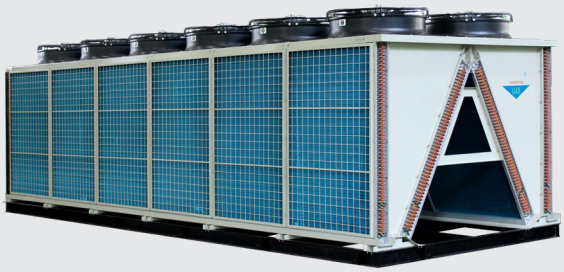
LIANHELENGRE
UAR

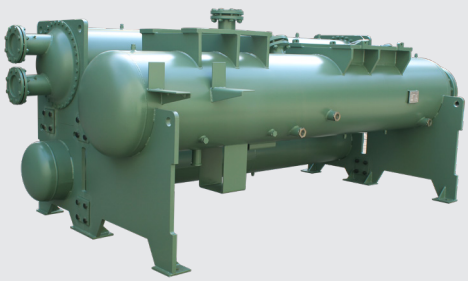
Guangzhou United A/C&R Co., Ltd.

H'Stars Group

Heat Exchangers
&
Pressure Vessels







Company Profile

Guangzhou United A/C & R Co., Ltd. is a foreign invested enterprise founded in 1996. Based in Guangzhou Economic & Technological Development District, it is an important member of H'Stars (Hong Kong) Group and a professional producer of heat exchangers and pressure vessels, with the capacity of designing and manufacturing a whole range of special equipment. The company has established itself as a leader in the industry with its long history and rich experience.

The Company is in possession of advanced processing equipment, including CNC machining center, CNC tube expander, automatic U tube bender, automatic tube opener, horizontal CNC automatic tube expander, and automatic welding machine, as well as qualifications for designing and manufacturing D1 and D2 pressure vessels. Building around the main business of heat exchangers, the company has gained recognition and support of the clients, created the UAR brand that enjoys high reputation in the trade, and established itself as a technical leader of heat exchangers.

Since its foundation, the company has been an ardent follower of the basic idea of "cooperation and win-win" and the core value of "make difference in the world". Supported by the highly reputed "UAR" brand and the honest and pragmatic attitude, the company has come a long way to become a highly integrated and specialized manufacturing enterprise that has independent intellectual property rights, and its own production base and industrial chain.

The company's main products include shell and tube condensers, dry-type evaporators, flooded evaporators, falling film evaporators, seawater evaporators and condensers, finned tube evaporators and condensers, water-to-water heat exchangers, steam condensers, and tanks. Having obtained CE and ASME certifications, and passed inspection by the quality control authority, our products are now on the procurement lists of many internationally renowned brands.

Products under "UAR" brand can be found in Europe, America, Asia, the Middle East and other regions and countries, in the industrial, commercial and agricultural sectors.



CONTENTS



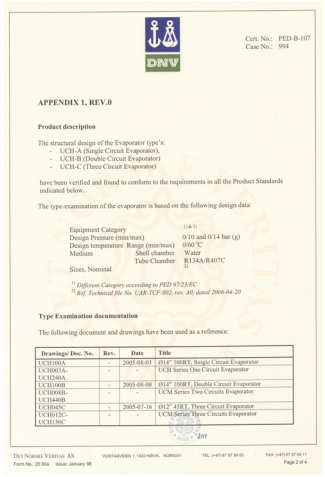


- Company Profile
- Shell and Tube Evaporator
- Shell and Tube Condenser
- Finned Tube Evaporator
- Shell and Tube Heat Exchanger Parameters
- Fin Heat Exchanger Parameters
- Fin Tube Exchanger
- Special Material Heat Exchanger Parameters
- Specialized Pressure Vessels
- Manufacturing Production Process
- Production Line Precision Equipment
- Tube Material Options

Quality, Value, and Legacy

- With a constant focus on the manufacturing of heat exchange equipment for more than 20 years, we have provided products and services for many international brands.
- UAR has the qualifications for designing and manufacturing pressure vessels, and 100% of our products have passed the national quality inspection.
- All products are produced according to national pressure vessel manufacturing standards and international ISO quality system.
- We have our own medium and large inspection stations All products are strictly tested to ensure compliance with design requirements.
- A variety of commonly used refrigerants are tested, and heat exchange tubes are selected according to the heat transfer coefficient of the refrigerant to ensure the quality of the heat exchanger.
- Working conditions of different clients are considered in selection of proper copper tubes to ensure service life of the equipment.

Qualifications and Honors


APPENDIX 1, REV.0

Product description

Type Examination documentation

UCH


DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

UCH


DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

UCM


DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

UCW


MANAGEMENT SYSTEM CERTIFICATE

Stars (Guangzhou) Refrigerating Equipment Manufacturing Co., Ltd.

ISO 14001:2004

ISO14000


Appendix 1 to Certificate

ISO14000


MANAGEMENT SYSTEM CERTIFICATE

Guangzhou United A/C & R Co., Ltd.

ISO 9001:2008/GB/T 19001-2008

ISO9000


MANAGEMENT SYSTEM CERTIFICATE

Guangzhou United A/C & R Co., Ltd.

ISO 9001:2008/GB/T 19001-2008

ASME

Shell and Tube Evaporator

Falling Film Evaporator

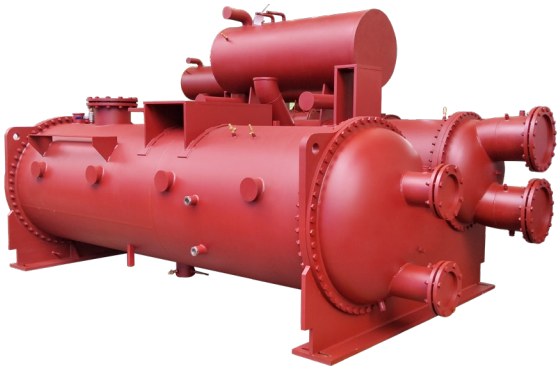
Liquid sprayed from above is to form a thin film on the surface of the heat exchange tube to obtain the best heat transfer effect.

The liquid separation and defoaming device is national patented.

With no superheat requirement of refrigerant vapor the evaporation temperature can be greatly increased.

Achieve 30% higher heat transfer coefficient and 35% less refrigerant charge volume than flooded evaporators.

Suitable for screw, centrifugal, magnetic bearing and other types of compressor.



Falling film evaporator

Flooded Evaporator

Adopted 1.1mm thickness heat exchange tube specially designed for flooded evaporators, and T-shaped spiral heat exchange tube greatly increases the heat exchange area.

The internal structure device has got a number of national patents.

The water passes through the heat exchange tube and the refrigerant flows in the shell; the gaseous refrigerant produced as the result of heat exchange between the liquid coolant and the liquid refrigerant will go directly into the compressor, which greatly improves the heat exchange efficiency.

Suitable for screw, centrifugal, magnetic bearing and other types of compressor. The difference between the outlet water temperature and the evaporation temperature is nearly 0, and the resistance along the way is small.



Flooded evaporator

Dry-type Evaporator

A traditional type evaporator, easy to control; the refrigerant evaporates in the tubes and the water cross flow in the shell.High efficiency internal and external grooved heat exchange tubes provide optimum heat exchange coefficient and service life.

Upgraded dry-type evaporator, using spiral baffle plate to create cross flow of water. Smaller in size and higher in heat exchange efficiency.

Workable with all types of compressor.



Dry-type evaporator

Shell and Tube Condenser

Large Tonage Condenser

The standard heat exchange tube adopts 1.1mm thickness high-efficiency tube with reinforcement on both sides to condense the high-temperature and high-pressure refrigerant in the refrigeration system into liquid, ensuring efficient operation of the whole unit.

Condenser is the only component in the refrigeration system that may bring in corrosive substances from the air.

The choice of material and thickness of heat exchange tube will directly affect the service life of the unit; and it shall be decided according to the working environment and operating conditions.

During nearly 30 years of designing and manufacturing in this field, numerous optimizations and innovations have been made on the internal structure, resulting in a number of national patents.



Small to Medium Tonnage Condenser





Finned Tube Heat Exchanger

Finned Heat Exchanger

The heat exchange tube adopts 9.52*0.3*0.17 internal grooved copper tube with extra thickness, and 0.12mm hydrophilic aluminum foil is used to make the fins.

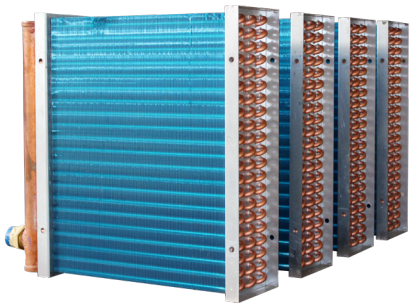
A whole range of automated equipment to process sheet metal, aluminum sheet, copper tube and bending operation reduce quality risk to the lowest possible level.

The use of long U tubes reduces the number of weld seams by 70% greatly decreased the leakage risk.

Optional fin types: Flat fin, corrugated fin, and louvered fin.

Optional fin shapes: plate fin, U fin, L fin, and O fin.

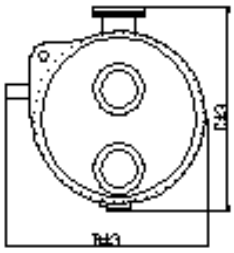
The perfect match of reasonable tube arrangement and face velocity maximizes the heat exchange capacity.

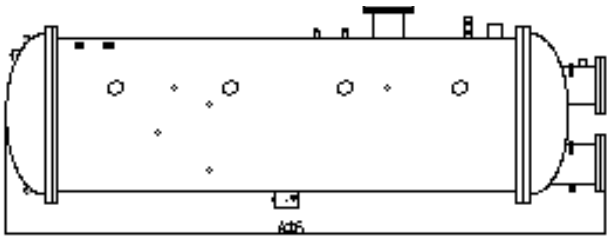




Shell and Tube Heat Exchanger Parameters

Falling Film Evaporator (Standard Type)





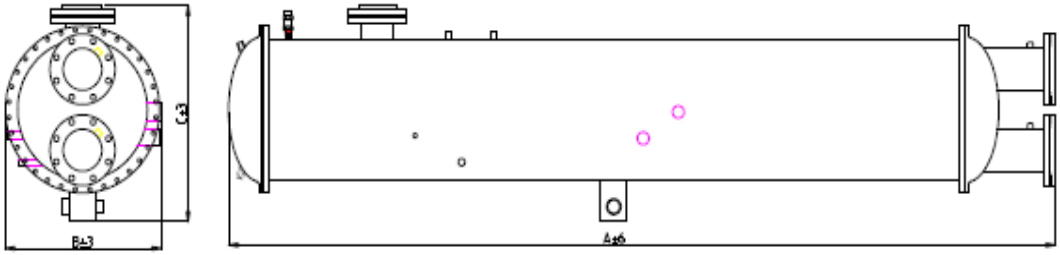
Heat exchanger model	Nominal heat exchange capacity (Unit: KW)		Water inlet/outlet (Unit: inch)	Refrigerant inlet (Unit: inch)	Refrigerant outlet (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: **mm**)	Weight (Unit: kg)
	R22/R404A	R134a							
UCP120A	422	338	4"	2"	4"	3467	720	880	800
UCP145A	510	408	4"	2"	4"	3467	720	880	820
UCP170A	598	478	5"	2"	4"	3467	720	880	850
UCP190A	668	535	5"	2–1/2"	5"	3518	850	978	1040
UCP220A	774	619	6"	2–1/2"	5"	3518	850	978	1100
UCP240A	844	675	6"	2–1/2"	5"	3518	900	978	1185
UCP255A	897	717	6"	2–1/2"	5"	4068	900	978	1220
UCP290A	1020	816	6"	2–1/2"	5"	4068	900	978	1240
UCP355A	1249	999	6"	2–1/2"	5"	4068	900	978	1296
UCP415A	1460	1168	8"	2–1/2"	5"	4068	920	990	1472
UCP480A	1688	1351	8"	2–1/2"	5"	4068	920	990	1998

Remarks:

1. Parameter of nominal heat exchange: evaporation temperature Te=4.5℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree of superheat 5℃ .
2. The refrigerant side max. allowable working pressure: 3.0MP, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
3. Water pressure drop less than 100KPa.
4. Customized materials or sizes are available upon request.
5. Any change of shape or size due to product improvement will not be further notified.

Shell and Tube Heat Exchanger Parameters (Continued)

Flooded Evaporator (Standard Type)



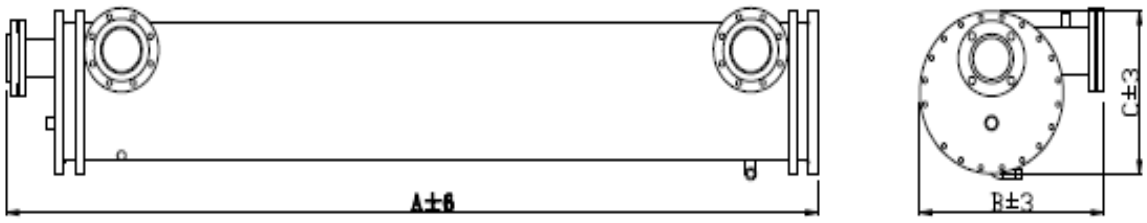
Heat exchanger model	Nominal heat exchange capacity (Unit：KW) R22/R134a/R404A	Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
UCM100A	352	4"	1–3/8",2–1/8"	4"	2837	540	540	617
UCM120A	422	5"	1–3/8",2–1/8"	4"	2837	600	600	630
UCM140A	492	5"	1–3/8",2–1/8"	4"	3446	600	600	767
UCM160A	563	5"	1–3/8",2–1/8"	5"	3446	600	600	791
UCM180A	633	5"	1–3/8",2–1/8"	5"	3446	600	600	815
UCM200A	703	6"	1–3/8",2–1/8"	5"	3446	660	660	798
UCM210A	739	6"	1–3/8",2–1/8"	5"	3446	660	660	810
UCM240A	844	6"	2–1/8",1–5/8"	5"	3446	660	660	844
UCM250A	879	6"	2–1/8",1–5/8"	6"	3446	660	660	856
UCM280A	985	8"	2–5/8",1–5/8"	6"	3446	710	710	903
UCM290A	1020	6"	2–1/8",1–5/8"	5"	3446	710	710	915
UCM310A	1090	8"	2–5/8",1–5/8"	8"	3992	660	660	1210
UCM340A	1196	8"	2–1/8",1–5/8"	8"	3992	710	710	1346
UCM360A	1266	8"	2–5/8",1–5/8"	8"	3992	710	710	1357
UCM390A	1372	8"	2–1/8",1–5/8"	8"	3992	710	710	1391
UCM420A	1477	8"	2–5/8",1–5/8"	8"	3992	710	710	1427
UCM470A	1653	8"	2–5/8",1–5/8"	8"	4492	830	830	1589
UCM580A	2040	8"	4"	6"	4492	930	930	1740
UCM680A	2392	8"	5"	8"	4492	980	980	1920

Remarks:

1. Parameter of nominal heat exchange: evaporation temperature Te=4.5 ℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree of superheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=5℃ , incoming water temperature Ti=15℃ , outgoing water temperature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Shell and Tube Heat Exchanger Parameters (Continued)

Dry-type Single-circuit Evaporator (Standard Type)



Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	**Weight** (Unit：kg)
	R22	R134a	R407C							
USH005A	18	14	16	1"	5/8 ″	7/8 ″	835	310	235	58
USH008A	28	23	25	1–1/2 ″	7/8 ″	1–3/8 ″	986	310	235	62
USH010A	35	28	32	2"	7/8"	1–3/8"	986	310	235	76
USH015A	49	39	44	2"	1–1/8"	1–5/8"	1286	310	235	105
USH020A	70	56	63	2"	1–3/8"	2–1/8"	1584	310	235	121
USH025A	88	70	79	2"	1–3/8"	2–1/8"	1834	310	235	136
USH030A	106	84	95	2–1/2"	1–3/8"	2–1/8"	1934	390	280	145
USH035A	123	98	111	2–1/2"	1–3/8"	2–1/8"	1934	390	280	154
USH040A	141	113	127	2–1/2"	1–3/8"	2–5/8"	1934	390	280	164
USH045A	158	127	142	2–1/2"	1–3/8"	2–5/8"	1934	390	280	175
UCH020A	70	56	63	2"	1–3/8"	2–1/8"	1934	390	280	151
UCH025A	88	70	79	2"	1–3/8"	2–1/8"	1934	390	280	157
UCH030A	106	84	95	2–1/2"	1–3/8"	2–1/8"	1934	390	280	163
UCH035A	123	98	111	2–1/2"	1–3/8"	2–1/8"	1934	390	280	169
UCH040A	141	113	127	2–1/2"	1–3/8"	2–5/8"	1934	420	340	226
UCH045A	158	127	142	2–1/2"	1–3/8"	2–5/8"	1934	420	340	232
UCH050A	176	141	158	2–1/2"	1–3/8"	2–1/8"	1934	420	340	238
UCH055A	193	155	174	2–1/2"	1–3/8"	2–1/8"	1934	420	340	244
USH050A	176	141	158	2–1/2"	1–3/8"	3"	2253	420	340	299
USH055A	193	155	174	2–1/2"	1–3/8"	3"	2253	420	340	311
USH060A	211	169	190	2–1/2"	1–3/8"	3"	2253	420	340	323
USH065A	229	183	206	3"	1–3/8"	3"	2653	420	340	328
USH070A	246	197	222	3"	1–3/8"	3"	2653	420	340	342
USH075A	264	211	237	3"	1–3/8"	3"	2653	420	340	354
USH080A	281	225	253	3"	1–3/8"	3"	2653	420	340	366
USH085A	299	239	269	3"	1–3/8"	3"	2653	420	340	370
UCH060A	211	169	190	2–1/2"	1–3/8"	3"	2653	420	340	300
UCH065A	229	183	206	3"	1–3/8"	3"	2653	420	340	312

Shell and Tube Heat Exchanger Parameters (Continued)

Dry-type Single-circuit Evaporator (Standard Type) (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UCH070A	246	197	222	3"	1-3/8"	3"	2653	420	340	324
UCH075A	264	211	237	3"	1-3/8"	3"	2653	560	390	336
UCH080A	281	225	253	3"	1-3/8"	3"	2653	560	390	348
UCH085A	299	239	269	3"	1-3/8"	3"	2653	560	390	360
UCH090A	317	253	285	4"	1-3/8"	4"	2653	560	390	372
UCH095A	334	267	301	4"	1-3/8"	4"	2653	560	390	384
UCH100A	352	281	317	4"	1-3/8"	4"	2653	560	390	396
UCH105A	369	295	332	4"	1-3/8"	4"	2653	560	390	408
UCH110A	387	309	348	4"	1-3/8"	4"	2653	560	390	420
USH090A	317	253	285	4"	1-3/8"	4"	2653	560	390	340
USH095A	334	267	301	4"	1-3/8"	4"	2653	560	390	352
USH100A	352	281	317	4"	1-3/8"	4"	2653	560	390	364
USH105A	369	295	332	4"	1-3/8"	4"	2653	560	390	376
USH110A	387	309	348	4"	1-3/8"	4"	2653	560	390	388
USH115A	404	324	364	4"	1-3/8"	4"	2653	570	420	400
USH120A	422	338	380	4"	1-3/8"	4"	2653	570	420	412
USH125A	440	352	396	4"	1-3/8"	4"	2653	570	420	424
USH130A	457	366	411	4"	1-3/8"	4"	2653	570	420	436
UCH115A	404	324	364	4"	1-3/8"	4"	2653	570	420	432
UCH120A	422	338	380	4"	1-3/8"	4"	2653	570	420	447
UCH125A	440	352	396	4"	1-3/8"	4"	2653	570	420	472
UCH130A	457	366	411	4"	1-3/8"	4"	2653	570	420	497
UCH135A	475	380	427	4"	1-3/8"	4"	2653	570	420	522
UCH140A	492	394	443	4"	1-3/8"	4"	2653	570	420	547
UCH145A	510	408	459	5"	1-3/8"	4"	2653	590	480	524
UCH150A	528	422	475	5"	1-3/8"	4"	2653	590	480	544
UCH155A	545	436	491	5"	1-3/8"	4"	2653	590	480	565
UCH160A	563	450	506	5"	1-3/8"	4"	2653	590	480	585
UCH165A	580	464	522	5"	1-5/8"	5"	2653	590	480	605
UCH170A	598	478	538	5"	1-5/8"	5"	2653	590	480	629
UCH180A	633	506	570	5"	1-5/8"	5"	3310	590	480	665
UCH185A	651	521	586	5"	1-5/8"	5"	3310	590	480	675
UCH190A	668	535	601	5"	1-5/8"	5"	3310	590	480	685
UCH195A	686	549	617	5"	1-5/8"	5"	3310	590	480	695
UCH200A	703	563	633	6"	1-5/8"	5"	3310	670	530	714
UCH205A	721	577	649	6"	1-5/8"	5"	3310	670	530	723
UCH210A	739	591	665	6"	1-5/8"	5"	3310	670	530	732

Shell and Tube Heat Exchanger Parameters (Continued)

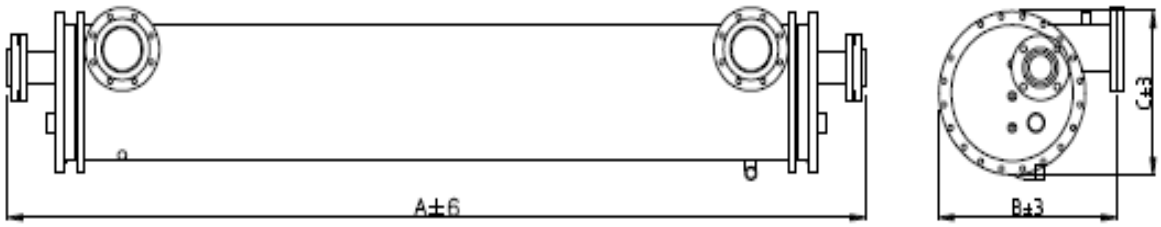
Dry-type Single-circuit Evaporator (Standard Type) (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UCH215A	756	605	681	6"	1–5/8"	5"	3310	670	530	741
UCH220A	774	619	696	6"	1–5/8"	5"	3310	670	530	750
UCH225A	791	633	712	6"	1–5/8"	5"	3310	670	530	759
UCH230A	809	647	728	6"	1–5/8"	5"	3310	670	530	768
UCH235A	826	661	744	6"	1–5/8"	5"	3310	670	530	777
UCH240A	844	675	760	6"	1–5/8"	5"	3310	670	530	786
UCH245A	862	689	775	6"	1–5/8"	5"	3310	670	530	795
UCH250A	879	703	791	6"	1–5/8"	5"	3310	670	530	804
UCH255A	897	717	807	6"	1–5/8"	5"	3310	670	530	813
UCH260A	914	732	823	6"	1–5/8"	6"	3310	700	590	924
UCH265A	932	746	839	6"	1–5/8"	6"	3310	700	590	937
UCH270A	950	760	855	6"	1–5/8"	6"	3310	700	590	950
UCH275A	967	774	870	6"	1–5/8"	6"	3310	700	590	963
UCH280A	985	788	886	6"	1–5/8"	6"	3310	700	590	976
UCH285A	1002	802	902	6"	1–5/8"	6"	3310	700	590	989
UCH290A	1020	816	918	6"	1–5/8"	6"	3310	700	590	1002
UCH295A	1038	830	934	6"	1–5/8"	6"	3310	700	590	1015
UCH300A	1055	844	950	6"	1–5/8"	6"	3310	700	590	1028
UCH310A	1090	872	981	6"	1–5/8"	6"	3310	700	590	1054
UCH320A	1125	900	1013	6"	1–5/8"	6"	3310	700	590	1080
UCH330A	1161	928	1045	8"	1–5/8"	6"	3850	730	650	1127
UCH340A	1196	957	1076	8"	1–5/8"	6"	3850	730	650	1144
UCH350A	1231	985	1108	8"	1–5/8"	6"	3850	730	650	1161
UCH360A	1266	1013	1140	8"	1–5/8"	6"	3850	730	650	1178
UCH370A	1301	1041	1171	8"	1–5/8"	6"	3850	730	650	1195
UCH380A	1336	1069	1203	8"	1–5/8"	6"	3850	730	650	1212
UCH390A	1372	1097	1234	8"	1–5/8"	6"	3850	750	710	1284
UCH400A	1407	1125	1266	8"	1–5/8"	6"	3850	750	710	1303
UCH410A	1442	1154	1298	8"	1–5/8"	6"	3850	750	710	1320
UCH420A	1477	1182	1329	8"	1–5/8"	6"	3850	750	710	1337
UCH430A	1512	1210	1361	8"	1–5/8"	6"	3850	750	710	1354
UCH440A	1547	1238	1393	8"	1–5/8"	6"	3850	750	710	1371
UCH450A	1583	1266	1424	8"	1–5/8"	6"	3850	750	710	1388

Remarks:
1. Parameter of nominal heat exchange: evaporation temperature Te=2 ℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degreeof superheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=3 ℃ , incoming water temperature Ti=15℃ , outgoing water temperature To=8 ℃ , degreeof superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Shell and Tube Heat Exchanger Parameters (Continued)

Dry-type Double-circuit Evaporator (Standard Type)



Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USH016B	56	45	51	2 ″	7/8 ″	1–3/8 ″	1386	310	235	105
USH020B	70	56	63	2"	7/8 ″	1–3/8 ″	1684	310	235	121
USH030B	106	84	95	2–1/2"	1–1/8"	1–5/8"	1684	310	235	136
USH035B	123	98	111	2–1/2"	1–1/8"	2–1/8"	2034	390	280	154
USH040B	141	113	127	2–1/2"	1–3/8"	2–1/8"	2034	390	280	164
USH045B	158	127	142	2–1/2"	1–3/8"	2–1/8"	2034	390	280	175
USH050B	176	141	158	2–1/2"	1–3/8"	2–1/8"	2353	420	340	299
USH055B	193	155	174	2–1/2"	1–3/8"	2–1/8"	2353	420	340	311
USH060B	211	169	190	2–1/2"	1–3/8"	2–1/8"	2353	420	340	323
UCH055B	193	155	174	2–1/2"	1–3/8"	2–1/8"	2353	560	390	294
UCH060B	211	169	190	2–1/2"	1–3/8"	2–1/8"	2353	560	390	300
UCH065B	229	183	206	3"	1–3/8"	2–1/8"	2353	560	390	307
UCH070B	246	197	222	3"	1–3/8"	2–1/8"	2353	560	390	314
USH065B	229	183	206	3"	1–3/8"	2–1/8"	2753	420	340	336
USH070B	246	197	222	3"	1–3/8"	2–1/8"	2753	420	340	342
USH075B	264	211	237	3"	1–3/8"	2–1/8"	2753	420	340	354
USH080B	281	225	253	3"	1–3/8"	2–1/8"	2753	420	340	366
USH085B	299	239	269	3"	1–3/8"	2–1/8"	2753	420	340	370
USH090B	317	253	285	4"	1–3/8"	3"	2753	560	390	340
USH095B	334	267	301	4"	1–3/8"	3"	2753	560	390	352
USH100B	352	281	317	4"	1–3/8"	3"	2753	560	390	364
USH105B	369	295	332	4"	1–3/8"	3"	2753	560	390	376
USH110B	387	309	348	4"	1–3/8"	3"	2753	560	390	388
UCH075B	264	211	237	3"	1–3/8"	2–1/8"	2753	560	390	336
UCH080B	281	225	253	3"	1–3/8"	2–1/8"	2753	560	390	348
UCH085B	299	239	269	3"	1–3/8"	2–1/8"	2753	560	390	360
UCH090B	317	253	285	4"	1–3/8"	3"	2753	560	390	372
UCH095B	334	267	301	4"	1–3/8"	3"	2753	560	390	384
UCH100B	352	281	317	4"	1–3/8"	3"	2753	560	390	396

Shell and Tube Heat Exchanger Parameters (Continued)

Dry-type Double-circuit Evaporator (Standard Type) (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UCH105B	369	295	332	4"	1–3/8"	3"	2753	560	390	408
UCH110B	387	309	348	4"	1–3/8"	3"	2753	560	390	420
USH115B	404	324	364	4"	1–3/8"	3"	2753	570	420	400
USH120B	422	338	380	4"	1–3/8"	3"	2753	570	420	412
USH125B	440	352	396	4"	1–3/8"	3"	2753	570	420	424
USH130B	457	366	411	4"	1–3/8"	3"	2753	570	420	436
UCH115B	404	324	364	4"	1–3/8"	3"	2753	570	420	432
UCH120B	422	338	380	4"	1–3/8"	3"	2753	570	420	447
UCH125B	440	352	396	4"	1–3/8"	3"	2753	570	420	472
UCH130B	457	366	411	4"	1–3/8"	3"	2753	570	420	497
UCH135B	475	380	427	4"	1–3/8"	3"	2753	570	420	522
UCH140B	492	394	443	4"	1–3/8"	3"	2753	570	420	547
UCH145B	510	408	459	5"	1–3/8"	3"	2803	590	480	524
UCH150B	528	422	475	5"	1–3/8"	3"	2803	590	480	544
UCH155B	545	436	491	5"	1–3/8"	3"	2803	590	480	565
UCH160B	563	450	506	5"	1–3/8"	3"	2803	590	480	585
UCH165B	580	464	522	5"	1–3/8"	3"	2803	590	480	605
UCH170B	598	478	538	5"	1–3/8"	3"	2803	590	480	629
UCH175B	615	492	554	5"	1–3/8"	4"	3460	590	480	655
UCH180B	633	506	570	5"	1–3/8"	4"	3460	590	480	665
UCH185B	651	521	586	5"	1–3/8"	4"	3460	590	480	675
UCH190B	668	535	601	5"	1–3/8"	4"	3460	590	480	685
UCH195B	686	549	617	5"	1–3/8"	4"	3460	590	480	695
UCH200B	703	563	633	6"	1–3/8"	4"	3460	670	530	714
UCH205B	721	577	649	6"	1–3/8"	4"	3460	670	530	723
UCH210B	739	591	665	6"	1–3/8"	4"	3460	670	530	732
UCH215B	756	605	681	6"	1–3/8"	4"	3460	670	530	741
UCH220B	774	619	696	6"	1–3/8"	4"	3460	670	530	750
UCH225B	791	633	712	6"	1–3/8"	4"	3460	670	530	759
UCH230B	809	647	728	6"	1–3/8"	4"	3460	670	530	768
UCH235B	826	661	744	6"	1–3/8"	4"	3460	670	530	777
UCH240B	844	675	760	6"	1–3/8"	4"	3460	670	530	786
UCH245B	862	689	775	6"	1–3/8"	4"	3460	670	530	795
UCH250B	879	703	791	6"	1–3/8"	4"	3460	670	530	804
UCH255B	897	717	807	6"	1–3/8"	4"	3460	670	530	813
UCH260B	914	732	823	6"	1–3/8"	4"	3460	700	590	924

Shell and Tube Heat Exchanger Parameters (continued)

Dry-type Double-circuit Evaporator (Standard Type) (continued)

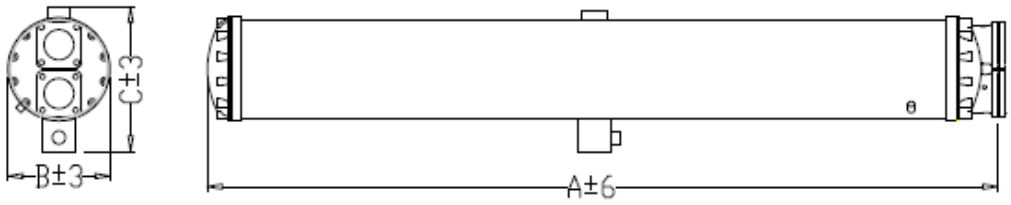
Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UCH265B	932	746	839	6"	1–3/8"	4"	3460	700	590	937
UCH270B	950	760	855	6"	1–3/8"	4"	3460	700	590	950
UCH275B	967	774	870	6"	1–3/8"	4"	3460	700	590	963
UCH280B	985	788	886	6"	1–3/8"	4"	3460	700	590	976
UCH285B	1002	802	902	6"	1–3/8"	4"	3460	700	590	989
UCH290B	1020	816	918	6"	1–3/8"	4"	3460	700	590	1002
UCH295B	1038	830	934	6"	1–3/8"	4"	3460	700	590	1015
UCH300B	1055	844	950	6"	1–3/8"	4"	3460	700	590	1028
UCH305B	1073	858	965	6"	1–3/8"	4"	3460	700	590	1041
UCH310B	1090	872	981	6"	1–3/8"	4"	3460	700	590	1054
UCH315B	1108	886	997	6"	1–3/8"	4"	3460	700	590	1067
UCH320B	1125	900	1013	6"	1–3/8"	4"	3460	700	590	1080
UCH330B	1161	928	1045	8"	1–5/8"	5"	3910	730	650	1127
UCH340B	1196	957	1076	8"	1–5/8"	5"	3910	730	650	1144
UCH350B	1231	985	1108	8"	1–5/8"	5"	3910	730	650	1161
UCH360B	1266	1013	1140	8"	1–5/8"	5"	3910	730	650	1178
UCH370B	1301	1041	1171	8"	1–5/8"	5"	3910	730	650	1195
UCH380B	1336	1069	1203	8"	1–5/8"	5"	3910	730	650	1212
UCH390B	1372	1097	1234	8"	1–5/8"	5"	3910	750	710	1284
UCH400B	1407	1125	1266	8"	1–5/8"	5"	3910	750	710	1303
UCH410B	1442	1154	1298	8"	1–5/8"	5"	3910	750	710	1320
UCH420B	1477	1182	1329	8"	1–5/8"	5"	3910	750	710	1337
UCH430B	1512	1210	1361	8"	1–5/8"	5"	3910	750	710	1354
UCH440B	1547	1238	1393	8"	1–5/8"	5"	3910	750	710	1371
UCH450B	1583	1266	1424	8"	1–5/8"	5"	3910	750	710	1388
UCH440B	1547	1238	1393	8"	1–5/8"	5"	3910	750	710	1371
UCH450B	1583	1266	1424	8"	1–5/8"	5"	3910	750	710	1388

Remarks:

1. Parameter of nominal heat exchange: evaporation temperature Te=2℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree of superheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=3 ℃ , incoming water temperature Ti=15℃ , outgoing water tem perature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure:2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Shell and Tube Heat Exchanger Parameters (continued)

Shell and Tube Single-circuit Condenser (Standard Type)



Heat exchanger model	Nominal heat exchange capacity (Unit: KW)		Water inlet/outlet (Unit: inch)	Refrigerant inlet (Unit: inch)	Refrigerant outlet (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: mm)	Weight (Unit: kg)
	R22/R134a	R407C							
UCW005A	21	19	1–1/2"	7/8"	5/8"	857	234	191	35
UCW008A	35	31	1–1/2"	7/8"	5/8"	857	234	191	36
UCW010A	43	39	2"	7/8"	5/8"	1158	242	219	54
UCW015A	64	58	2"	1–1/8"	7/8"	1313	250	219	62
UCW020A	86	77	2–1/2"	1–5/8"	1–1/8"	1619	261	400	90
UCW025A	107	97	2–1/2"	1–5/8"	1–1/8"	1619	261	400	95
UCW030A	129	116	2–1/2"	1–5/8"	1–1/8"	1869	280	400	123
UCW035A	150	135	2–1/2"	1–5/8"	1–1/8"	1869	280	400	128
UCW040A	172	154	2–1/2"	1–5/8"	1–1/8"	1869	280	400	133
UCW045A	193	174	3"	1–5/8"	1–1/8"	1881	458	420	182
UCW050A	215	193	3"	1–5/8"	1–1/8"	1881	458	420	223
UCW055A	236	212	3"	2–1/8"	1–3/8"	2535	470	420	226
UCW060A	257	232	3"	2–1/8"	1–3/8"	2535	470	420	232
UCW065A	279	251	3"	2–1/8"	1–3/8"	2535	470	420	236
UCW070A	300	270	3"	2–1/8"	1–3/8"	2535	470	420	241
UCW075A	322	290	3"	2–1/8"	1–3/8"	2535	470	420	250
UCW080A	343	309	3"	2–1/8"	1–3/8"	2535	470	420	255
UCW085A	365	328	4"	2–5/8"	1–3/8"	2623	507	257	280
UCW090A	386	348	4"	2–5/8"	1–3/8"	2623	507	257	291
UCW095A	408	367	4"	2–5/8"	1–3/8"	2623	507	257	297
UCW100A	429	386	4"	2–5/8"	1–3/8"	2623	507	257	300
UCW105A	451	405	4"	2–5/8"	1–3/8"	2623	507	257	305
UCW110A	472	425	4"	2–5/8"	1–3/8"	2623	507	257	315
UCW115A	493	444	5"	3"	1–3/8"	2635	375	577	357
UCW120A	515	463	5"	3"	1–3/8"	2635	375	577	362
UCW125A	536	483	5"	3"	1–3/8"	2635	375	577	366
UCW130A	558	502	5"	3"	1–3/8"	2635	375	577	374
UCW135A	579	521	5"	3"	1–3/8"	2635	375	577	378
UCW140A	601	541	5"	3"	1–3/8"	2635	375	577	382
UCW145A	622	560	5"	3"	1–3/8"	2635	375	577	387
UCW150A	644	579	5"	3"	1–3/8"	2635	375	577	390
UCW155A	665	599	5"	3"	1–5/8"	2640	425	604	463
UCW160A	687	618	5"	3"	1–5/8"	2640	425	604	468
UCW165A	708	637	5"	3"	1–5/8"	2640	425	604	472
UCW170A	729	656	5"	3"	1–5/8"	2640	425	604	477
UCW175A	751	676	5"	3"	1–5/8"	2640	425	604	482
UCW180A	772	695	5"	3"	1–5/8"	2640	425	604	485
UCW185A	794	714	5"	4"	1–5/8"	3240	425	604	493

Shell and Tube Heat Exchanger Parameters (continued)

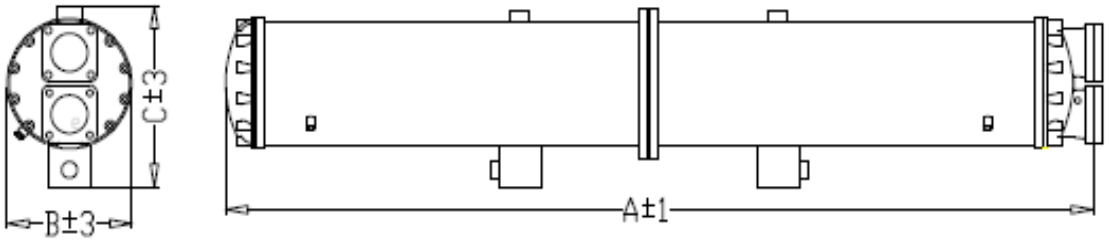
Shell and Tube Single-circuit Condenser (Standard Type) (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit: KW)		Water inlet/outlet (Unit: inch)	Refrigerant inlet (Unit: inch)	Refrigerant outlet (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: mm)	Weight (Unit: kg)
	R22/R134a	R407C							
UCW190A	815	734	5"	4"	1–5/8"	3240	425	604	498
UCW195A	837	753	5"	4"	1–5/8"	3240	425	604	534
UCW200A	858	772	5"	4"	1–5/8"	3240	425	604	543
UCW205A	880	792	5"	4"	1–5/8"	3240	425	604	547
UCW210A	901	811	5"	4"	1–5/8"	3240	425	604	550
UCW215A	923	830	5"	4"	1–5/8"	3240	425	604	560
UCW220A	944	850	5"	4"	1–5/8"	3240	425	604	564
UCW225A	965	869	5"	4"	1–5/8"	3240	425	604	567
UCW230A	987	888	6"	4"	1–5/8"	3334	540	662	576
UCW235A	1008	907	6"	4"	1–5/8"	3334	540	662	580
UCW240A	1030	927	6"	4"	1–5/8"	3334	540	662	586
UCW245A	1051	946	6"	4"	1–5/8"	3334	540	662	591
UCW250A	1073	965	6"	4"	1–5/8"	3334	540	662	604
UCW255A	1094	985	6"	4"	1–5/8"	3334	540	662	610
UCW260A	1116	1004	6"	4"	1–5/8"	3334	540	662	616
UCW265A	1137	1023	6"	4"	1–5/8"	3334	540	662	619
UCW270A	1158	1043	6"	4"	1–5/8"	3334	540	662	625
UCW275A	1180	1062	6"	4"	1–5/8"	3334	540	662	630
UCW280A	1201	1081	6"	4"	1–5/8"	3334	540	662	637
UCW285A	1223	1101	6"	4"	1–5/8"	3334	540	662	642
UCW290A	1244	1120	6"	4"	1–5/8"	3334	540	662	647
UCW295A	1266	1139	6"	4"	1–5/8"	3334	540	662	652
UCW300A	1287	1158	6"	4"	1–5/8"	3334	540	662	658
UCW310A	1330	1197	6"	4"	1–5/8"	4112	540	662	726
UCW320A	1373	1236	6"	4"	1–5/8"	4112	540	662	737
UCW330A	1416	1274	6"	4"	1–5/8"	4112	540	662	748
UCW340A	1459	1313	6"	4"	1–5/8"	4112	540	662	759
UCW350A	1502	1352	6"	4"	1–5/8"	4112	540	662	773
UCW360A	1545	1390	8"	5"	1–5/8"	4112	592	734	784
UCW370A	1588	1429	8"	5"	1–5/8"	4112	592	734	795
UCW380A	1630	1467	8"	5"	1–5/8"	4112	592	734	806
UCW390A	1673	1506	8"	5"	1–5/8"	4112	592	734	817
UCW400A	1716	1545	8"	5"	1–5/8"	4112	592	734	828
UCW410A	1759	1583	8"	5"	1–5/8"	4112	592	734	839
UCW420A	1802	1622	8"	5"	1–5/8"	4112	592	734	850
UCW430A	1845	1661	8"	5"	1–5/8"	4112	592	734	861
UCW440A	1888	1699	8"	5"	1–5/8"	4112	592	734	872
UCW450A	1931	1738	8"	5"	1–5/8"	4112	592	734	885

Remarks:
1. Parameter of nominal heat exchange: condensing temperature Te=40℃，incoming water temperature Ti=30℃, outgoing water temperature To=35℃, degreeof supercooling 5℃.
2. Operating conditions of water source: condensing temperature Te=35 ℃, incoming water temperature Ti=18℃, outgoing water tem perature To=29℃, degree of superheat 5℃; in which heat exchange Q (water source) = 1.18 Q (nominal).
3. The refrigerant side max. allowable working pressure: 4.5MPa, operating pressure: 3.8MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Shell and Tube Heat Exchanger Parameters (continued)

Shell and Tube Double-circuit Condenser (Standard Type)



Heat exchanger model	Nominal heat exchange capacity (Unit: KW)		Water inlet/outlet (Unit: inch)	Refrigerant inlet (Unit: inch)	Refrigerant outlet (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: **mm**)	Weight (Unit: kg)
	R22/R134a	R407C							
UCW016B	69	62	2"	7/8"	5/8"	1625	242	233	80
UCW020B	86	77	2"	7/8"	5/8"	1625	242	233	90
UCW030B	129	116	2–1/2"	1–1/8"	7/8"	1656	293	286	125
UCW035B	150	135	2–1/2"	1–1/8"	7/8"	1656	293	286	130
UCW040B	172	154	3"	1–5/8"	1–1/8"	1970	338	458	166
UCW045B	193	174	3"	1–5/8"	1–1/8"	1970	338	458	215
UCW050B	215	193	3"	1–5/8"	1–1/8"	1970	338	458	221
UCW055B	236	212	3"	1–5/8"	1–1/8"	1970	338	458	228
UCW060B	257	232	3"	1–5/8"	1–1/8"	2272	338	458	250
UCW065B	279	251	3"	1–5/8"	1–1/8"	2272	338	458	246
UCW070B	300	270	3"	1–5/8"	1–1/8"	2272	338	458	262
UCW075B	322	290	3"	1–5/8"	1–1/8"	2272	338	458	273
UCW080B	343	309	3"	1–5/8"	1–1/8"	2272	338	458	285
UCW085B	365	328	4"	1–5/8"	1–1/8"	2360	356	510	305
UCW090B	386	348	4"	1–5/8"	1–1/8"	2360	356	510	320
UCW095B	408	367	4"	1–5/8"	1–1/8"	2360	356	510	340
UCW100B	429	386	4"	1–5/8"	1–1/8"	2360	356	510	350
UCW105B	451	405	4"	2–1/8"	1–3/8"	2360	356	510	354
UCW110B	472	425	4"	2–1/8"	1–3/8"	2360	356	510	358
UCW115B	493	444	4"	2–1/8"	1–3/8"	2360	356	510	363
UCW120B	515	463	4"	2–1/8"	1–3/8"	2360	356	510	370
UCW125B	536	483	5"	2–1/8"	1–3/8"	2634	470	557	397
UCW130B	558	502	5"	2–1/8"	1–3/8"	2634	470	557	403
UCW135B	579	521	5"	2–1/8"	1–3/8"	2634	470	557	408
UCW140B	601	541	5"	2–1/8"	1–3/8"	2634	470	557	413
UCW145B	622	560	5"	2–1/8"	1–3/8"	2634	470	557	418
UCW150B	644	579	5"	2–1/8"	1–3/8"	2634	470	557	423
UCW155B	665	599	5"	2–1/8"	1–3/8"	2634	470	557	428
UCW160B	687	618	5"	2–1/8"	1–3/8"	2634	470	557	433
UCW165B	708	637	5"	2–1/8"	1–3/8"	2634	470	557	438

Shell and Tube Heat Exchanger Parameters (continued)

Shell and Tube Double-circuit Condenser (Standard Type) (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)		Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22/R134a	R407C							
UCW170B	729	656	5"	2–1/8"	1–3/8"	2639	490	632	473
UCW175B	751	676	5"	2–1/8"	1–3/8"	2639	490	632	487
UCW180B	772	695	5"	2–1/8"	1–3/8"	2639	490	632	545
UCW190B	815	734	5"	2–1/8"	1–3/8"	2939	490	632	596
UCW200B	858	772	5"	2–1/8"	1–3/8"	2939	490	632	608
UCW210B	901	811	5"	2–1/8"	1–3/8"	2939	490	632	615
UCW220B	944	850	5"	3"	1–3/8"	2939	490	632	628
UCW230B	987	888	5"	3"	1–3/8"	2939	490	632	725
UCW240B	1030	927	5"	3"	1–3/8"	2939	490	632	737
UCW250B	1073	965	5"	3"	1–3/8"	2939	490	632	748
UCW260B	1116	1004	5"	3"	1–3/8"	2939	490	632	759
UCW270B	1158	1043	5"	3"	1–3/8"	2939	490	632	771
UCW280B	1201	1081	6"	3"	1–3/8"	2939	536	678	832
UCW290B	1244	1120	6"	3"	1–3/8"	2939	536	678	855
UCW300B	1287	1158	6"	3"	1–3/8"	2939	536	678	860
UCW310B	1330	1197	6"	3"	1–3/8"	2939	536	678	887
UCW320B	1373	1236	6"	3"	1–3/8"	2939	536	678	890
UCW330B	1416	1274	6"	3"	1–3/8"	3189	536	678	902
UCW340B	1459	1313	6"	3"	1–3/8"	3189	536	678	914
UCW350B	1502	1352	6"	3"	1–3/8"	3189	536	678	959
UCW360B	1545	1390	6"	3"	1–3/8"	3189	536	678	970
UCW370B	1588	1429	6"	3"	1–3/8"	3189	536	678	982
UCW380B	1630	1467	8"	6"	1–3/8"	3189	592	734	994
UCW390B	1673	1506	8"	6"	1–3/8"	3189	592	734	1004
UCW400B	1716	1545	8"	6"	1–3/8"	3189	592	734	1071
UCW410B	1759	1583	8"	6"	1–3/8"	3189	592	734	1084
UCW420B	1802	1622	8"	6"	1–3/8"	3189	592	734	1095
UCW430B	1845	1661	8"	6"	1–3/8"	3189	592	734	1162
UCW440B	1888	1699	8"	6"	1–3/8"	3189	592	734	1174
UCW450B	1931	1738	8"	6"	1–3/8"	3189	592	734	1185

Remarks:

1. Parameter of nominal heat exchange: condensing temperature Te=40℃ , incoming water temperature Ti=30℃ , outgoing water temperature To=35℃ , degree of supercooling 5℃ .
2. Operating conditions of water source: condensing temperature Te=35℃ , incoming water temperature Ti=18℃ , outgoing water temperature To=29℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.18 Q (nominal).
3. The refrigerant side max. allowable working pressure: 4.5MPa, operating pressure: 3.8MPa; the water side, the max. allowable working pressure:2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Fin Heat Exchanger Parameters

Fin Evaporator (Standard Type)

Heat exchange tube specifications	Number of heat exchange tube rows	Mould specifications (Unit：mm)	Number of fins in an inch	Fine shape	Type of fin structure
9.52*0.3*0.17	1–4	25.4*22	8–16	Louvered fin/flat fin/corrugated fin	Plate fin/L fin/U fin/W fin/V fin
12.7*0.41	1–4	31.75*27.5	7–14	Flat fin,corrugated fin	

Fin Condenser (Standard Type)

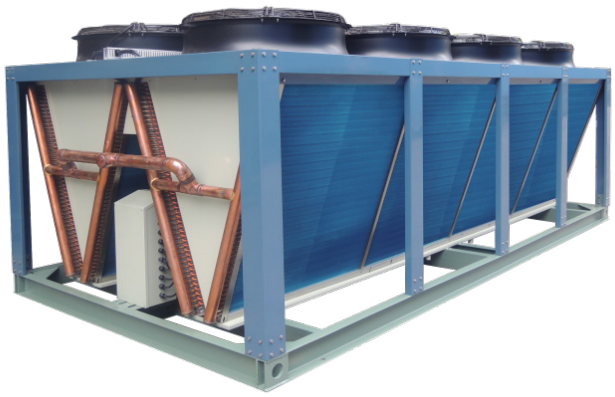
Heat exchange tube specifications	Number of heat exchange tube rows	Mould specifications (Unit：mm)	Number of fins in an inch	Fine shape	Type of fin structure
9.52*0.3*0.17	1–4	25.4*22	8–16	Louvered fin/flat fin/corrugated fin	Plate fin/L fin/U fin/W fin/V fin
12.7*0.41	1–4	31.75*27.5	7–14	Flat fin,corrugated fin	Plate fin/W fin/V fin

Fin Heat Exchanger/Heat Pump Parameters

Heat exchange tube specifications	Number of heat exchange tube rows	Mould specifications (Unit：mm)	Number of fins in an inch	Fine shape	Type of fin structure
9.52*0.3*0.17	1–4	25.4*22	8–16	Louvered fin/flat fin/corrugated fin	Plate fin/L fin/U fin/W fin/V fin
12.7*0.41	1–4	31.75*27.5	7–14	Flat fin,corrugated fin	

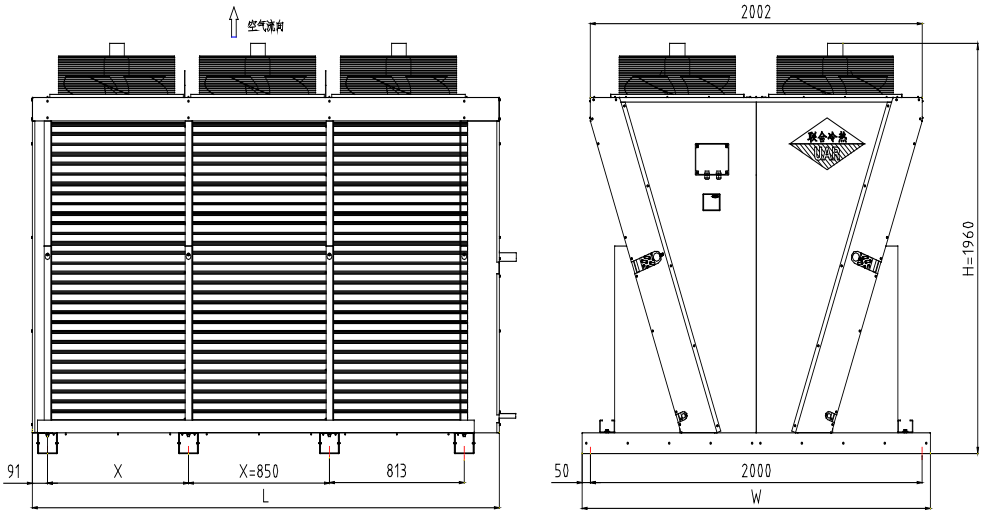
Fin Heat Exchanger

Fin heat exchangers have been widely used in different projects in recent years.
There are mainly 3 applications as follows:
Air-cooled condenser: with the condenser placed outdoor, and the evaporator and compressor indoor, the damage rate of the original electrical components of the unit is reduced, and hence lower maintenance costs.
Air-cooled evaporator: its application in a dual-source heat pump system can effectively reduce the average energy consumption of the system.
Dry-air cooler: also known as winter economizer, in which high temperature water and low temperature air exchange heat directly without using a cooling medium. The whole cooling system has only two energy consuming parts, the fan and the pump; as a result, the energy consumption of the system is gre atly reduced.
Optional structures: Plate type, V type, and W type.
The use of low-consumption, low-noise fan, proper fan nozzle, and reasonable fin structure can maximize air flow and reduce noise.
With IP54 protection and F insulation class, the fan runs stably and has a longer service life.
Available for different working environment and operating conditions: explosion-proof fan, copper foil, anti-corrosion coating, stainless steel heat exchange tube, stainless steel plate, etc.



Fin Heat Exchanger Parameters

UC2 Series Air-cooled Condenser, with fin spacing of 2.2mm



Model				UC2-236	UC2-285	UC2-348	UC2-421	UC2-465	UC2-560	UC2-589
Heat exchange capacity	R404A	Δ	KW	235.86	284.84	348.49	421	464.84	560.17	588.54
		Y		180.44	206.01	266.46	306.19	354.61	405	444.83
	R22	Δ		231.1	275.42	343.81	407.52	451.27	540.8	559.19
		Y		175.19	196.91	259.89	292.99	343.89	388.52	423.93
Airflow		Δ	M^3/h	71234	65922	106807	98832	142410	131767	178077
		Y		45116	43250	67639	62219	90180	82933	112738
Fan motor		Δ	Phase	3	3	3	3	3	3	3
		Y								
		Δ	W	10400	10400	15600	15600	20800	20800	26000
		Y		6400	6400	9600	9600	12800	12800	16000
		Δ	A	19.02	19.02	28.80	28.80	38.40	38.40	48.00
		Y		10.80	10.80	16.20	16.20	21.60	21.60	27.00
Fan			NOXΦ	2x2x630	2x2x630	2x3x630	2x3x630	2x4x630	2x4x630	2x5x630
Noise		Δ	DB(A)10m	64	64	66	66	67	67	68
		Y		57	57	59	59	60	60	61
Dimensions		L	mm	1970	1970	2820	2820	3670	3670	4520
		W	mm	2100	2100	2100	2100	2100	2100	2100
		H	mm	1960	1960	1960	1960	1960	1960	1960
Weight			Kg	533	641	765	873	1025	1133	1275
Outlet diameterΦ			mm	53.9x2	53.9x2	63.5x2	63.5x2	63.5x2	76.2x2	76.2x2
Inlet diameter Φ			mm	41.28x2	41.28x2	53.9x2	53.9x2	53.9x2	63.5x2	63.5x2

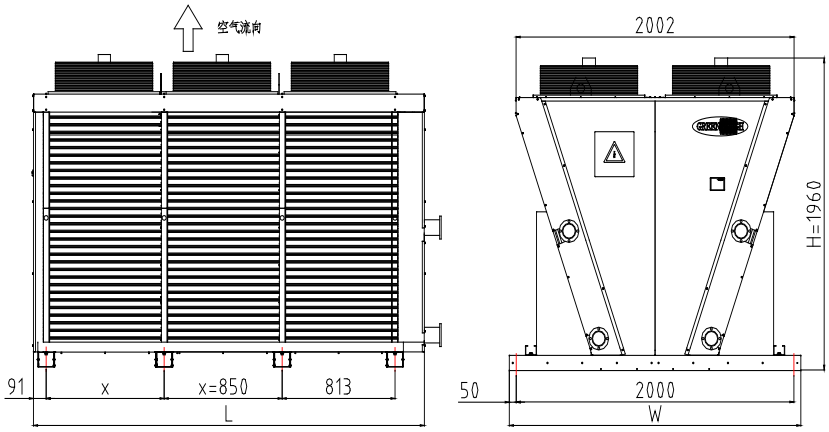
Fin Heat Exchanger Parameters (Continued)

UC2 Series Air-cooled Condenser, with fin spacing of 2.2mm

Model				UC2-706	UC2-859	UC2-1013	UC2-1163	UC1-1314	UC2-1460	UC2-1603	UC2-1740
Heat exchange capacity	R404A	Δ	KW	705.62	858.66	1012.53	1163.63.	1314.00	1460.81	1603.05	1739.81
		Y		510.93	614.87	724.34	831.93	940.38	1047.64	1153.32	1257.03
	R22	Δ		665.78	801.29	944.21	1084.82	1223.61	1358.31	1487.9	1611.42
		Y		482.65	574.28	673.65	775.10	875.54	974.66	1071.96	1167.05
Airflow		Δ	M^3/h	164753	197800	230853	263885	296909	329907	362866	395781
		Y		103702	124456	145251	166033	186822	207600	228366	249118
Fan motor		Δ	Phase	3	3	3	3	3	3	3	3
		Y									
		Δ	W	26000	31200	36400	41600	46800	52000	57200	62400
		Y		16000	19200	22400	25600	28800	32000	35200	38400
		Δ	A	48	57	67.2	76.8	86.4	96	105.6	115.20
		Y		27	32.4	37.8	43.2	27	54	59	64.80
Fan			NOxΦ	2x5x630	2x6x630	2x7x630	2x8x630	2x9x630	2x10x630	2x11x630	2x12x630
Noise		Δ	DB(A)10m	68	69	70	71	72	73	74	75
		Y		61	62	63	64	65	66	67	68
Dimensions		L	mm	4520	5370	6220	7070	7920	8770	9620	10470
		W	mm	2100	2100	2100	2100	2100	2100	2100	2100
		H	mm	1960	1960	1960	1960	1960	1960	1960	1960
Weight			Kg	1385	1636	1883	2135	2385	2633	2885	3135
Outlet diameter Φ			mm	88.9x2	88.9x2	76.2x4	76.2x4	76.2x4	88.90x4	88.90x4	88.90x4
Inlet diameter Φ			mm	76.2x2	76.2x4	63.5x4	63.5x4	63.5x4	76.2x4	76.2x4	76.2x4

Fin Heat Exchanger Parameters (Continued)

UD2 Series Dry-air Cooler, with fin spacing of 2.2mm



Model					UD2-853	UD2-966	UD2-1291	UD2-1446	UD2-1716	UD2-1914	UD2-2159
Heat exchange capacity	Glycol (20%)	95 degree (in)	Δ	KW	853.40	965.96	1291.26	1445.98	1715.93	1914.29	2158.50
		85 degree (out)	Y		561.98	611.14	852.43	914.62	1134.9	1208.55	1426.24
		65 degree (in)	Δ		265.26	319.94	407.43	476.91	543.01	655.67	695.22
		55degree (out)	Y		178.68	209.61	276.50	312.03	370.05	429.17	473.02
	Water	95 degree (in)	Δ		859.99	972.26	1301.38	1455.41	1729.38	1922.60	2172.20
		85degree (out)	Y		565.77	614.31	858.32	1347.61	1142.66	1212.57	1434.09
		65 degree (in)	Δ		274.89	331.07	422.55	493.46	562.88	669.80	715.21
		55degree (out)	Y		184.94	216.62	286.47	322.43	382.95	437.47	485.79
	OilSAE30 oil	85 degree (in)	Δ		651.60	746.95	987.99	1117.49	1313.83	1492.71	1660.52
		75degree (out)	Y		431.34	476.37	656.13	712.41	874.62	949.65	1103.93
	OilSAE10 oil	65 degree (in)	Δ		375.10	442.84	573.37	661.13	763.76	886.87	964.73
		55degree (out)	Y		250.20	286.11	384.68	426.76	513.84	517.85	648.16
		60 degree (in)	Δ		330.57	379.69	501.35	568.04	667.49	755.37	840.23
		55degree (out)	Y		218.28	241.65	332.13	361.38	443.19	479.91	557.31
Airflow		Δ		m^3/h	71234	65922	106807	98832	142410	131467	178077
		Y			45116	67639	67639	62219	90180	82933	112738
Fan motor		Δ		Phase	3	3	3	3	3	3	3
		Y									
		Δ		W	10400	10400	15600	15600	20800	20800	26000
		Y			6400	6400	9600	9600	12800	12800	16000
		Δ		A	19.20	19.20	28.80	28.80	38.40	38.40	48.00
		Y			10.80	10.80	16.20	16.20	21.60	21.60	27.00
Fan				N0.XΦ630	2X2	2X2	2X3	2X3	2X4	2X4	2X5
Noise		Δ		Db(A)10m	64	64	66	66	67	67	68
		Y			57	57	59	59	60	60	61
Weight				kg	640	760	920	1002	1210	1308	1420
Φ Inlet diameter				mm	2XDN125	2XDN125	2XDN150	2XDN150	4XDN125	4XDN125	4XDN125
Φ Outlet diameter				mm	2XDN125	2XDN125	2XDN150	2XDN150	4XDN125	4XDN125	4XDN125
Dimensions		L		mm	1970	1970	2820	2820	3670	3670	4520
		W		mm	2100	2100	2100	2100	2100	2100	2100
		H		mm	1960	1960	1960	1960	1960	1960	1960

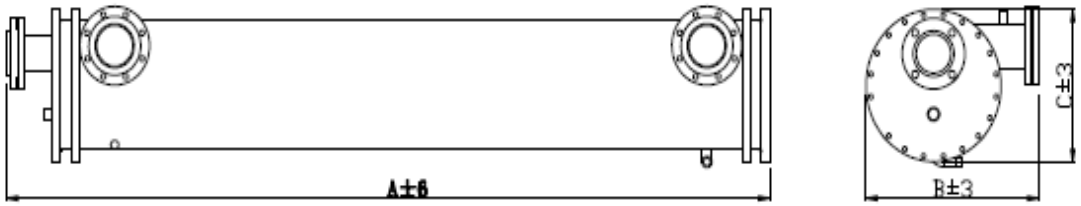
Fin Heat Exchanger Parameters (Continued)

UD2 Series Dry-air Cooler, with fin spacing of 2.2mm

Model					UD2–2380	UD2–2520	UD2–2866	UD2–3029	UD2–3334	UD2–3820	UD2–2159
Heat exchange capacity	Glycol (20%)	95 degree (in)	Δ	KW	2379.97	2520.24	2865.77	3029.30	3334.14	3819.58	2158.50
		85 degree (out)	Y		1503.50	1670.09	1808.82	2008.49	2102.87	2407.49	1426.24
		65 degree (in)	Δ		803.9	764.40	977.51	981.64	1132.19	1306.56	695.22
		55degree (out)	Y		525.75	518.46	638.94	671.51	741.93	855.09	473.02
	Water	95 degree (in)	Δ		2392.18	2552.65	2878.11	3046.96	3349.74	3835.32	2172.20
		85degree (out)	Y		1509.45	1685.09	1814.80	2018.56	2110.28	2414.94	1434.09
		65 degree (in)	Δ		823.94	803.03	998.35	1007.10	1158.41	1332.88	715.21
		55degree (out)	Y		538.15	543.97	602.90	687.61	757.11	870.18	485.79
	OilSAE30 oil	85 degree (in)	Δ		1849.81	1915.21	2233.48	2334.41	2595.70	2979.13	1660.52
		75degree (out)	Y		1177.84	1273.99	1420.37	1557.83	1650.93	1893.02	1103.93
	OilSAE10 oil	65 degree (in)	Δ		1096.72	1106.53	1324.04	1356.27	1539.21	1766.62	964.73
		55degree (out)	Y		707.36	742.25	852.96	915.47	992.84	1138.52	648.16
		60 degree (in)	Δ		938.11	979.66	1130.13	1180.17	1315.30	1507.32	840.23
		55degree (out)	Y		596.33	649.68	717.74	785.99	835.65	957.00	557.31
Airflow		Δ		m^3/h	164753	221283	197800	257592	230853	263885	178077
		Y			103702	126685	124456	147181	145251	166033	112738
Fan motor		Δ		Phase	3	3	3	3	3	3	3
		Y									
		Δ		W	26000	31200	31200	36400	36400	41600	26000
		Y			16000	19200	19200	22400	22400	25600	16000
		Δ		A	48	57.6	57.6	67.2	67.2	76.8	48.00
		Y			27	32.4	32.4	37.8	37.8	43.2	27.00
Fan				N0.XΦ630	2x5	2x6	2x6	2x7	2x7	2x8	2X5
Noise		Δ		Db(A)10m	68	69	69	70	70	71	68
		Y			61	62	62	63	63	64	61
Weight				kg	1530	1780	1870	1950	2130	2250	1420
Φ Inlet diameter				mm	4xDN150	4xDN150	4xDN150	4xDN150	4xDN150	6xDN150	4XDN125
Φ Outlet diameter				mm	4xDN150	4xDN150	4xDN150	4xDN150	4xDN150	6xDN150	4XDN125
Dimensions		L		mm	4520	5370	5370	6220	6220	7070	4520
		W		mm	2100	2100	2100	2100	2100	2100	2100
		H		mm	1960	1960	1960	1960	1960	1960	1960

Special Material Heat Exchanger Parameters

Shell and Tube Copper-nickel Evaporator Parameters



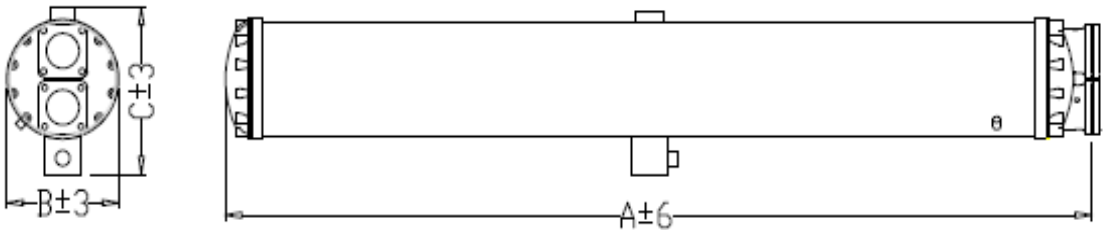
Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USHN050A	176	141	158	3"	1–3/8"	2–1/8"	2253	420	340	299
USHN055A	193	155	174	3"	1–3/8"	2–1/8"	2253	420	340	311
USHN060A	211	169	190	3"	1–3/8"	3"	2253	420	340	323
USHN065A	229	183	206	3"	1–3/8"	3"	2653	420	340	328
USHN070A	246	197	222	4"	1–5/8"	3"	2653	420	340	342
USHN075A	264	211	237	4"	1–5/8"	3"	2653	420	340	354
USHN080A	281	225	253	4"	1–5/8"	3"	2653	420	340	366
USHN085A	299	239	269	4"	1–5/8"	3"	2653	420	340	370
USHN090A	317	253	285	4"	1–5/8"	4"	2653	560	390	340
USHN095A	334	267	301	4"	1–5/8"	4"	2653	560	390	352
USHN100A	352	281	317	4"	1–5/8"	4"	2653	560	390	364
USHN105A	369	295	332	5"	1–5/8"	4"	2653	560	390	376
USHN110A	387	309	348	5"	1–5/8"	4"	2653	560	390	388
USHN115A	404	324	364	5"	1–5/8"	4"	2653	570	420	400
USHN120A	422	338	380	5"	1–5/8"	4"	2653	570	420	412
USHN125A	440	352	396	5"	1–5/8"	4"	2653	570	420	424
USHN130A	457	366	411	5"	1–5/8"	4"	2653	570	420	436
UCHN115A	404	324	364	5"	1–5/8"	4"	2653	570	420	432
UCHN120A	422	338	380	5"	1–5/8"	4"	2653	570	420	447
UCHN125A	440	352	396	5"	1–5/8"	4"	2653	570	420	472
UCHN130A	457	366	411	5"	1–5/8"	4"	2653	570	420	497
UCHN135A	475	380	427	5"	1–5/8"	4"	2653	570	420	522
UCHN140A	492	394	443	5"	1–5/8"	4"	2653	570	420	547
UCHN145A	510	408	459	5"	1–5/8"	4"	2653	590	480	524
UCHN150A	528	422	475	5"	1–5/8"	4"	2653	590	480	544
UCHN155A	545	436	491	5"	1–5/8"	4"	2653	590	480	565
UCHN160A	563	450	506	5"	1–5/8"	4"	2653	590	480	585
UCHN165A	580	464	522	5"	1–5/8"	5"	2653	590	480	605
UCHN170A	598	478	538	5"	1–5/8"	5"	2653	590	480	629
UCHN180A	633	506	570	6"	2–1/8"	5"	3310	590	480	665
UCHN185A	651	521	586	6"	2–1/8"	5"	3310	590	480	675
UCHN190A	668	535	601	6"	2–1/8"	5"	3310	590	480	685
UCHN195A	686	549	617	6"	2–1/8"	5"	3310	590	480	695
UCHN200A	703	563	633	6"	2–1/8"	5"	3310	670	530	714

Remarks:

1. Parameter of nominal heat exchange: evaporation temperature Te=2℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degreeof superheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=3℃ , incoming water temperature Ti=15℃ , outgoing water temperature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.

Special Material Heat Exchanger Parameters

Shell and Tube Copper-nickel Condenser Parameters

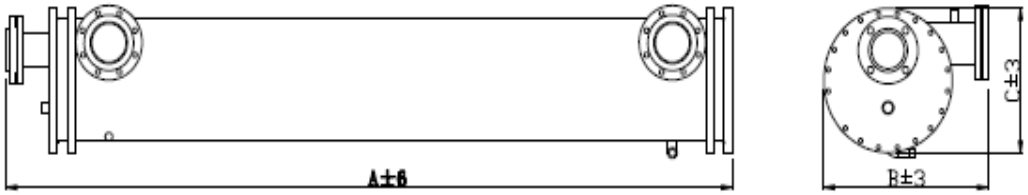


Heat exchanger model	Nominal heat exchange capacity (Unit: KW)			Water inlet/outlet (Unit: inch)	Refrigerant inlet (Unit: inch)	Refrigerant outlet (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: mm)	Weight (Unit: kg)
	R22	R134a	R407C							
USN020A	86	69	77	2–1/2"	1–5/8"	1–1/8"	1619	261	400	90
USN025A	107	86	97	2–1/2"	1–5/8"	1–1/8"	1619	261	400	95
USN030A	129	103	116	2–1/2"	1–5/8"	1–1/8"	1869	280	400	123
USN035A	150	120	135	2–1/2"	1–5/8"	1–1/8"	1869	280	400	128
USN040A	172	137	154	2–1/2"	1–5/8"	1–1/8"	1869	280	400	133
USN045A	193	154	174	3"	1–5/8"	1–1/8"	1881	458	420	182
USN050A	215	172	193	3"	1–5/8"	1–1/8"	1881	458	420	223
USN055A	236	189	212	3"	2–1/8"	1–3/8"	2535	470	420	226
USN060A	257	206	232	3"	2–1/8"	1–3/8"	2535	470	420	232
USN065A	279	223	251	3"	2–1/8"	1–3/8"	2535	470	420	236
USN070A	300	240	270	3"	2–1/8"	1–3/8"	2535	470	420	241
USN075A	322	257	290	3"	2–1/8"	1–3/8"	2535	470	420	250
USN080A	343	275	309	3"	2–1/8"	1–3/8"	2535	470	420	255
USN085A	365	292	328	4"	2–1/8"	1–3/8"	2623	507	257	280
USN090A	386	309	348	4"	2–5/8"	1–3/8"	2623	507	257	291
USN095A	334	267	301	4"	2–5/8"	1–3/8"	2623	507	257	297
USN100A	429	343	386	4"	2–5/8"	1–3/8"	2623	507	257	300
USN105A	451	360	405	4"	2–5/8"	1–3/8"	2623	507	257	305
USN110A	472	378	425	4"	2–5/8"	1–3/8"	2623	507	257	315
USN115A	493	395	444	5"	2–5/8"	1–3/8"	2635	375	577	357
USN120A	515	412	463	5"	2–5/8"	1–3/8"	2635	375	577	362
USN125A	536	429	483	5"	2–5/8"	1–3/8"	2635	375	577	366
USN130A	558	446	502	5"	2–5/8"	1–3/8"	2635	375	577	374
USN135A	579	463	521	5"	3"	1–3/8"	2635	375	577	378
USN140A	601	481	541	5"	3"	1–3/8"	2635	375	577	382
USN145A	622	498	560	5"	3"	1–3/8"	2635	375	577	387
USN150A	644	515	579	5"	3"	1–3/8"	2635	375	577	390
USN155A	665	532	599	5"	3"	1–3/8"	2640	425	604	463
USN160A	687	549	618	5"	3"	1–3/8"	2640	425	604	468
USN165A	708	566	637	5"	3"	1–3/8"	2640	425	604	472
USN170A	729	584	656	5"	3"	1–3/8"	2640	425	604	477
USN175A	751	601	676	5"	3"	1–5/8"	2640	425	604	482
USN180A	772	618	695	5"	3"	1–5/8"	2640	425	604	485
USN185A	794	635	714	5"	4"	1–5/8"	3240	425	604	493
USN190A	815	652	734	5"	4"	1–5/8"	3240	425	604	498
USN195A	837	669	753	5"	4"	1–5/8"	3240	425	604	534
USN200A	858	687	772	5"	4"	1–5/8"	3240	425	604	543

Remarks:
1. Parameter of nominal heat exchange: condensing temperature Te=40 ℃ , incoming water temperature Ti=30℃ , o utgoing water temperature To=35℃ ,degree of supercooling 5℃ .
2. Operating conditions of water source: condensing temperature Te=35 ℃ , incoming water temperature Ti=18℃ , outgoing water tem perature To=29℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.18 Q (nominal).
3. The refrigerant side max. allowable working pressure: 4.5MPa, operating pressure: 3.8MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

Special Material Heat Exchanger Parameters (Continued)

Shell and Tube Aluminum Brass Evaporator Parameters

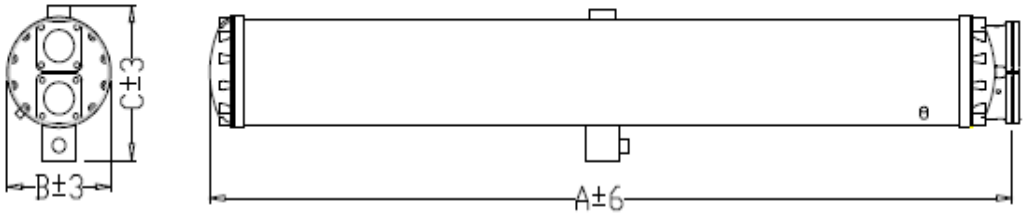


Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USHY050A	176	141	158	3"	1–3/8"	2–1/8"	2253	420	340	299
USHY055A	193	155	174	3"	1–3/8"	2–1/8"	2253	420	340	311
USHY060A	211	169	190	3"	1–3/8"	2–1/8"	2253	420	340	323
USHY065A	229	183	206	3"	1–3/8"	2–1/8"	2653	420	340	328
USHY070A	246	197	222	4"	1–5/8"	3"	2653	420	340	342
USHY075A	264	211	237	4"	1–5/8"	3"	2653	420	340	354
USHY080A	281	225	253	4"	1–5/8"	3"	2653	420	340	366
USHY085A	299	239	269	4"	1–5/8"	3"	2653	420	340	370
USHY090A	317	253	285	4"	1–5/8"	4"	2653	560	390	340
USHY095A	334	267	301	4"	1–5/8"	4"	2653	560	390	352
USHY100A	352	281	317	4"	1–5/8"	4"	2653	560	390	364
USHY105A	369	295	332	5"	1–5/8"	4"	2653	560	390	376
USHY110A	387	309	348	5"	1–5/8"	4"	2653	560	390	388
USHY115A	404	324	364	5"	1–5/8"	4"	2653	570	420	400
USHY120A	422	338	380	5"	1–5/8"	4"	2653	570	420	412
USHY125A	440	352	396	5"	1–5/8"	4"	2653	570	420	424
USHY130A	457	366	411	5"	1–5/8"	4"	2653	570	420	436
UCHY115A	404	324	364	5"	1–5/8"	4"	2653	570	420	432
UCHY120A	422	338	380	5"	1–5/8"	4"	2653	570	420	447
UCHY125A	440	352	396	5"	1–5/8"	4"	2653	570	420	472
UCHY130A	457	366	411	5"	1–5/8"	4"	2653	570	420	497
UCHY135A	475	380	427	5"	1–5/8"	5"	2653	570	420	522
UCHY140A	492	394	443	5"	1–5/8"	5"	2653	570	420	547
UCHY145A	510	408	459	5"	1–5/8"	5"	2653	590	480	524
UCHY150A	528	422	475	5"	1–5/8"	5"	2653	590	480	544
UCHY155A	545	436	491	5"	1–5/8"	5"	2653	590	480	565
UCHY160A	563	450	506	5"	1–5/8"	5"	2653	590	480	585
UCHY165A	580	464	522	5"	1–5/8"	5"	2653	590	480	605
UCHY170A	598	478	538	5"	1–5/8"	5"	2653	590	480	629
UCHY180A	633	506	570	6"	2–1/8"	5"	3310	590	480	665
UCHY185A	651	521	586	6"	2–1/8"	5"	3310	590	480	675
UCHY190A	668	535	601	6"	2–1/8"	5"	3310	590	480	685
UCHY195A	686	549	617	6"	2–1/8"	5"	3310	590	480	695
UCHY200A	703	563	633	6"	2–1/8"	5"	3310	670	530	714

Remarks:
1. Parameter of nominal heat exchange: evaporation temperature Te=2 ℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree ofsuperheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=3 ℃ , incoming water temperature Ti=15℃ , outgoing water temperature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request

Special Material Heat Exchanger Parameters (Continued)

Shell and Tube Aluminum Brass Condenser Parameters



Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USC020A	86	69	77	2–1/2"	1–5/8"	1–1/8"	1619	261	400	90
USC025A	107	86	97	2–1/2"	1–5/8"	1–1/8"	1619	261	400	95
USC030A	129	103	116	2–1/2"	1–5/8"	1–1/8"	1869	280	400	123
USC035A	150	120	135	2–1/2"	1–5/8"	1–1/8"	1869	280	400	128
USC040A	172	137	154	2–1/2"	1–5/8"	1–1/8"	1869	280	400	133
USC045A	193	154	174	3"	1–5/8"	1–1/8"	1881	458	420	182
USC050A	215	172	193	3"	1–5/8"	1–1/8"	1881	458	420	223
USC055A	236	189	212	3"	2–1/8"	1–3/8"	2535	470	420	226
USC060A	257	206	232	3"	2–1/8"	1–3/8"	2535	470	420	232
USC065A	279	223	251	3"	2–1/8"	1–3/8"	2535	470	420	236
USC070A	300	240	270	3"	2–1/8"	1–3/8"	2535	470	420	241
USC075A	322	257	290	3"	2–1/8"	1–3/8"	2535	470	420	250
USC080A	343	275	309	3"	2–1/8"	1–3/8"	2535	470	420	255
USC085A	365	292	328	4"	2–1/8"	1–3/8"	2623	507	257	280
USC090A	386	309	348	4"	2–5/8"	1–3/8"	2623	507	257	291
USC095A	334	267	301	4"	2–5/8"	1–3/8"	2623	507	257	297
USC100A	429	343	386	4"	2–5/8"	1–3/8"	2623	507	257	300
USC105A	451	360	405	4"	2–5/8"	1–3/8"	2623	507	257	305
USC110A	472	378	425	4"	2–5/8"	1–3/8"	2623	507	257	315
USC115A	493	395	444	5"	2–5/8"	1–3/8"	2635	375	577	357
USC120A	515	412	463	5"	2–5/8"	1–3/8"	2635	375	577	362
USC125A	536	429	483	5"	2–5/8"	1–3/8"	2635	375	577	366
USC130A	558	446	502	5"	2–5/8"	1–3/8"	2635	375	577	374
USC135A	579	463	521	5"	3"	1–3/8"	2635	375	577	378
USC140A	601	481	541	5"	3"	1–3/8"	2635	375	577	382
USC145A	622	498	560	5"	3"	1–3/8"	2635	375	577	387
USC150A	644	515	579	5"	3"	1–3/8"	2635	375	577	390
USC155A	665	532	599	5"	3"	1–3/8"	2640	425	604	463
USC160A	687	549	618	5"	3"	1–3/8"	2640	425	604	468
USC165A	708	566	637	5"	3"	1–3/8"	2640	425	604	472
USC170A	729	584	656	5"	3"	1–3/8"	2640	425	604	477
USC175A	751	601	676	5"	3"	1–5/8"	2640	425	604	482
USC180A	772	618	695	5"	3"	1–5/8"	2640	425	604	485
USC185A	794	635	714	5"	4"	1–5/8"	3240	425	604	493
USC190A	815	652	734	5"	4"	1–5/8"	3240	425	604	498
USC195A	837	669	753	5"	4"	1–5/8"	3240	425	604	534
USC200A	858	687	772	5"	4"	1–5/8"	3240	425	604	543

Remarks:
1. Parameter of nominal heat exchange: condensing temperature Te=40℃ , incoming water temperature Ti=30℃ , outgoing water tempe rature To=35℃ ,degree of supercooling 5℃ .
2. Operating conditions of water source: condensing temperature Te=35℃ , incoming water temperature Ti=18℃ , outgoing water temperature To=29℃ ,degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.18 Q (nominal).
3. The refrigerant side max. allowable working pressure: 4.5MPa, operating pressure: 3.8MPa; the water side, the max. allowable working pressure:2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.
6. Any change of shape or size due to product improvement will not be further notified.

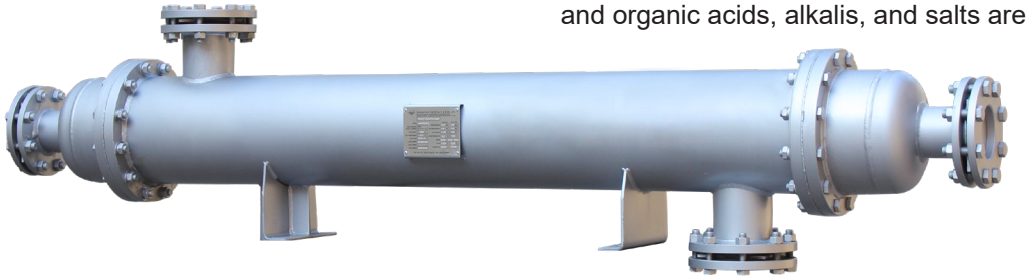
Special Material Heat Exchanger

Stainless Steel Shell and Tube Heat Exchangers -

The main parts in contact with corrosive media, such as heat exchange tubes, cylinders, and tube plates, are made of stainless steel.

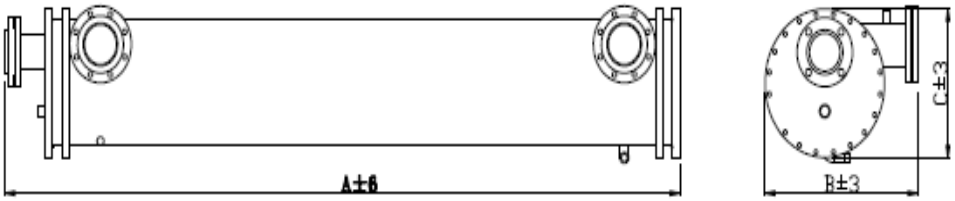
Standard materials: 304, 316L.

Options for specific working environment and operating conditions:ferritic stainless steel, dual phase steel and other special steels.Scope of application: The heat exchanger can be used incorrosive environments where reductive salts, inorganicacids and organic acids, alkalis, and salts are involved.



Stainless steel shell and tube heat exchanger

Stainless Steel Shell and Tube Heat Exchanger Parameters



Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USHG050A	176	141	158	3"	1–3/8"	2–1/8"	2253	420	340	299
USHG055A	193	155	174	3"	1–3/8"	2–1/8"	2253	420	340	311
USHG060A	211	169	190	3"	1–3/8"	2–1/8"	2253	420	340	323
USHG065A	229	183	206	3"	1–3/8"	2–1/8"	2653	420	340	328
USHG070A	246	197	222	4"	1–5/8"	3"	2653	420	340	342
USHG075A	264	211	237	4"	1–5/8"	3"	2653	420	340	354
USHG080A	281	225	253	4"	1–5/8"	3"	2653	420	340	366
USHG085A	299	239	269	4"	1–5/8"	3"	2653	420	340	370
USHG090A	317	253	285	4"	1–5/8"	4"	2653	560	390	340
USHG095A	334	267	301	4"	1–5/8"	4"	2653	560	390	352
USHG100A	352	281	317	4"	1–5/8"	4"	2653	560	390	364
USHG105A	369	295	332	5"	1–5/8"	4"	2653	560	390	376
USHG110A	387	309	348	5"	1–5/8"	4"	2653	560	390	388

Special Material Heat Exchanger (Continued)

Stainless Steel Shell and Tube Heat Exchanger Parameters (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USHG115A	404	324	364	5"	1–5/8"	4"	2653	570	420	400
USHG120A	422	338	380	5"	1–5/8"	4"	2653	570	420	412
USHG125A	440	352	396	5"	1–5/8"	4"	2653	570	420	424
USHG130A	457	366	411	5"	1–5/8"	4"	2653	570	420	436
UCHG115A	404	324	364	5"	1–5/8"	4"	2653	570	420	432
UCHG120A	422	338	380	5"	1–5/8"	4"	2653	570	420	447
UCHG125A	440	352	396	5"	1–5/8"	4"	2653	570	420	472
UCHG130A	457	366	411	5"	1–5/8"	4"	2653	570	420	497
UCHG135A	475	380	427	5"	1–5/8"	5"	2653	570	420	522
UCHG140A	492	394	443	5"	1–5/8"	5"	2653	570	420	547
UCHG145A	510	408	459	5"	1–5/8"	5"	2653	590	480	524
UCHG150A	528	422	475	5"	1–5/8"	5"	2653	590	480	544
UCHG155A	545	436	491	5"	1–5/8"	5"	2653	590	480	565
UCHG160A	563	450	506	5"	1–5/8"	5"	2653	590	480	585
UCHG165A	580	464	522	5"	1–5/8"	5"	2653	590	480	605
UCHG170A	598	478	538	5"	1–5/8"	5"	2653	590	480	629
UCHG180A	633	506	570	6"	2–1/8"	5"	3310	590	480	665
UCHG185A	651	521	586	6"	2–1/8"	5"	3310	590	480	675
UCHG190A	668	535	601	6"	2–1/8"	5"	3310	590	480	685
UCHG200A	703	563	633	6"	2–1/8"	5"	3310	670	530	714

Remarks:

1. Parameter of nominal heat exchange: evaporation temperature Te=2 ℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree of superheat5℃ .

2. Operating conditions of water source: evaporation temperature Te=3 ℃ , incoming water temper ature Ti=15℃ , outgoing water temperature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).

3. The refrigerant max. allowable working pressure: 3.0MP, operating pressure 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.

4. Water pressure drop less than 100KPa.

5. Customized materials or sizes are available upon request.

Special Material Heat Exchanger (Continued)

Titanium Shell and Tube Heat Exchanger

The main parts in contact with corrosive media, such a sheat exchange tubes, cylinders, and tube plates, are made of TA2 pure titanium.

Scope of application: to be used in acidic, alkaline, neutralsalt water, sea water and other solutions. It has muchsuperior anti-corrosion performance than stainless steeland other non-ferrous metals. and is widely used in marine,metallurgy, chemical and other fields.



Titanium Shell and Tube Heat Exchanger

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
USHT050A	176	141	158	3"	1–3/8"	2–1/8"	2253	420	340	299
USHT055A	193	155	174	3"	1–3/8"	2–1/8"	2253	420	340	311
USHT060A	211	169	190	3"	1–3/8"	2–1/8"	2253	420	340	323
USHT065A	229	183	206	3"	1–3/8"	2–1/8"	2653	420	340	328
USHT070A	246	197	222	4"	1–5/8"	3"	2653	420	340	342
USHT075A	264	211	237	4"	1–5/8"	3"	2653	420	340	354
USHT080A	281	225	253	4"	1–5/8"	3"	2653	420	340	366
USHT085A	299	239	269	4"	1–5/8"	3"	2653	420	340	370
USHT090A	317	253	285	4"	1–5/8"	4"	2653	560	390	340
USHT095A	334	267	301	4"	1–5/8"	4"	2653	560	390	352
USHT100A	352	281	317	4"	1–5/8"	4"	2653	560	390	364
USHT105A	369	295	332	5"	1–5/8"	4"	2653	560	390	376
USHT110A	387	309	348	5"	1–5/8"	4"	2653	560	390	388
USHT115A	404	324	364	5"	1–5/8"	4"	2653	570	420	400
USHT120A	422	338	380	5"	1–5/8"	4"	2653	570	420	412
USHT125A	440	352	396	5"	1–5/8"	4"	2653	570	420	424
USHT130A	457	366	411	5"	1–5/8"	4"	2653	570	420	436
UCHT115A	404	324	364	5"	1–5/8"	4"	2653	570	420	432
UCHT120A	422	338	380	5"	1–5/8"	4"	2653	570	420	447
UCHT125A	440	352	396	5"	1–5/8"	4"	2653	570	420	472
UCHT130A	457	366	411	5"	1–5/8"	4"	2653	570	420	497
UCHT135A	475	380	427	5"	1–5/8"	5"	2653	570	420	522
UCHT140A	492	394	443	5"	1–5/8"	5"	2653	570	420	547
UCHT145A	510	408	459	5"	1–5/8"	5"	2653	590	480	524
UCHT150A	528	422	475	5"	1–5/8"	5"	2653	590	480	544
UCHT155A	545	436	491	5"	1–5/8"	5"	2653	590	480	565
UCHT160A	563	450	506	5"	1–5/8"	5"	2653	590	480	585
UCHT165A	580	464	522	5"	1–5/8"	5"	2653	590	480	605
UCHT170A	598	478	538	5"	1–5/8"	5"	2653	590	480	629
UCHT180A	633	506	570	6"	2–1/8"	5"	3310	590	480	665
UCHT185A	651	521	586	6"	2–1/8"	5"	3310	590	480	675
UCHT190A	668	535	601	6"	2–1/8"	5"	3310	590	480	685
UCHT195A	686	549	617	6"	2–1/8"	5"	3310	590	480	695
UCHT200A	703	563	633	6"	2–1/8"	5"	3310	670	530	714

Remarks:
1. Parameter of nominal heat exchange: evaporation temperature Te=2℃ , incoming water temperature Ti=12℃ , outgoing water temperature To=7℃ , degree ofsuperheat 5℃ .
2. Operating conditions of water source: evaporation temperature Te=3℃ , incoming water temperature Ti=15℃ , outgoing water temperature To=8℃ , degree of superheat 5℃ ; in which heat exchange Q (water source) = 1.05 Q (nominal).
3. The refrigerant side max. allowable working pressure: 3.0MPa, operating pressure: 2.5MPa; the water side, the max. allowable working pressure: 2.0MPa.
4. Water pressure drop less than 100KPa.
5. Customized materials or sizes are available upon request.

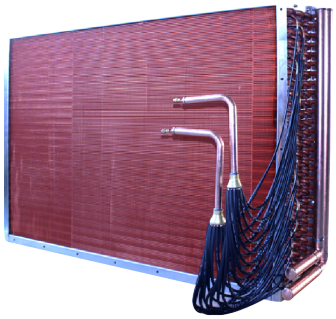
Special Material Heat Exchanger (Continued)

Copper Fin Heat Exchanger

Copper is widely used in heat exchangers for its high heat exchange coefficient and easy processibility.Its competitive price makes it a preferred material in the heat exchanger industry.

Standard configuration:0.12mm aluminum foil, in either corrugated fin or plate fin.
9.52*0.3*0.17 internal grooved heat exchange tube.
304 stainless steel plate.
A combination of copper tube, copper foil and 304 metal plate.

It is widely used in marine drilling platforms, ships and offshore air-cooled equipment.



Copper Fin Heat Exchanger

Stainless Fin Heat Exchanger

Fins, heat exchange tubes and metal plates are all made of stainless steel. It is characterized with nice appearance,good corrosion resistance and wide application range.

Commwonly used materials are 304, 316L.

It is widely used for cooling of organic gas, flue gas, steam and other gases.As concern of environmental protection rises in various industries, the demand for such products is increasing.Options for specific working environment andoperating conditions: tubes made of dual phase steel,ferritic stainless steel, titanium alloy or others.



Stainless Fin Heat Exchanger

Specialized Pressure Vessels

Oil Separator

URA oil separators are two types, vertical oil separatorsand horizontal oil separators.

The vertical oil separators adopt a technical combination of mechanical cyclonic separation and high-quality stainless steel wire mesh demister.

The vertical oil separators use gravity separation and high-quality stainless steel wire mesh demister.

An oil storage tank is set at the bottom, which is completed with oil level control and oil heating devices.



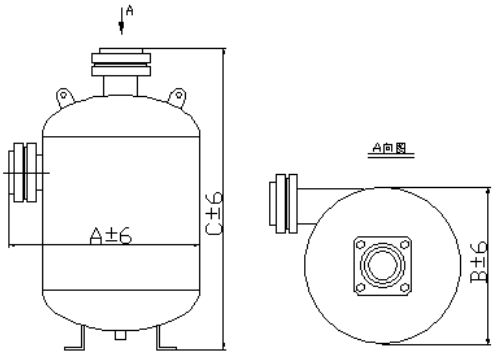
Vertical oil separator



Horizontal oil separator

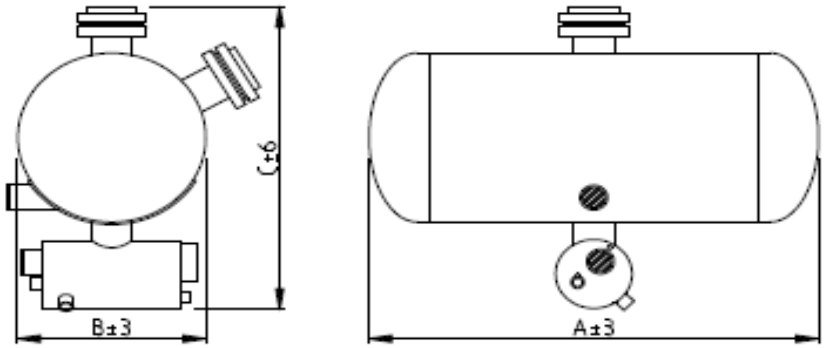
Specialized Pressure Vessels (Continued)

Vertical oil separator specifications



Model	Cooling capacity (Unit: KW)	Refrigerant inlet/outlet (Unit: inch)	Oil outlet joint (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: mm)	Weight (Unit: kg)
COYF14012	90 ~ 175	1–1/2"	Rc1/4"	412	362	750	87
COYF16020	175 ~ 295	2–1/2"	Rc1/2"	480	412	775	95
COYF16024	175 ~ 380	3"	Rc1/2"	480	412	775	97
COYF18024	295 ~ 570	3"	Rc1/2"	565	462	812	115
COYF18032	380 ~ 745	4"	Rc1/2"	565	462	812	120

Horizontal oil separator specifications



Model	Cooling capacity (Unit: KW)		Refrigerant inlet/outlet (Unit: inch)	Oil inlet joint (Unit: inch)	Product length A (Unit: mm)	Product width B (Unit: mm)	Product height C (Unit: mm)	Weight (Unit: kg)
	R22/R404A	R134a						
CWYF14020	340 ~ 430	215 ~ 300	2–1/2"	1–1/8"	960	520	808	107
CWYF16024	400 ~ 500	250 ~ 350	3"	1–1/8"	984	560	750	130
CWYF18024	500 ~ 580	360 ~ 450	3"	1–1/8"	1088	580	830	186
CWYF18032	500 ~ 580	360 ~ 450	4"	1–1/8"	1088	580	830	188
CWYF20024	580 ~ 650	460 ~ 550	4"	1–1/8"	1212	655	632	217
CWYF22032	650 ~ 880	560 ~ 650	4"	1–1/8"	1238	700	900	233
CWYF24040	880 ~ 1000	660 ~ 800	5"	1–1/8"	1322	760	980	295
CWYF26040	1010 ~ 1250	810 ~ 1000	5"	1–1/8"	1388	812	1014	320
CWYF26048	1010 ~ 1250	810 ~ 1000	6"	1–1/8"	1388	812	1014	322
CWYF28048	1260 ~ 1500	1010 ~ 1150	6"	1–1/8"	1416	860	1062	427
CWYF30048	1510 ~ 1700	1160 ~ 1300	6"	1–1/8"	1442	913	1117	495
CWYF32048	1710 ~ 1900	1310 ~ 1800	6"	1–1/8"	1466	970	1165	527
CWYF36048	1910 ~ 2300	1810 ~ 2250	6"	1–1/8"	1716	1060	1265	622
CWYF40048	2310 ~ 3000	2195 ~ 2850	6"	1–1/8"	1870	1168	1397	792
CWYF40064	2310 ~ 3000	2195 ~ 2850	8"	1–1/8"	1870	1168	1397	792

Specialized Pressure Vessels (Continued)

Liquid-gas Separator

A technical combination of cyclonic separation and U tube is used to separate oil from gas.

Ensure that refrigerant in the system return to the compressor in the gaseous state, thereby to avoid liquid hammer that may be caused by liquid refrigerant inside the compressor.

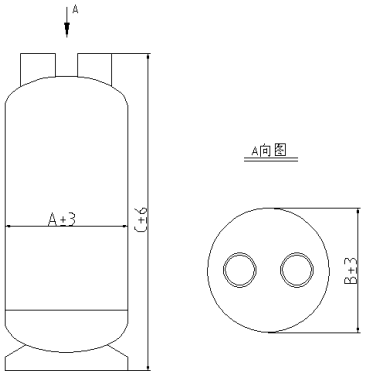


Horizontal liquid-gas separator



Vertical liquid–gas separator

Liquid-gas Separator Specifications



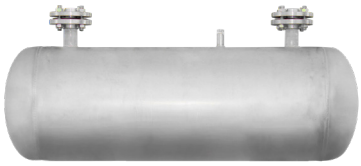
Model	Cooling capacity (Unit：KW)	Refrigerant inlet/outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit: kg)
COYA06011	45 ~ 65	1–3/8"	168	168	553	15
COYA06013	60 ~ 75	1–5/8"	168	168	603	16
COYA08017	75 ~ 140	2–1/8	219	219	520	32
COYA10021	140 ~ 200	2–5/8"	273	273	656	40
COYA12024	205 ~ 400	3–1/8"	325	325	640	42

Accumulator

There are two port design ensures that all liquid refrigerant is employed in the circulation, so it is less likely to form "stagnant water".

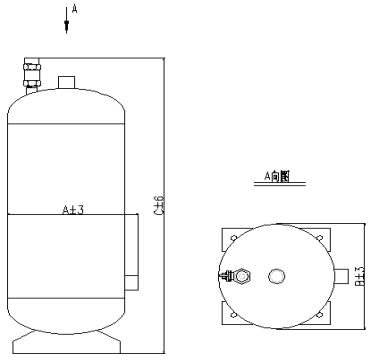


Vertical accumulator



Horizontal accumulator

Accumulator Specifications



Model	Cooling capacity (Unit：KW)	Refrigerant inlet/outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
COIA06005(4L)	10 ~ 20	5/8"	170	168	583	6
COIA08009(12L)	21 ~ 45	1–1/8"	298	219	560	10
COIA08011(12L)	21 ~ 45	1–3/8"	298	219	560	13
COIA08013(12L)	21 ~ 45	1–5/8"	298	219	560	16
COIA10009(20L)	45 ~ 90	1–1/8"	361	273	587	22
COIA10011(20L)	45 ~ 90	1–3/8"	361	273	587	22
COIA10013(20L)	45 ~ 90	1–5/8"	361	273	587	33
COIA12011(40L)	90 ~ 180	1–3/8"	410	325	758	60

Specialized Pressure Vessels (Continued)

Economizer

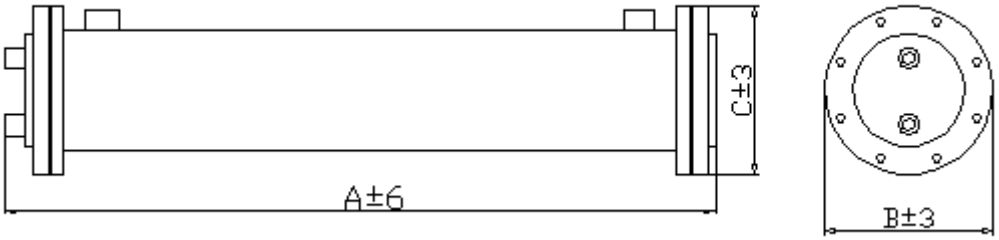
Part of the refrigerant in the unit evaporates to cool the liquid condensed by the condenser.

Increased supercooling degree to improve energy efficiency of the unit.



Economizer

Economizer Specifications



Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
CJJA008A	28	23	25	1–1/8 ″	5/8 ″	1–1/8 ″	986	310	235	62
CJJA010A	35	28	32	1–3/8"	7/8"	1–3/8"	986	310	235	76
CJJA014A	49	39	44	1–5/8"	1–1/8"	1–5/8"	1286	310	235	105
CJJA020A	70	56	63	2–1/8"	1–1/8"	2–1/8"	1584	310	235	121
CJJA025A	88	70	79	2–1/8"	1–1/8"	2–1/8"	1834	310	235	136
CJJA030A	106	84	95	2–1/8"	1–1/8"	2–1/8"	1934	390	280	145
CJJA035A	123	98	111	2–1/8"	1–1/8"	2–1/8"	1934	390	280	154
CJJA040A	141	113	127	2–1/8"	1–3/8"	2–1/8"	1934	390	280	164
CJJA045A	158	127	142	2–1/8"	1–3/8"	2–1/8"	1934	390	280	175

Specialized Pressure Vessels (Continued)

Cold and Heat Recovery Units

Patented invention, the second prize of the China MachineryIndustry Award for Science and Technology.

The high-temperature and high-pressure gaseous refrigerant discharged from the compressor flows into the heat recovery unit,passes through the condenser and expansion valve, turns into a low-temperature and low-pressure gaseous state after absorbing heat from the medium to be cooled, and then returns to the compressor. The heat released during the heat recovery process can be used water for domestic use.

Depending on different working conditions, the amount of heat recovered can be 30%-100% of the cooling capacity.

Heat recovery does not consume energy and improves the efficiency of the whole unit.

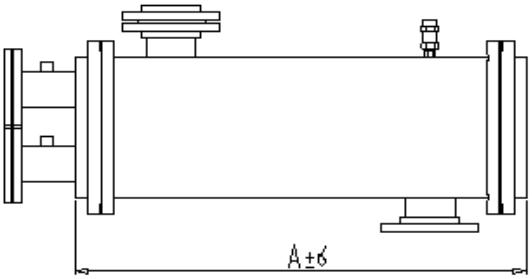


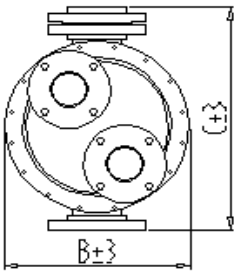
Cold recovery unit



Heat recovery unit

Parameters of Heat and Cold Recovery Units





Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UHR020A	86	69	77	2–1/2"	1–5/8"	1–5/8"	1123	340	550	90
UHR025A	107	86	97	2–1/2"	1–5/8"	1–5/8"	1123	390	570	95
UHR030A	129	103	116	2–1/2"	1–5/8"	1–5/8"	1123	390	570	123
UHR035A	150	120	135	2–1/2"	1–5/8"	1–5/8"	1123	390	570	128
UHR040A	172	137	154	2–1/2"	1–5/8"	1–5/8"	1123	390	570	133
UHR045A	193	154	174	3"	1–5/8"	1–5/8"	1123	430	600	182
UHR050A	215	172	193	3"	1–5/8"	1–5/8"	1123	430	600	223
UHR055A	236	189	212	3"	2–1/8"	2–1/8"	1123	500	670	226
UHR060A	257	206	232	3"	2–1/8"	2–1/8"	1123	500	670	232
UHR065A	279	223	251	3"	2–1/8"	2–1/8"	1424	500	670	236
UHR070A	300	240	270	3"	2–1/8"	2–1/8"	1424	500	670	241
UHR075A	322	257	290	3"	2–1/8"	2–1/8"	1424	540	710	250
UHR080A	343	275	309	3"	2–1/8"	2–1/8"	1424	540	710	255
UHR085A	365	292	328	4"	2–1/8"	2–1/8"	1424	540	710	280
UHR090A	386	309	348	4"	3"	2–5/8"	1424	540	710	291
UHR095A	334	267	301	4"	3"	2–5/8"	1424	540	710	297
UHR100A	429	343	386	4"	3"	2–5/8"	1424	540	710	300
UHR105A	451	360	405	4"	4"	2–5/8"	1812	540	710	305
UHR110A	472	378	425	4"	4"	2–5/8"	1812	540	710	315
UHR115A	493	395	444	5"	4"	2–5/8"	1812	540	710	357
UHR120A	515	412	463	5"	3"	2–5/8"	1812	540	710	362

Specialized Pressure Vessels (Continued)

Parameters of Heat and Cold Recovery Units (continued)

Heat exchanger model	Nominal heat exchange capacity (Unit：KW)			Water inlet/outlet (Unit：inch)	Refrigerant inlet (Unit：inch)	Refrigerant outlet (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
	R22	R134a	R407C							
UHR125A	536	429	483	5"	2–5/8"	2–5/8"	2635	375	577	366
UHR130A	558	446	502	5"	2–5/8"	2–5/8"	2635	375	577	374
UHR135A	579	463	521	5"	3"	3"	2635	375	577	378
UHR140A	601	481	541	5"	3"	3"	2635	375	577	382
UHR145A	622	498	560	5"	3"	3"	2635	375	577	387
UHR150A	644	515	579	5"	3"	3"	2635	375	577	390
UHR155A	665	532	599	5"	3"	3"	2640	425	604	463
UHR160A	687	549	618	5"	3"	3"	2640	425	604	468
UHR165A	708	566	637	5"	3"	3"	2640	425	604	472
UHR170A	729	584	656	5"	3"	3"	2640	425	604	477
UHR175A	751	601	676	5"	3"	3"	2640	425	604	482
UHR180A	772	618	695	5"	3"	3"	2640	425	604	485
UHR190A	815	652	734	5"	4"	4"	3240	425	604	498
UHR200A	858	687	772	5"	4"	4"	3240	425	604	543

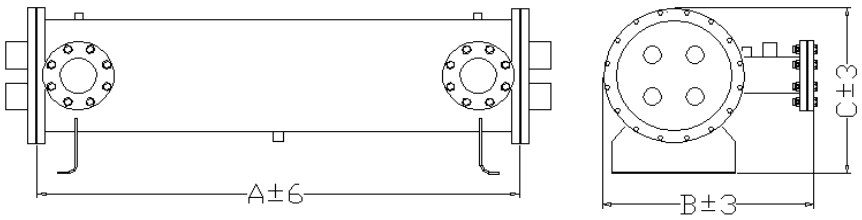
Electric auxiliary heater

To be used in air source hot water units. It helps improve evaporation temperature and the volumetric efficiency of the compressor,

resulting in significant improvement in heating capacity and coefficient of performance of the heat pump.



Electric auxiliary heater specifications



model	heat exchange capacity (Unit：KW)	Water inlet/outlet (Unit：inch)	Heating coil hole (Unit：inch)	Product length A (Unit：mm)	Product width B (Unit：mm)	Product height C (Unit：mm)	Weight (Unit：kg)
UEH009A	9	1–1/2"	1–1/2"	830	435	345	45
UEH015A	15	2"	1–1/2"	830	435	345	67
UEH024A	24	2"	1–1/2"	1000	435	345	93
UEH030A	30	3"	1–1/2"	1100	435	345	119
UEH045A	45	4"	1–1/2"	1540	510	420	195
UEH054A	54	5"	1–1/2"	1740	510	530	204
UEH072A	72	5"	1–1/2"	1740	640	540	230
UEH090A	90	5"	1–1/2"	1740	640	540	234
UEH100A	100	5"	1–1/2"	1740	640	540	240

Tube material options

Copper Tube

Suitable for general domestic water, unpolluted neutral water, neutral alcohol solution.

Nickel-copper Tube

Also known as cupronickel, it is suitable for sea water without sulphide pollution, river water, calcium chloride solution, glycol solution and other solutions with near neutral pH value.

Aluminum Brass Tube

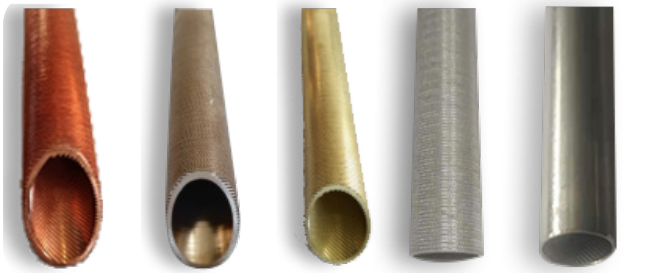
Also known as naval brass, it is suitable for river water, calcium chloride solution, glycol solution, and sea water without sulfide pollution, etc.

304/316L Stainless Steel Tube

Well-known used in corrosive environments where reductive salts, inorganic acids and organic acids, alkalis, and salts are involved. Do not use it in solutions containing chloride ions.

Titanium Tube

To be used in acidic, alkaline, and neutral salt solutions. It has much superior anti-corrosion performance than stainless steel and other non-ferrous metals.



Copper tube | Nickel-copper Tube | Aluminum Brass Tube | 304/316L Stainless Steel Tube | Titanium Tube

Tube specifications

Name	Copper tube (mm)	Nickel-copper tube (mm)	Aluminum brass tube (mm)	304/316L stainless steel tube (mm)	Titanium tube (mm)
Evaporator tube	0.5	0.7	0.75	0.5	0.4
	0.6	0.8	0.9	0.6	0.5
	0.8	0.9	1.1	0.7	0.6
Condenser tube	1.0	1.1	1.1	1.0	1.0
	1.1	1.2	1.2	1.1	1.1
	1.2	1.4	1.35	1.2	1.2
Flooded and falling film tube	1.1	1.1	1.2	1.1	1.0
	1.15	1.15	1.35	1.15	1.1
	1.2	1.2	1.4	1.2	1.2

Important Reminders

Heat exchanger is a key component of the air conditioning unit. As the only part of the unit that is in contact with outside air, heat exchange tubes are closely related to the service life of the unit and a major determinant the unit's performance and quality

The thickness and material of heat exchange tubes are of critical importance, and customers may choose the right kind of tube according to air and water quality of the site of use.

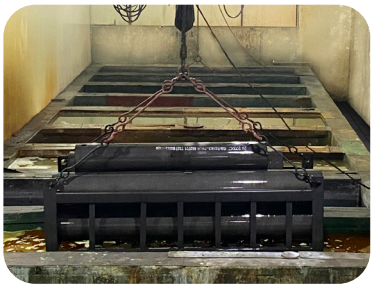
Manufacturing Production Process

Acid Pickling

Procedures: acid pickling-water washing-high pressurecleaning-phosphating-water washing-purification-drying

Our unique acid pickling process can remove from the heat exchanger shell oil, oxide scale and rust, and form a dense phosphate film to protect the shell. The treatment prevents the shell from being oxidized or rusted again during the manufacturing process, thereby effectively ensuring the cleanliness of the refrigeration system.



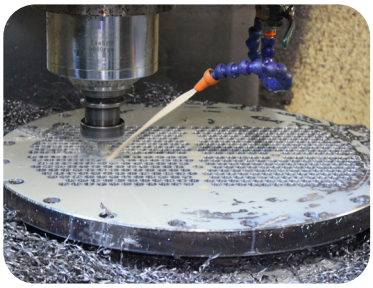


Hole Drilling

An important step in heat exchanger manufacturing,done in a high-end CNC machining center.

Carefully completed with patented tools after 6 procedures of drilling, grooving, and boring.

Long-term sealing performance guaranteed of the expansion tube position.





Welding

Adopted Miller welding machine form the USA and ASME standard C0 2 flux cored wire.

Specially designed welding process according to the characteristics of each product. Ensure flawless appearance of each weld seam on the product.





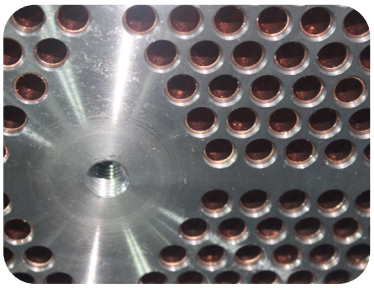
Tube Expanding

Adopted German CNC tube expansion equipment.

Expansion tube head and torque are selected according to the diameter and wall thickness of the heat exchange tube.

High-end equipment and rigorous process control effectively guarantee the quality of the expansion tubes and the safety of the tube expansion process.





Manufacturing Production Process (Continued)

Watertight Test

The 10-meter watertight testing equipment has the capacity to perform sealing performance testing for extra large products.

It ensures that all products are safe without leakage, and can pass inspections of national quality authority.



Air pressure Test

The last procedure to a finished product, and also a comprehensive manifestation of manufacturing quality.

Each product must undergo pressure test under 2.5MPa-4.5MPa for at least 12 hours to ensure compliance with national safety standards.





X-ray Defectoscopy

An important process of pressure vessel manufacturing.

UAR has a national level X-ray defectoscopy room and the Radiation Safety Permit.

Equipped with non-destructive testing equipment such as RT/UT/MT.

All welds of the product must undergo non-destructive testing to ensure that the welds are 100% qualified.





Equipment Inspection

Our national-level testing platform ensures that all products will go through performance testing.

Provide effective data support for design of products with better performance.



Production Line Precision Equipment (Continued)

Product Inspection Station

There is a national level test platform for testing of air-cooled or water-cooled equipment within 4500KW to ensure that all products are tested and verified.



Automatic Fin Punching Machine

Large-scale automatic fin punching machine, completed with molds from Japanese brands. It can process aluminum foil and copper foil with high precision and high quality. 24 rows can be processed at a time.



Automatic Welding Equipment

USA made Miller gas shielded automatic welding machine is used for automatic welding of shell and tube heat exchanger to ensure welding quality.



Precision Tube Expander

TECHNODATA CNC automatic tube expansion equipment from Germany. Accurately control of torque and expansion time reduces leakage risk of heat exchange tube after expansion process and ensures product quality.



Production Line Precision Equipment (Continued)

Sheet Metal Multi Punch Press

Large automatic CNC closed hydraulic turret punch press. Extra large work bench where all punching and cutting operations of a complete sheet metal can be complete; it helps to reduce welding seams of the product.



Precision Machining Center

Multiple high-precision CNC machine centers specially assigned for precision machining of heat exchanger tube plate holes. Digital precision control, and extra large work bench, and optional super large heat exchanger tube plates ensure the machining accuracy of the heat exchanger tube holes, and hence good product quality.



Fin Tube Expander

The large-scale horizontal automatic tube expander is used to expand fins and heat exchange tubes. It can process at a time 6 rows, with 48 copper tubes in each row; and it has a wide processing range. Tube expansion, flaring and flanging of a single fin can be completed in one working cycle to ensure close integration between fin and heat exchange tube.



Fin Bender

The fully automatic fin bending machine can produce L-shaped and U-shaped fins according to customerrequirements.

Used to process fins of finned tube exchanger that is incorporated in heat pump unit. The maximum number of processing rows of the machine is 3, and the number of processing holes in a row is 40.



Production Line Precision Equipment (Continued)

Automatic Tube Opener

The large-scale horizontal automatic intersecting line cutting machine, with a maximum processing diameter of 800mm and a maximum processing length of 12m, can accurately locate and process all tube ports of a shell and tube heat exchanger. Ensure the assembly accuracy of various parts of the product.



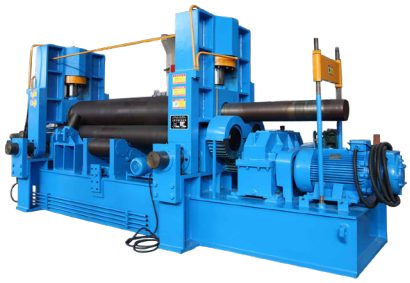
X-ray Defectoscopy Equipment

There are 6 units of high-end defectoscopy equipments,and 3 technicians with Grade 2 certification. The work scope covers radiography, ultrasound, magnetic particle,and penetration inspection and evaluation.



Tube Winding Equipment

The fully automatic three-roller universal hydraulic tube winding machine, with a maximum single tube length of 3m, and a maximum tube thickness of 12mm, has the capacity to process tubes of a wide range of outer diameters.



Pipe Welding Equipment

High-end domestic submerged ERW welding machine,supported by cross welding manipulator, are used for longitudinal and circumferential welding of the pipe.
Being able to weld pipes with diameter above 200, they have a wide range of application.



Large-Scale Water Testing Equipment

It can be used for the air tightness test of super-large products. The product is pressurized and immersed in a pool for testing to ensure that all welds, washer sealing sites, and valves of the product are 100% inspected.



Guangzhou United A/C & R Co., Ltd.

Address: No.1 Guoyuan 4th Road, Guangzhou Economic & Technological Development Zone, HuangPu District, Guangzhou, China Zip Code 510530
Email: sales@hstars.com.cn
Tel: +862062266755 ext. 886
Fax: +862082266081
Website: www.heatexchangermaker.com
LinkedIn: www.linkedin.com/company/uarshellandtube
Facebook: www.facebook.com/UARshellandtube
Instagram: www.instagram.com/heatexchanger_manufactuer_uar
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