

MACON®

Company Profile

- Proficient in energy saving, dedicated to environmental protection!



BUSINESS PHILOSOPHY

Customer focus, strive to exceed customer expectations!

COMPANY VISION

To become the world's most outstanding enterprise providing energy saving and environmental protection solutions.

CORE VALUES






Profession, standard, innovation, excellence, mutual benefit, cooperation,

About Us



MACON, the leading brand in the heat pump industry of China. **Founded in 2006** and located in **Shunde of Foshan**, Guangdong-Hong Kong-Macao Greater Bay Area, MACON is a national high-tech enterprise **focusing on the R&D, production, sales and service of heat pump products** for the improvement of the human living environment. Since the establishment, MACON has been silently guarding our **clean, efficient and symbiotic green environment**.

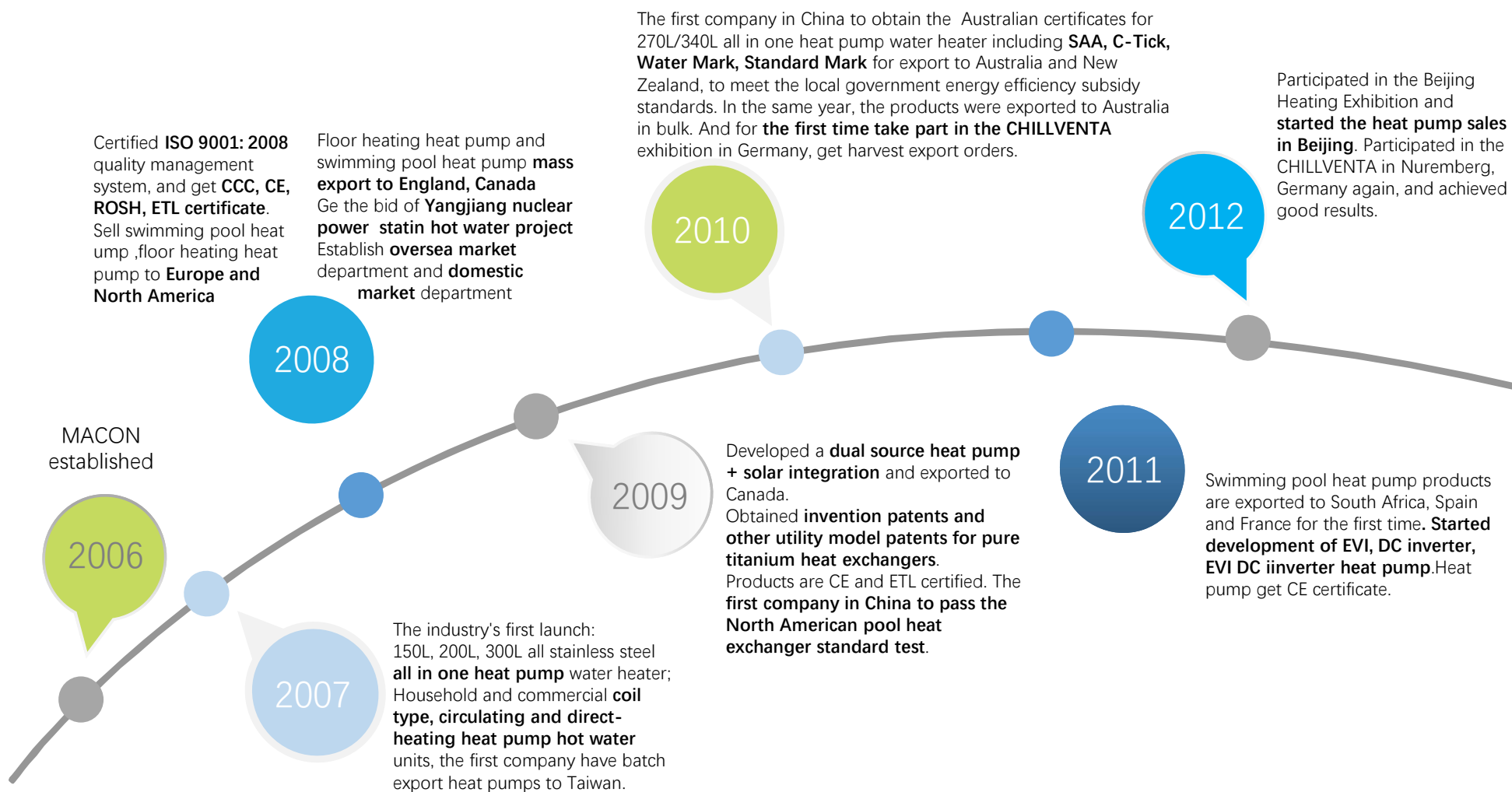
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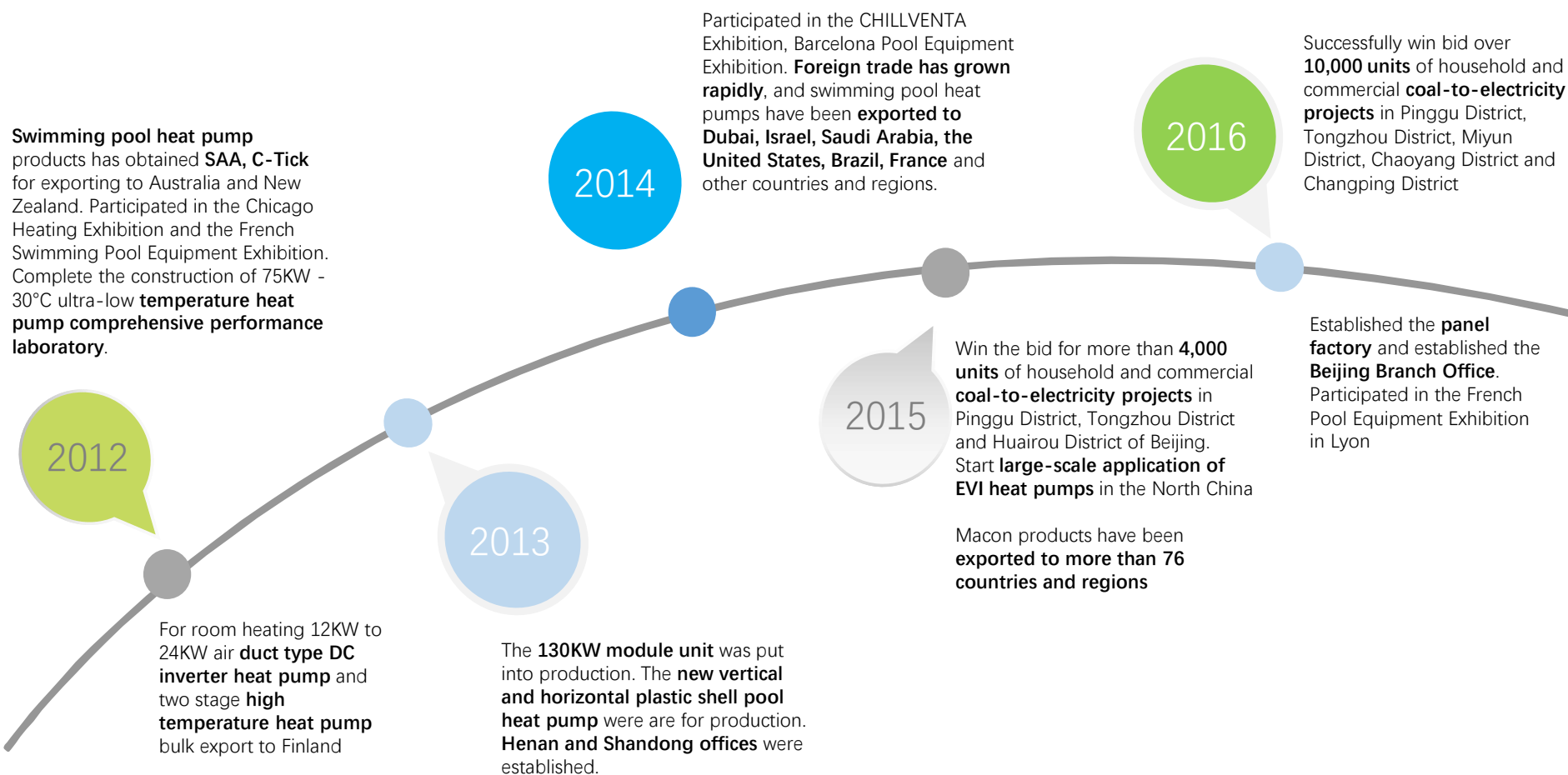
01 Company Development



► Company Development



► Company Development



▶ Company Development

Successfully won the bid to participate in Beijing Pinggu District, Tongzhou District, Miyun District, Chaoyang District, Changping District, Yanqing District, Tianjin City, Hebei Chengde, Shijiazhuang, Huangpi City, Taiyuan City and other areas of household and commercial coal-to- electricity projects cumulative sales of **more than 20,000 units**.

Macon is recognized as:

National high-tech enterprises, outstanding contributions to coal-to-electricity in 2017. Received the 2017-2018 "Blue Sky Cup" Clean Energy Heating Excellence Project Award. The output value **exceeded 390 million yuan** for the first time. Participate in the **Russian HVAC Exhibition**.

2017

Expand the all working conditions and wide water temperature range heat pump product: 1HP, 2HP, 3HP, 4HP, 5HP, 6HP, 7HP DC inverter and EVI DC inverter heat pump (heating, hot water, cooling), DC inverter air to air heat pumps for single indoor unit and multiple indoor units..

Branch offices in Hebei, Shanxi, Xi'an and Qinghai were established. New air to air heat pump laboratory, ultra-low temperature long-life **performance laboratory**, fully automatic online production testing system. Win the bid for more than **10,000 units** of household and commercial coal-to-electricity projects in Pinggu District, Changping District, Yanqing District, Hebei Chengde, Shijiazhuang, Taiyuan, Jincheng, Yuncheng and Qinghai.

2018

Complete the **full working condition wide water temperature range design product coverage**: single-phase 3, 5, 6, 8 horsepower, DC inverter and EVI DC inverter heat pump unit (heating, hot water, cooling) design upgrade. The company has obtained **three levels of installation qualification**.

2019

Complete the full working condition wide water temperature range design product coverage: three-phase 5HP, 6HP, 8HP, 10HP, 12HP, 20HP, 30HP **DC inverter and EVI DC inverter heat pump** (heating, hot water, cooling) design upgrade. And the development and application of fan and water pump **full DC inverter** products.

Upgraded design of the plastic shell **DC inverter swimming pool heat pump**. North American **water to air heat pump** development. **DC inverter high temperature heat pump** development. **Photovoltaic + DC inverter heat pump** development

► Company Development

Achieved: **cTUVus, A+++ energy label** for EVI DC inverter heat pump, **CE** for DC inverter swimming pool heat pump. **CCC, Energy Saving and Energy Efficiency Certification** for inverter heat pump, EVI inverter heat pump and ground source heat pump products.

Finished: Development of **DC inverter ground source heat pump** and export to European and domestic markets. Product Line Expansion and development of **ground source high temp Heat Pump**. Development and mass production of a **new series of side vent and top vent plastic shell swimming pool heat pump**. Development of 50HP Heat Pump with double compressors and double fans optimization. Development of 20KW ground source duct heat pump. Completed the development of 12 HP, 15 HP, 25 HP and 50 HP **modular EVI DC inverter heat pump**.

2022

Complete the upgrade of the **whole series of inverter high temp heat pumps**. Completed the development of **inverter heat pump products below 60 HP**. Obtained bulk orders for **EVI DC inverter water to water heat pump** products exported to Germany. The **function of the inverter controller** series has been fully upgraded. Completed the upgrade of **5G intelligent IoT control** of all series of DC inverter heat pump. Completed the planning and construction of the production line, laboratory and office area of the **new Wusha factory**.

Start product development of **DC inverter water to water high temperature heat pump**.
Start product development of **200KW EVI DC inverter module air source heat pump**.
Start product development of **300KW DC inverter water to water module heat pump**.
Start the development of **75KW EVI DC inverter high temperature steam heat pump**.

2020

Applied to the central heating of a building with an area **of 270,000 square meters in a single project**.
High temperature heat pumps are used in **aquaculture projects** in batches.
High temperature heat pumps have been successfully applied in several **oilfield** in Northern China.
Completed the development of **cloud intelligent IoT upgrade application** for MACON heat pump products

2021

02 Enterprise Strength



► Enterprise Strength



101 MILLION RMB
Registered capital



20 THOUSAND M²
Construction area



3 SETS
Advanced production lines



250 THOUSAND UNITS
Designed annual production capability

COMPANY MISSION

- Create conditions and opportunities for employees to realize their aspirations for a better life and personal value
- Provide customers with valuable products and solutions and establish successful business partnerships
- Create sustainable economic benefits for enterprise development
- Contribute value to society



► Enterprise Strength



6 SETS

Professional heat pump
laboratories



300 EMPLOYEES

Most are experienced in heat
pump industry



25 YEARS

Experience in heat pump
engineering designs and
applications



12 TYPES

Product categories suitable
for different kinds of
application

► Our Teams



► Our Teams



► Our Laboratories



High Performance Heat Pump Comprehensive Performance Laboratories

1. -35°C low temperature heat pump comprehensive performance lab
2. Air conditioning enthalpy difference comprehensive performance lab
3. Water source heating and cooling comprehensive performance lab
4. Heat pump dryer performance lab
5. -35°C low temperature heat pump long term operation lab

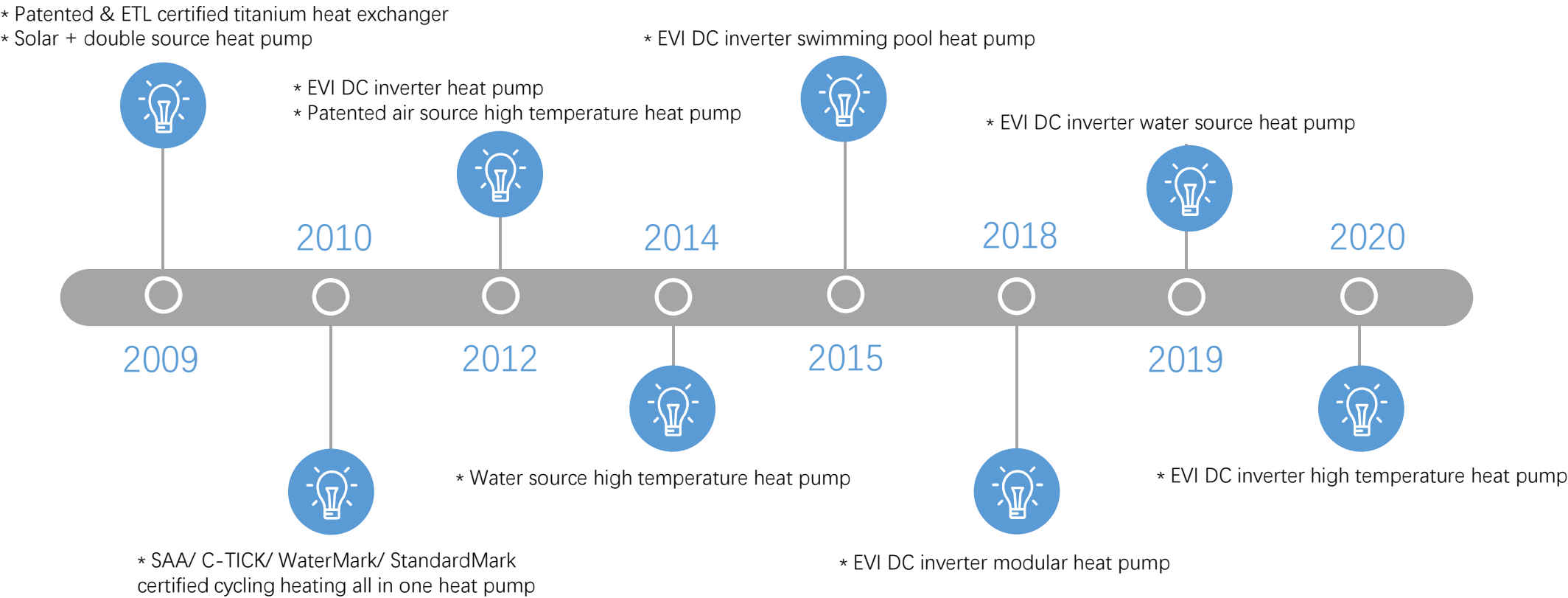


03 Company Achievements



▶ Product R&D

First Company in China to achieve:



▶ Product Patents



Heat Exchanger



Two Stage High Temp Heat Pump



Four in One Heat Pump



DC Inverter Constant Capacity Heat Pump System



EVI Multifunction Heat Pump System



Drying Function Heat Pump



High Temp Pool Heat Pump



Medium Temp Antifreeze device



Air Cooled Water Chiller



Multifunction Heat Pump

► Company Certificates



ISO 9001



ISO 14001



OHSAS 18001



Laboratory Competency Assessment Certificate



National Industrial Production License

▶ Product Certificates

European Certificates





Australian Certificates



Product Certificates

North American Certificate

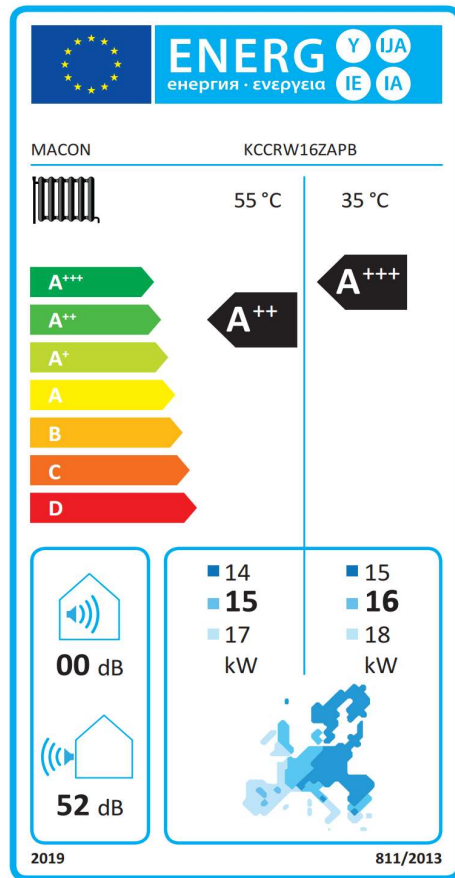
Certificate		TÜVRheinland
Certificate no. CU 72200840 01		
License Holder: Foshan MACON Cooling & Heating Energy-Saving Equipment Co., Ltd No.12, Fu'an Industrial Zone 1, Leliu Town Shunde District, Foshan City, Guangdong P.R. China	Manufacturing Plant: Foshan MACON Cooling & Heating Energy-Saving Equipment Co., Ltd No.12, Fu'an Industrial Zone 1, Leliu Town Shunde District, Foshan City, Guangdong P.R. China	
Test report no. USA-SOS 50349749 001		Client Reference: Z. X. Y
Tested to: UL 1995:2015 8.18 CSA C22.2 No. 236-15		
Certified Product: AIR TO WATER HEAT PUMP License Fee - Units		
Model Designation:	Input Power: (Max Load)	Running Current: (Max Load)
MACRW0352A/(BE)	4.1KW	17.4A
MACRW0502A/(BE)	5.7KW	25.9A
MACRW0602A/(BE)	6.56KW	27.6A
MACRW0702A/(BE)	6.6KW	28.0A
Trademark : MACON, MEHOT		
Rated Voltage : AC 220-240V, 60Hz		
Appendix: 1,1-20		
Licensed Test mark:	Date of Issue (day/no/yr) 25/04/2020	
		
TUV Rheinland of North America, Inc. 12 Commerce Road, Newbury, CT 06470, Tel (203) 438-0888 Fax (203) 438-4038		

Certificate		TÜVRheinland
Certificate no. CU 72210153 01		
License Holder: Foshan MACON Cooling & Heating Energy-Saving Equipment Co., Ltd No.12, Fu'an Industrial Zone 1, Leliu Town Shunde District, Foshan City, Guangdong P.R. China	Manufacturing Plant: Foshan MACON Cooling & Heating Energy-Saving Equipment Co., Ltd No.12, Fu'an Industrial Zone 1, Leliu Town Shunde District, Foshan City, Guangdong P.R. China	
Test report no. USA-SOS CN202XRG 001		Client Reference: Z. X. Y
Tested to: UL 1995:2015 8.18 CSA C22.2 No. 236-15		
Certified Product: DC INVERTER SWIMMING POOL HEAT PUMP UNIT License Fee - Units		
Model Designation:	Input Power:	Max Load (Cooling/Heating):
MALCRW0182A/(B)	1.08KW	0.92KW/1.7KW
MALCRW0282A/(B)	1.77KW	1.5KW/2.8KW
MALCRW0402A/(B)	2.82KW	3.6KW/3.5KW
MALCRW0602A/(B)	4.52KW	4.4KW/5.8KW
Trademark : MACON, MEHOT		
Rated Voltage : AC 220-240V, 60Hz		
Appendix: 1,1-21		
Licensed Test mark:	Date of Issue (day/no/yr) 16/01/2021	
		
TUV Rheinland of North America, Inc. 12 Commerce Road, Newbury, CT 06470, Tel (203) 438-0888 Fax (203) 438-4038		

CERTIFICATE of Conformity		TÜVRheinland
EC Council Directive 2014/30/EU Electromagnetic Compatibility		
Registration No.:	AE 50503637 0001	
Report No.:	CN21C79V 001	
Holder:	Foshan MACON Cooling & Heating Energy-Saving Equipment Co., Ltd No.12, Fu'an Industrial Zone 1, Leliu Town, Shunde District, Foshan City, Guangdong P.R. China	
Product:	Air/Water Heat pumps (DC Inverter Swimming Pool Heat Pump Unit)	
Identification:	MALCRW0252A/(B) Serial No.: n.a. Remark : Refer to test report CN21C79V 001 for details.	
Tested acc. to:	EN 55014-1:2017+A11 EN 55014-2:2015 EN IEC 61000-3-2:2019 EN 61000-3-3:2013+A1	
This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive.		
Date	13.05.2021	
TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg		
The CE marking may only be used if all relevant and effective EC Directives are complied with.		

Product Certificates

ErP Energy Label



Technical Report



Technical Report No.: 64.181.21.04416.01 Rev.00
Date: 2021-08-31

Client: Report holder's name: Foshan MACON Cooling&Heating Energy-Saving Equipment Co.,Ltd
Report holder's Address: No.1 Lianan Road, Fuan Industrial Park, Lailu Town, Shunde District, Foshan City, Guangdong Province, China
Contact person of report holder: Zhang Xian Yun
Manufacturer's name: Foshan MACON Cooling&Heating Energy-Saving Equipment Co.,Ltd
Manufacturer's address: No.1 Lianan Road, Fuan Industrial Park, Lailu Town, Shunde District, Foshan City, Guangdong Province, China
Factory: Factory's name: Foshan MACON Cooling&Heating Energy-Saving Equipment Co.,Ltd
Factory's address: No.1 Lianan Road, Fuan Industrial Park, Lailu Town, Shunde District, Foshan City, Guangdong Province, China
Test object: Product: DC INVERTER AIR TO WATER HEAT PUMP
Model: KCCRW16ZAPB, KCCRW16ZAB
Trade name: MACON
Test specification: ☒ EN 14825:2018
☒ (EU) No 813/2013
Purpose of examination: ☒ Test according to the test specification
☒ EU 2016/2282:2016-11-30

Test result: The test results show that the presented product is in compliance with the above listed test specifications.

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see testing and certification regulation, chapter A-3.4.

Project No: 64.181.21.04416.01
Rev: 00
Date: 2021-08-31
Page: 1 of 15

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TUV SUD Certification and Testing (China) Co., Ltd.
Guangzhou Branch, TUV SUD Group
SF Communication Building, 103 Pingan Rd, Huangpu
Ave, West, Guangzhou, 51055, P. R. China

Performance test report from AHRI recognized lab Standard: AHRI 550/590

GMPI
No.888, West Changliang
Road, Hefei, 230032, Anhui,
P.R.China



Page 1
GMPI Report Number: 2020LKE145
Report Version Number: 1
Date: 5/13/2020

Air-Cooled Water Chilling Packages (ACCL) Certification Program

Manufacturer Information		Model Information	
Manufacturer:	Northern Lights Solar Tube Inc.	Model Number:	MACRW06024(BE)
Manufacturer's Contact:	sales@nlstubes.com	Serial Number:	SFD220531122016273003
Facility Contact:	Li Hongzhe	V/Hz:	220 1 60
Name:	Li Hongzhe	AHRI Standard:	AHRI 550/590
3rd Party Lab Information (in-house testing)			
Date Unit Arrived:	03/02/2021	Test Stand:	150KW Test Facility
Date(s) of Test:	2021/03/15-16, 2021/5/6		
Test Results		Standard Rating	
Title of Test	Units	Certified	Measured
Test Tolerances: TOL: 6.00% TOL: 7.55%			
Net Cooling Capacity	kW	12.20	11.54
Cooling Efficiency	BTU/h	11.55	10.99
PLV	kW/kW	1	1
Application Rating 1 (DB 8°F, Outlet Water Temp. 119°F)			
Heating Capacity	kW	11.70	11.09
Heating Efficiency	BTU/h	11.09	10.99
Application Rating 2 (DB 47°F WB 48°F, Outlet Water Temp. 106°F)			
Heating Capacity	kW	12.62	11.96
Heating Efficiency	BTU/h	11.96	11.09
Application Rating 3 (DB 17°F WB 16°F, Outlet Water Temp. 106°F)			
Heating Capacity	kW	12.37	11.73
Heating Efficiency	BTU/h	11.73	10.99
Application Rating 4 (DB 44.8°F WB 42.8°F, Inlet Water Temp. 104°F, Outlet Water Temp. 119°F)			
Heating Capacity	kW	17.58	17.58
Heating Efficiency	BTU/h	17.58	17.58
Notes:			
1. Codes: P-Pass, F-Fail, I-Inoperable Sample, NP-Not Performed, GR-See "Remarks"			
2. For units that require conversion, the factors shown in Section 7 of AHRI Standards 550/590 and 551/591 shall be used.			
3rd Party Lab Disclaimer			
The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an AHRI Certification Program.			
Remarks			
Test Supervised By:			
Report Approved By:			
Attachments			
1 Sample Description			
2 Test Data			
3 Instruments List			

► Company Honors



Advanced Technology Enterprise Certificate



Top Ten Leading Brands in Heat Pump Industry



Top Ten Outstanding Brands in Heat Pump Industry



Enterprise Credit Evaluation AAA Credit Enterprise



Excellent Demonstration Enterprise of Quality Brand



Best Application Award of Heat Pump Central Heating



Best Application Award of Heat Pump Residential Heating



Outstanding Contribution Enterprise of Beijing Coal-to-Clean Energy Project



"Blue Sky Cup" Clean Energy Heating Excellent Project Award



Excellent Practice Case of Clean Heating



China Heat Pump Industry Best Heating Brand



China Heat Pump Industry Top Ten Consumer Favorite Brand



National High-Tech Energy-Saving Products Award



Advanced Enterprise of New and Renewable Energy Association

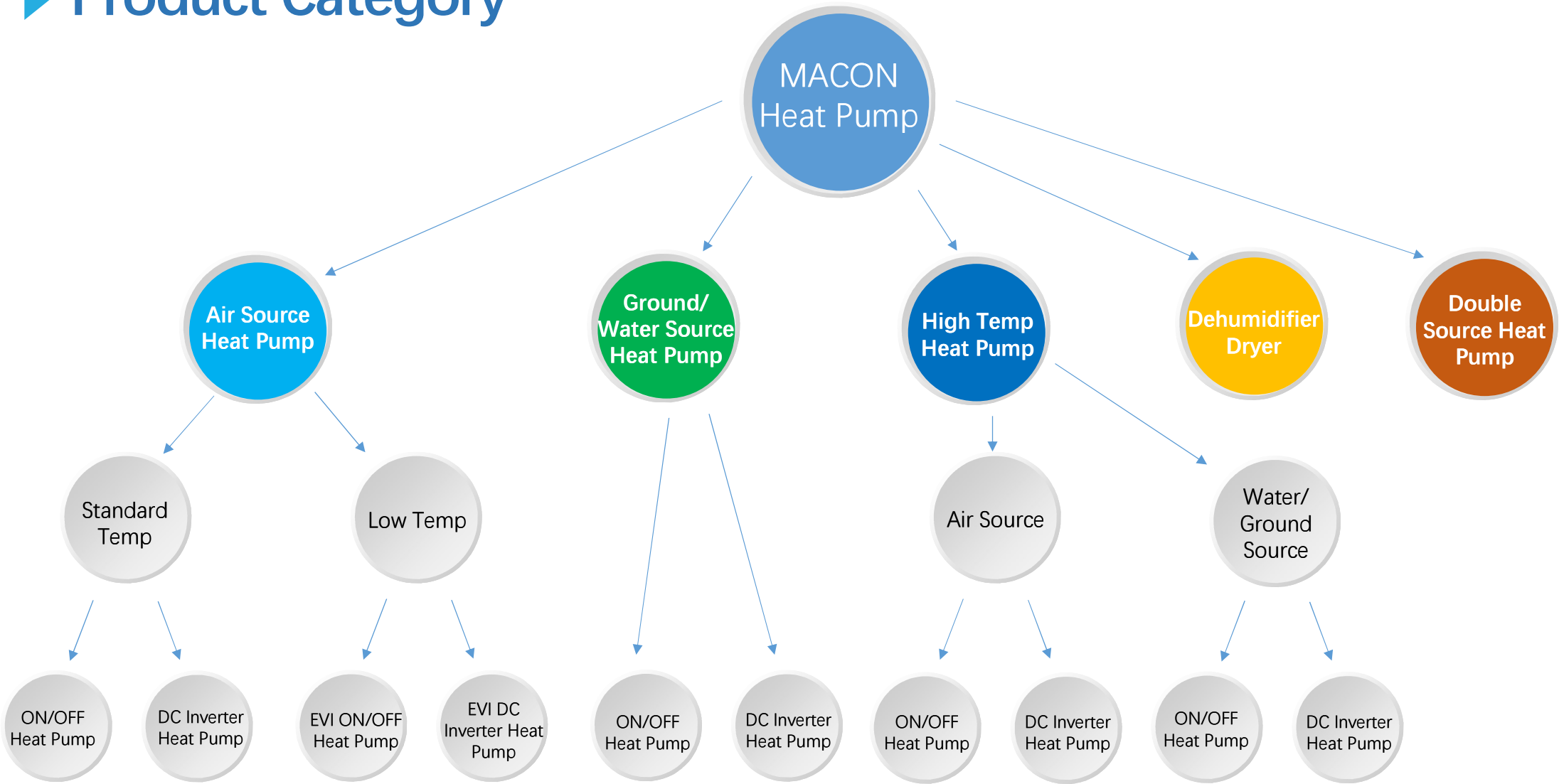


China Energy Conservation Association Council Member

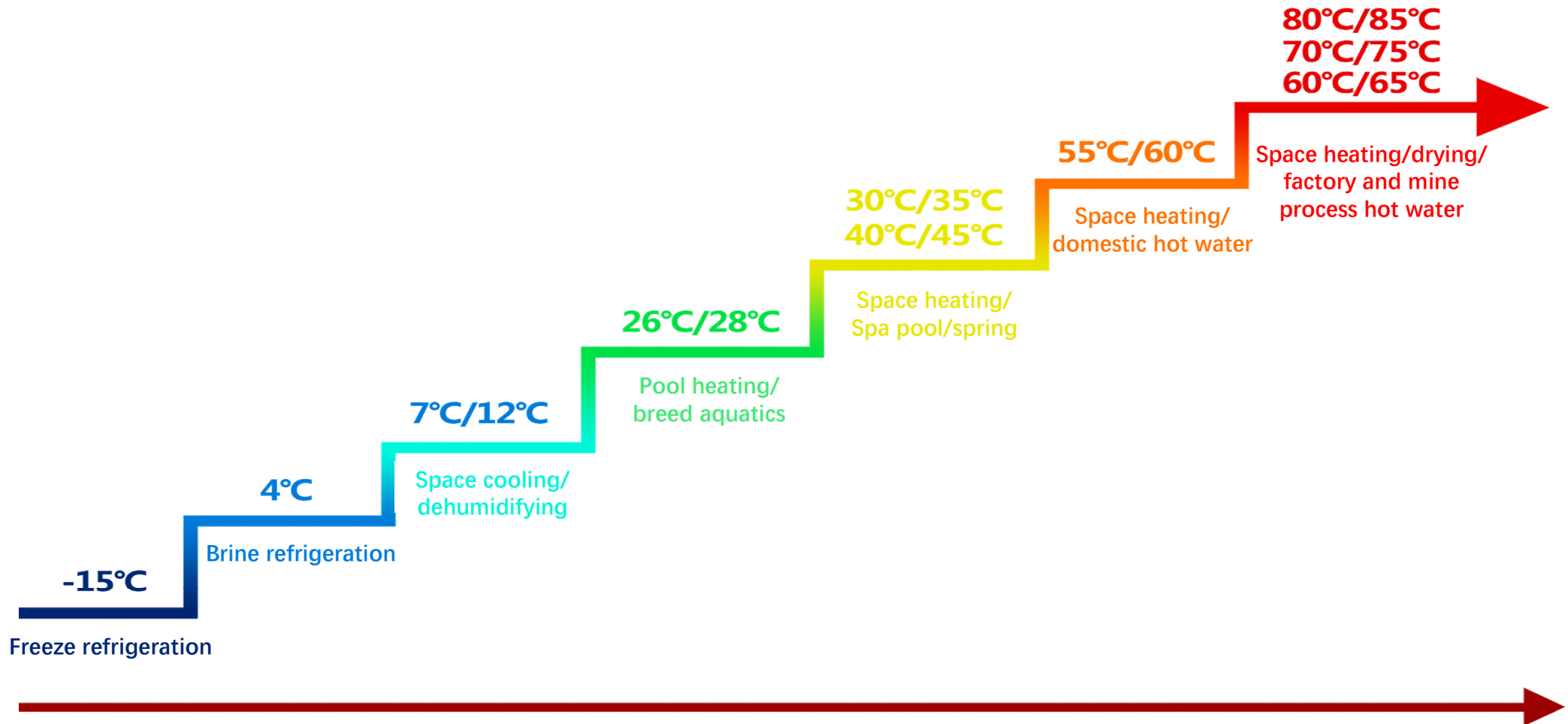
04 Product Range



► Product Category










► Product Applicable Temperature Range



► Product Working Temperature Range

Working Temp Range	Heat Pump Selection	Max Water Temp
-35°C ~ 43°C	EVI DC Inverter High Temp Heat Pump	85°C
-35°C ~ 53°C	EVI DC Inverter Heat Pump	60°C
-35°C ~ 43 °C	EVI ON/OFF Heat Pump	60°C
-25°C ~ 48°C	DC Inverter Heat Pump	55°C
-7°C ~ 43°C	ON/OFF Heat Pump	55°C

▶ Hot Sale Product Series

Product Series		Photo	Refrigerant	Power	Type	Heating capacity kW (Air 7°C/ Water 35°C, Brine 10°C/ Water 35°C, Air 7°C/ Water 75°C)																											
						6	8	9	10	12	14	15	16	18	20	21	24	30	36	40	45	48	59	60	75	90	103	120	140	150	180		
Super Heating Star	A Series		R410A/R32	1 phase	Monoblock			√				√		√	√																		
				3 phase						√		√			√	√	√		√			√	√	√		√	√						
				1 phase	split			√			√		√	√																			
				3 phase						√		√			√	√	√																
	B Series		R32/R290	1 phase	Monoblock	√	√		√	√	√		√																				
				3 phase					√	√	√		√																				
	C Series		R32/R290	1 phase	Monoblock	√	√		√	√																							
Geo Heating Star	A Series		R410A/R32	1 phase	Monoblock			√				√		√		√																	
				3 phase						√		√		√	√	√		√			√	√	√		√								
	B Series			1 phase							√		√		√																		
				3 phase							√		√		√																		
Flame Heating Star	/		R134A+R410A/ R134A+R32	1 phase	Monoblock					√																							
				3 phase												√			√		√				√								

05 Outstanding Applications



► Outstanding Projects



Heating area:

270,000m²
89 rural community
buildings

Installation:

100 units of 130kW EVI
modular heat pump



► Outstanding Projects

Hot water demand:

1200m³/day

15 student dormitories

Installation:

48 units of 50HP EVI hot water heat pump



Heating area:

33200m²

Science and technology R&D Base

Installation:

16 units of 25HP EVI heat pump

14 units of 50HP EVI heat pump

► Outstanding Projects

Heating area:

46,000m²

13 residential buildings

Installation:

17 units of 50HP EVI modular heat pump



Heating area:

4000m²

Old residential Building

Installation:

34 units of 6HP EVI heat pump

► Outstanding Projects



Heating area:

10,000m²

Yanqing District Finance Bureau

Installation:

11 units of 50HP EVI modular heat pump

Heating area:

14,000m²

Scenic area estate

Installation:

14 units of 60HP EVI modular heat pump



► Outstanding Projects



Heating area:
9600m²
6 chicken coops

Installation:
12 units of 25HP high temperature heat pump

MACON[®]

Thanks for Your Attention!



- Looking forward to our cooperation.

