 5mm;
4.The basement can be steel structure according to the field conditions.

Dimension & Foundation



CXW	DN1	DN2	DN3	DN4	H	H1
350ASSW xn	150x2n	150x2n	150x4n	200x2n	4650	3810
400ASSW xn	150x2n	150x2n	150x4n	200x2n	5310	4470
450ASSW xn	200x2n	200x2n	150x4n	200x2n	5640	4800
500ASSW xn	200x2n	200x2n	150x4n	200x2n	5640	4800
550ASSW xn	200x2n	200x2n	150x4n	200x2n	5640	4800

Notes:
1.The basement should be horizontal;
2.The water outlet flange should be 1 MPa, other pipe connection is screw connection;
3.The height of the basement should be no less than 500mm plus the height of the water outlet,margin is +/- 5mm;
4.The basement can be steel structure according to the field conditions.

MATTERS NEEDING ATTENTION

Maintenance management

Part	Checking Item	Hour	Day	Week	Month	3 Months	6 Months	Year	Replacing Time
Fan	Damage, abrasion, deformation, degradation					—			
	Inspection of foreign body					—			
	Bolt's situation					—			
Shell	Damage, deformation, gap between of fans							—	
Bearing	Strange noise		—						
Belt	Belt's tightness				—				
	Abrasion				—				
Shell	Damage, deformation, pollution inspection							—	
Spry basin	Inspection for Water level. blockage of water hole		—						
※1	Inspection for damage and deformation					—			
Window-blinds	Inspection for foreign body, damage and degradation					—			
Fill	Inspection for fouling , residue					—			
	Inspection and cleaning of air holes							—	
Ball valve	Confirmation		—						
Water basin	Checking water level and makeup water		—						
※1	Leakage and clean				—				
Filter※1	Hole leakage		—						
	Clean					—			
Body frame	Inspection for corrosion & bolts situation							—	

Reference Of Water Quality

Item	Cooing water system		Chilled water system		Effect to chiller	
	Circulating water	Make-up water (below 20℃)	Circulating water	Make-up water	Corrosion	Scaling
[25℃]	6.5~8.0	6.0~8.0	6.8~8.0	6.8~8.0	—	—
[25℃](μS/cm)	800	200	400	300	—	—
Cl^-(mgCl^-/L)	200	50	50	50	—	
SO_4^{2-}(mg/L)	200	50	50	50	—	
[PH4.8] (mg$CaCO_3$ /L)	100	50	50	50		—
(mg$CaCO_3$/L)	200	70	70	70		—
(mg$CaCO_3$/L)	150	50	50	50		—
(mgSiO_2/L)	50	30	30	30		—

JOB REFERENCE

Job Reference

Beijing Benz Dalmlerchrysler Automotive Co.Ltd

ShouGang Group

Foxconn Group

The Beijing Olympic Games Shooting Range

Juneng Special Steel Co.Ltd

The Ministry Of Commerce Of The State Council Office Building

GAC-TOYOYA

Xi`an Xianyang International Airport

Beijing Dongzhimen hub project