

# H.Stars High Temperature Heat Pump



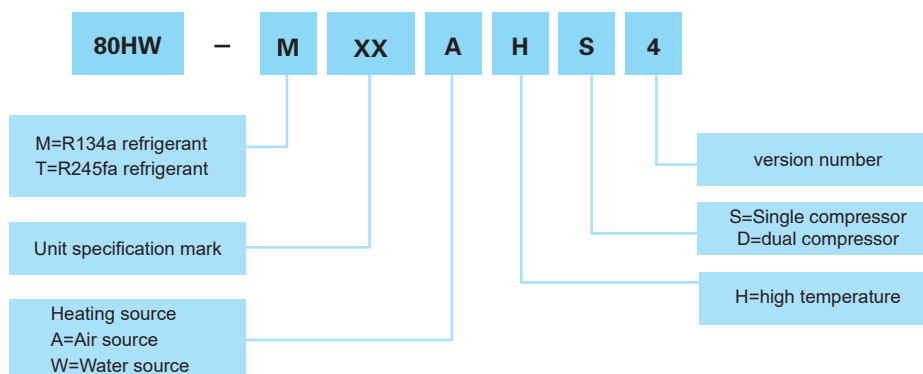
H.Stars (Guangzhou) Refrigerating Equipment Group Ltd.



H.Stars (Guangzhou) Refrigerating Equipment Group Co., Ltd., established in 1992, is a foreign-invested enterprise, headquarter located in Economic and Technological Development Zone of Guangzhou, as an important member of H.Stars (HK) Group, has specialized in manufacturing of refrigerating air conditioning and industrial heating and cooling equipment. It has various special equipment design, techniques and manufacturing capabilities. H.Stars Group main products include refrigerating

equipment, air conditioning equipment, industrial refrigerating equipment, air side terminal and all kinds of customized HVACR equipment (including explosion-proof, anti-corrosion, purification, ultra-low temperature, high temperature hot water, heat recovery, cold recovery, energy-saving equipment, etc.). H.Stars has obtained different certifications and patents. Customizer high integral design base on customer requirement

## Model Nomenclature



## Air-source High Temperature Heat Pump

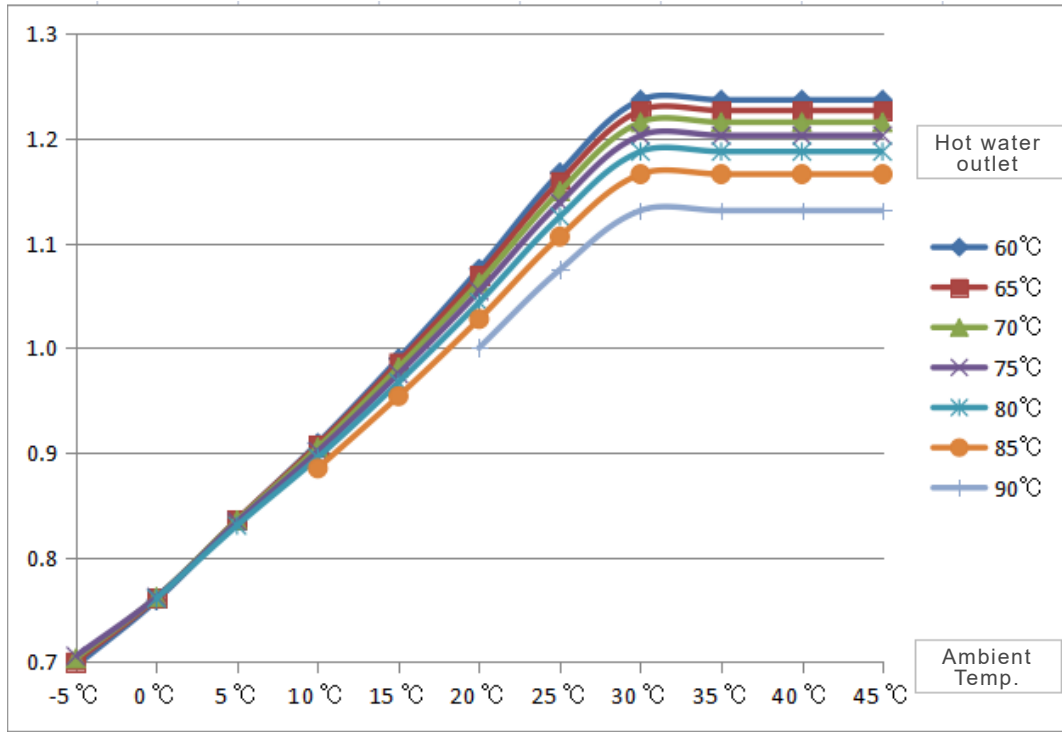


- Adopt air as heat source
- Water temperature outlet 55°C ~90°C
- Ambient temperature: -30°C ~55°C
- 90°C COP 2.3
- Suitable for high temperature heating industry
- Optional VSD variable frequency inverter to improve energy efficiency
- Optional cold recovery system 5°C ~30°C frozen water

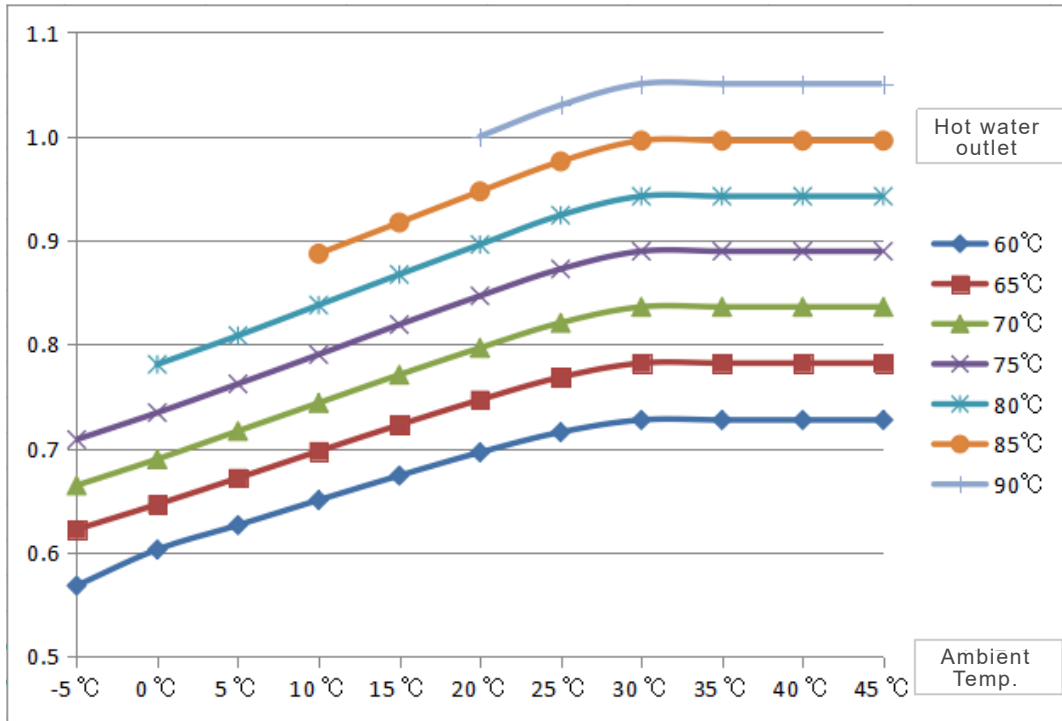
## Water Source High Temperature Heat Pump



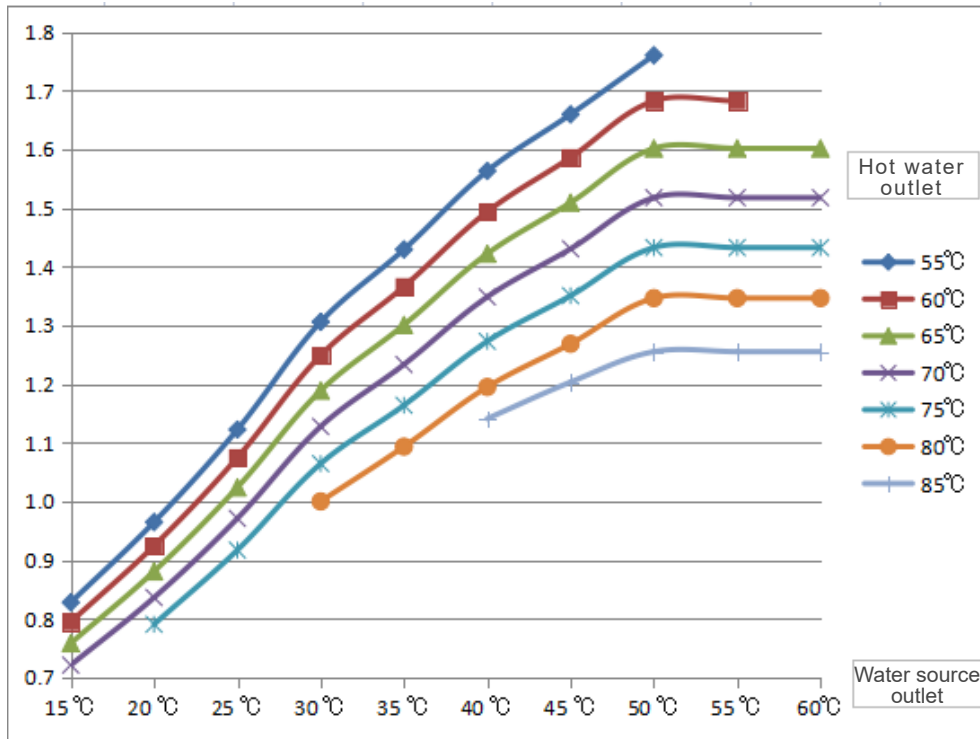
- Use water source to produce 55°C ~90°C hot water
- Not limited by the ambient temperature, the inlet temperature of the water source is 5°C or above
- 3.0 Energy efficiency ratio when outlet water at 90°C
- Suitable for waste heat recovery and utilization, High temperature cycle use, High temperature heating, High temperature drying, High-temperature industrial



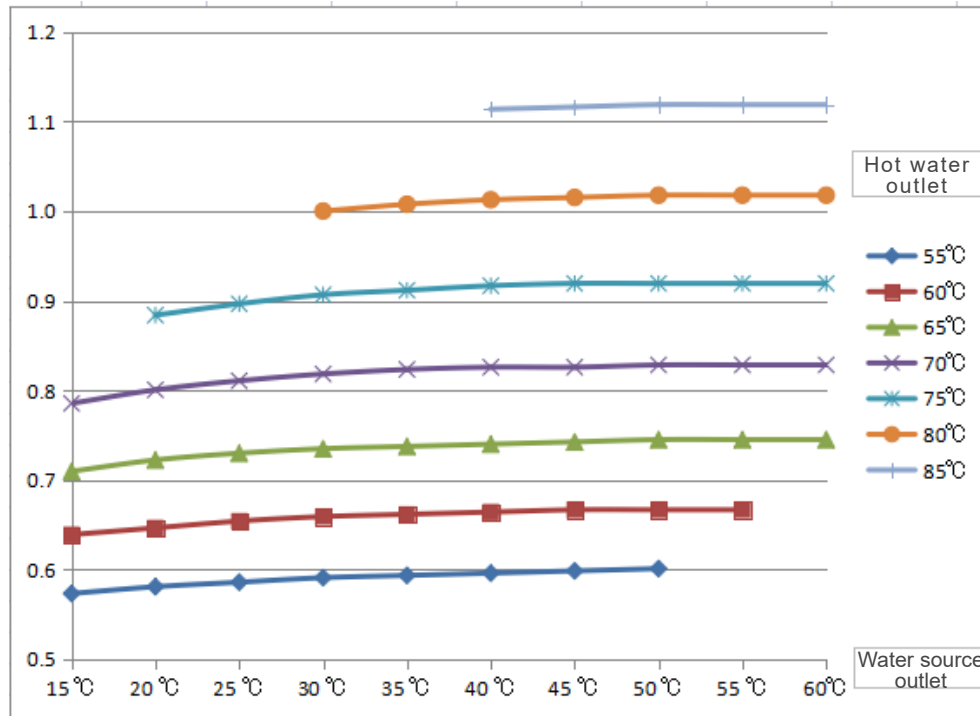
Air source heating correction factor



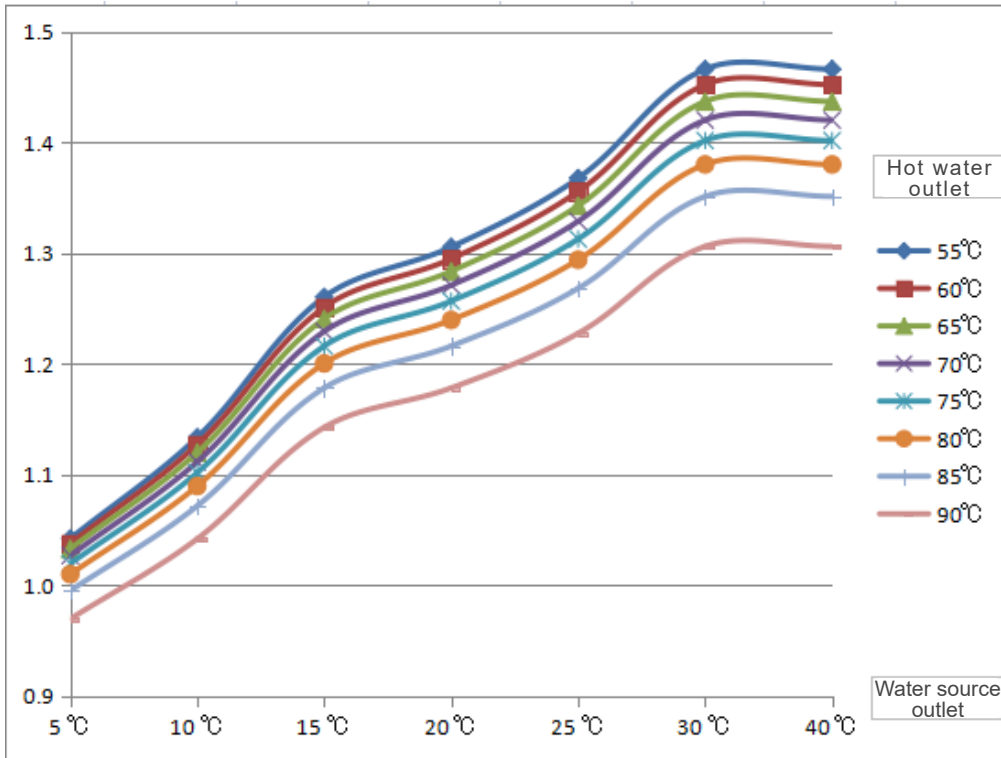
Air source power correction factor



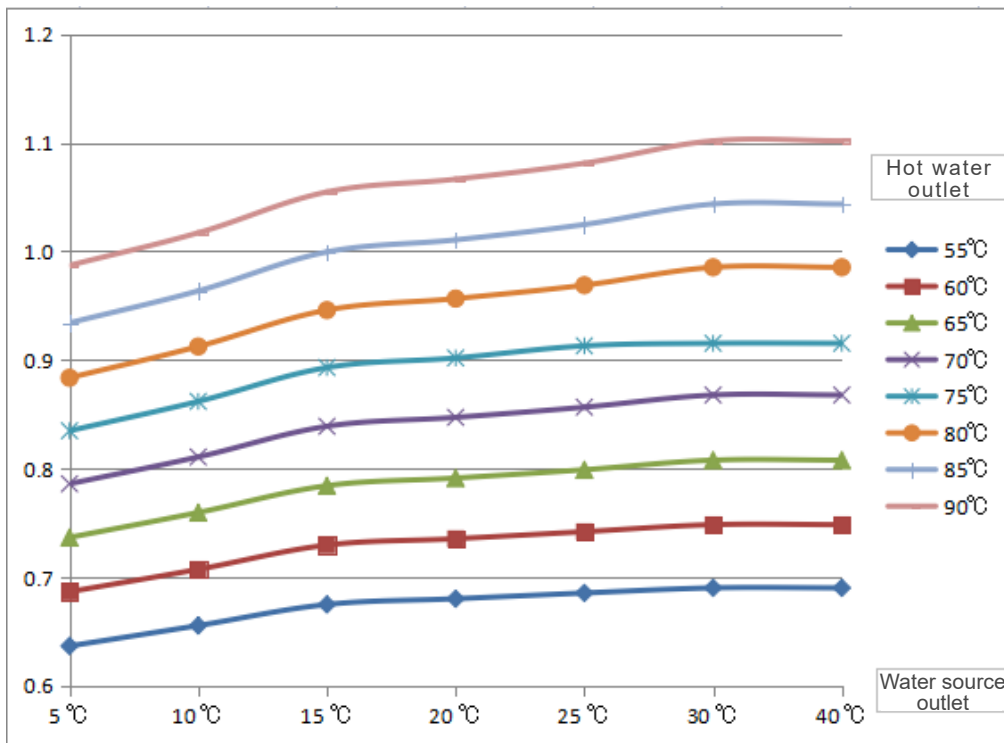
correction coefficient for heating capacity of 80°C effluent water source



Correction factor for power of outlet water source at 80°C



Correction coefficient for heating capacity of 90°C outlet water source



Correction coefficient of 90°C outlet water source power

## Technical parameters of air source high temperature heat pump

Refrigerant: R134a Power Supply: 3φ-380V-50Hz

Model	Nominal heating capacity		Input Power kW	Energy control %	Refrigerant charge kg	Condenser				Evaporator/ Fan			Operating sound dB(A)	Shipping weight kg	Operating weight kg
	kW	USRT				Condenser inlet and outlet pipe diameter in	Cooling water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Condenser water pressure drop kPa	quantity	Air Volume m <sup>3</sup> /h	PowerkW			
80HW-M45/20AHS4	404	115	179	10 75 100	85	3"	69	1	53	6	144000	12	75	2650	2900
80HW-M55/25AHS4	462	131	208		95	3"	79	1	54	6	144000	12	76	2750	3050
80HW-M65/32AHS4	604	172	253		125	4"	104	1	55	8	192000	16	77	2850	3200
80HW-M83/41AHS4	732	208	305		150	5"	126	1	56	8	192000	16	78	3000	3250
80HW-M45/20AHD4	807	230	357		170	5"	139	1	68	12	288000	24	79	3500	3750
80HW-M55/25AHD4	924	263	417		190	5"	159	1	69	12	288000	24	80	3700	3950
80HW-M65/32AHD4	1207	343	505		250	8"	208	1	74	16	384000	32	86	3860	4110
80HW-M83/41AHD4	1463	416	611		300	8"	252	1	80	16	384000	32	90	3970	4220

Note:

1. Nominal working conditions: air dry/wet bulb temperature 20°C /15°C , hot water inlet/outlet temperature 85°C /90°C ; fouling coefficient 0.088 m<sup>2</sup> · °C /kW;
2. Ambient temperature range: 5°C ~43°C , please contact the manufacturer when the ambient temperature is lower than 5°C ;
3. The highest outlet hot water temperature is 90°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.

## Technical parameters of air source high temperature heat pump

Refrigerant: R1234ze Power Supply: 3φ-380V-50Hz

Model	Nominal heating capacity		Input Power kW	Energy control %	Refrigerant charge kg	Condenser				Evaporator/ Fan			Operating sound dB(A)	Shipping weight kg	Operating weight kg
	kW	USRT				Condenser inlet and outlet pipe diameter in	Cooling water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Condenser water pressure drop kPa	quantity	Air Volume m <sup>3</sup> /h	PowerkW			
80HW-U45/20AHS4	280	79	136	10 50 100	85	3"	48	1	53	6	144000	12	75	2650	2900
80HW-U55/25AHS4	320	91	157		95	3"	55	1	54	6	144000	12	76	2750	3050
80HW-U65/32AHS4	417	119	194	10 50 75 100	125	4"	72	1	55	8	192000	16	77	2850	3200
80HW-U83/41AHS4	504	143	233		150	5"	87	1	56	8	192000	16	78	3000	3250
80HW-U45/20AHD4	559	159	273	10 50 100	170	5"	96	1	68	12	288000	24	79	3500	3750
80HW-U55/25AHD4	640	182	315		190	5"	110	1	69	12	288000	24	80	3700	3950
80HW-U65/32AHD4	834	237	388	10 50 75 100	250	8"	143	1	74	16	384000	32	86	3860	4110
80HW-U83/41AHD4	1008	287	466		300	8"	173	1	80	16	384000	32	90	3970	4220

Note:

1. Nominal working conditions: air dry/wet bulb temperature 20°C /15°C , hot water inlet/outlet temperature 85°C /90°C ; fouling coefficient 0.088 m<sup>2</sup> · °C /kW;
2. Ambient temperature range: 5°C ~43°C , please contact the manufacturer when the ambient temperature is lower than 5°C ;
3. The highest outlet hot water temperature is 90°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.



## Technical parameters of water source high temperature heat pump (80 °C )

Refrigerant: R134a Power Supply: 3 φ -380V-50Hz

Model	Nominal heating capacity		Energy control %	Refrigerant charge kg	Condenser				Evaporator				Operating sound dB(A)	Shipping weight kg	Operating weight kg
	Heating capacity kW	power kW			Pipe connection in	Water flow m3/h	Water Side MAX Pressure MPa	Water pressure drop kPa	Pipe connection in	Water flow m3/h	Water Side MAX Pressure MPa	Water pressure drop kPa			
80HW-M100WHS4	97	40	33 66 100	25	2-1/2"	17	1	37	2"	10	1	43	73	980	1230
80HW-M230WHS4	240	94	25 50 75 100	55	3"	41	1	45	2-1/2"	25	1	62	74	1350	1600
80HW-M260WHS4	247	96		45	3"	42	1	46	3"	26	1	63	75	1460	1710
80HW-M410WHS4	402	153		80	4"	69	1	51	4"	43	1	71	79	2030	2280
80HW-M470WHS4	457	172		120	5"	79	1	53	4"	49	1	72	80	2180	2430
80HW-M710WHS4	689	257		175	5"	118	1	58	5"	74	1	72	85	2980	3230
80HW-M790WHS4	760	281		195	5"	131	1	64	6"	82	1	73	86	3220	3470

Note:

1. Nominal heating capacity standard: heat source water inlet and outlet temperature 35°C/30°C, hot water inlet and outlet temperature 75°C/80°C; fouling coefficient 0.088 m<sup>2</sup> · °C/kW;
2. The minimum outlet temperature of heat source water is 15°C ;
3. The maximum outlet temperature of hot water is 85°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.

## Technical parameters of water source high temperature heat pump (80 °C )

Refrigerant: R1234ze Power Supply: 3 φ -380V-50Hz

Model	Nominal heating capacity		Energy control %	Refrigerant charge kg	Condenser				Evaporator				Operating sound dB(A)	Shipping weight kg	Operating weight kg
	Heating capacity kW	power kW			Pipe connection in	Water flow m3/h	Water Side MAX Pressure MPa	Water pressure drop kPa	Pipe connection in	Water flow m3/h	Water Side MAX Pressure MPa	Water pressure drop kPa			
80HW-U100WHS4	106	34	33 66 100	35	2-1/2"	18	1	37	2"	12	1	43	73	980	123
80HW-U230WHS4	266	79	25 50 75 100	90	3"	46	1	45	2-1/2"	32	1	62	74	1350	1600
80HW-U260WHS4	273	81		95	3"	47	1	46	3"	33	1	63	75	1460	1710
80HW-U410WHS4	447	129		150	4"	77	1	51	4"	55	1	71	79	2030	2280
80HW-U470WHS4	508	145		170	5"	87	1	53	4"	62	1	72	80	2180	2430
80HW-U710WHS4	768	217		253	5"	132	1	58	5"	95	1	72	85	2980	3230
80HW-U790WHS4	847	236		280	5"	146	1	64	6"	105	1	73	86	3220	3470

Note:

1. Nominal heating capacity standard: heat source water inlet and outlet temperature 35°C/30°C, hot water inlet and outlet temperature 75°C/80°C; fouling coefficient 0.088 m<sup>2</sup> · °C/kW;
2. The minimum outlet temperature of heat source water is 15°C ;
3. The maximum outlet temperature of hot water is 85°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.

## Technical parameters of water source high temperature heat pump (90 °C)

Refrigerant: R134a Power Supply: 3 φ -380V-50Hz

Model	Nominal heating capacity		Energy control %	Refrigerant charge kg	Condenser				Evaporator				Operating sound dB(A)	Shipping weight kg	Operating weight kg
	Heating capacity kW	power kW			Pipe connection in	Water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Water pressure drop kPa	Pipe connection in	Water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Water pressure drop kPa			
80HW-M45/20WHS4	360	170	10 75 100	150	5"	62	1	56	4"	33	1	70	73	2930	3180
80HW-M55/25WHS4	409	195		175	5"	70	1	58	5"	37	1	72	74	3000	3250
80HW-M65/32WHS4	534	243		205	5"	92	1	73	5"	50	1	88	75	3450	3700
80HW-M83/41WHS4	645	291		230	5"	111	1	76	6"	61	1	91	76	3700	3950
80HW-M45/20WHD4	720	340		300	5"	124	1	81	6"	65	1	92	81	3890	4140
80HW-M55/25WHD4	817	390		350	6"	141	1	84	6"	74	1	94	82	3960	4210
80HW-M65/32WHD4	1068	487		410	8"	184	1	92	8"	100	1	96	83	4100	4350
80HW-M83/41WHD4	1289	582		460	8"	222	1	97	8"	122	1	98	84	4370	4620

Note:

1. Nominal heating capacity standard: heat source water inlet and outlet temperature 12°C/7°C, hot water inlet and outlet temperature 85°C/90°C; fouling coefficient 0.088 m<sup>2</sup> ·°C/kW;
2. The minimum outlet temperature of heat source water is 5°C ;
3. The maximum outlet temperature of hot water is 90°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.

## Technical parameters of water source high temperature heat pump (90 °C)

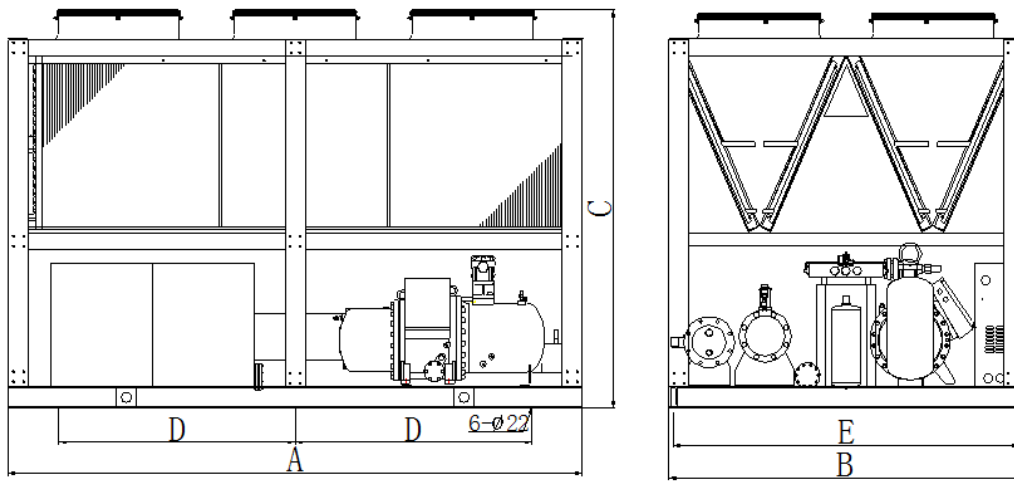
Refrigerant: R1234ze Power Supply: 3 φ -380V-50Hz

Model	Nominal heating capacity		Energy control %	Refrigerant charge kg	Condenser				Evaporator				Operating sound dB(A)	Shipping weight kg	Operating weight kg
	Heating capacity kW	power kW			Pipe connection in	Water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Water pressure drop kPa	Pipe connection in	Water flow m <sup>3</sup> /h	Water Side MAX Pressure MPa	Water pressure drop kPa			
80HW-U45/20WHS4	275	134	10 50	80	5"	47	1	56	4"	24	1	70	73	2930	3180
80HW-U55/25WHS4	315	154	100	100	5"	54	1	58	5"	28	1	72	74	3000	3250
80HW-U65/32WHS4	410	191	10 50	120	5"	70	1	73	5"	38	1	88	75	3450	3700
80HW-U83/41WHS4	495	229	75 100	150	5"	85	1	76	6"	46	1	91	76	3700	3950
80HW-U45/20WHD4	549	267	10 50	160	5"	94	1	81	6"	48	1	92	81	3890	4140
80HW-U55/25WHD4	629	308	100	200	6"	108	1	84	6"	55	1	94	82	3960	4210
80HW-U65/32WHD4	819	381	10 50	240	8"	141	1	92	8"	75	1	96	83	4100	4350
80HW-U83/41WHD4	990	458	75 100	300	8"	170	1	97	8"	92	1	98	84	4370	4620

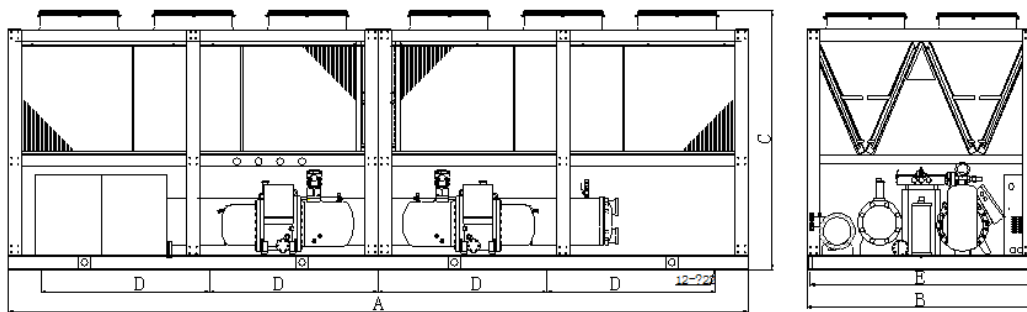
Note:

1. Nominal heating capacity standard: heat source water inlet and outlet temperature 12°C/7°C, hot water inlet and outlet temperature 85°C/90°C; fouling coefficient 0.088 m<sup>2</sup> ·°C/kW;
2. The minimum outlet temperature of heat source water is 5°C ;
3. The maximum outlet temperature of hot water is 90°C ;
4. Specifications and dimensions are subject to change due to product improvements without notice.

Air source high temperature heat pump

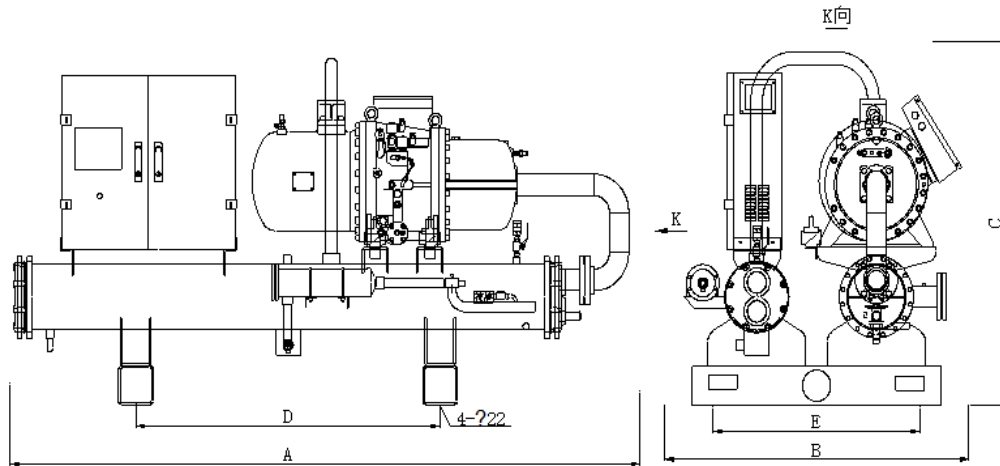


Model	A	B	C	D	E
80HW-M/U45/20AHS4	3400	2100	2400	1400	2050
80HW-M/U55/25AHS4	3400	2100	2400	1400	2050
80HW-M/U65/32AHS4	4500	2100	2400	2025	2050
80HW-M/U83/41AHS4	4500	2100	2400	2025	2050



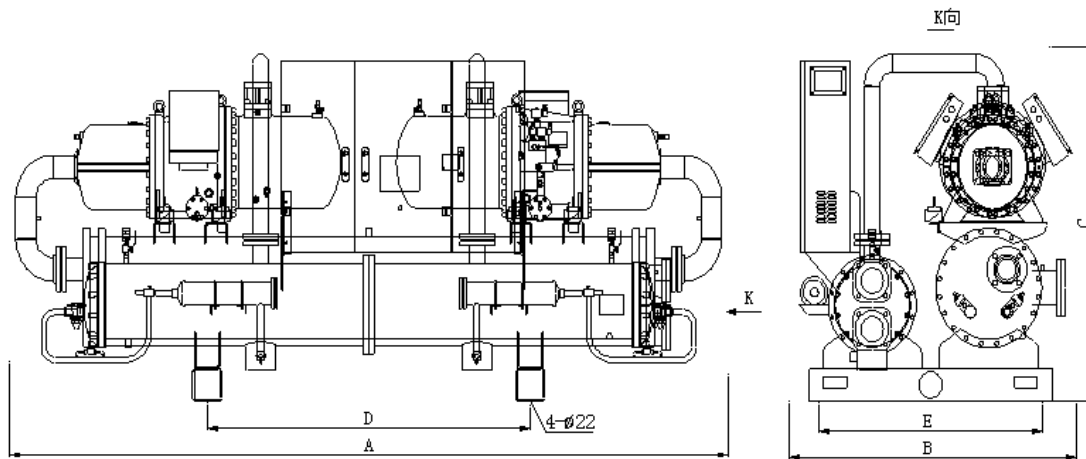
Model	A	B	C	D	E
80HW-M/U45/20AHD4	6800	2100	2400	1550	2050
80HW-M/U55/25AHD4	6800	2100	2400	1550	2050
80HW-M/U65/32AHD4	9000	2100	2400	2025	2050
80HW-M/U83/41AHD4	9000	2100	2400	2025	2050

## Water source high temperature heat pump



Model	A	B	C	D	E
80HW-M/U100WHS4	2150	800	1500	900	600
80HW-M/U230WHS4	2650	1400	1500	1400	1050
80HW-M/U260WHS4	2900	1400	1500	1400	1050
80HW-M/U410WHS4	2960	1400	1550	1400	1050
80HW-M/U470WHS4	2960	1400	1550	1400	1050
80HW-M/U710WHS4	3700	1600	1800	1600	1250
80HW-M/U790WHS4	3700	1800	2000	1600	1250
80HW-M/U45/20WHS4	3000	1400	1800	1400	1050
80HW-M/U55/25WHS4	3700	1600	1800	1600	1250
80HW-M/U65/32WHS4	3700	1800	2000	1600	1250
80HW-M/U83/41WHS4	3700	1800	2000	1600	1250

Water source high temperature heat pump



Model	A	B	C	D	E
80HW-M/U45/20WHD4	4000	1650	1900	1800	1250
80HW-M/U55/25WHD4	4600	1700	1900	2000	1250
80HW-M/U65/32WHD4	4600	1850	2000	2000	1450
80HW-M/U83/41WHD4	4700	1850	2000	2000	1650



H.Stars (Guangzhou) Refrigerating Equipment Group Ltd., a HongKong brand company established in 1992 ,in Economic & Technological Development Zone of Guangzhou, China , composed of 8 subsidiaries to provide one-stop solution to HVAC customers, specializing in R&D, production, design and installation. As the company grows, H.Stars group expands its business globally and has sold to 53 different countries. H.Stars Group is awarded with "New and High Technology Enterprise in Guangzhou" and has become the training base of many universities both in China and abroad via technology cooperation.

H.Stars group supplies an extensive line of Commercial and Industrial Energy Saving HVAC products including: Air Cooled Chiller, Water Cooled Chiller, Industrial Chiller, Centrifugal Chiller , Magnetic oil free centrifugal chiller , Multi-function Chiller, Hot Water Unit, Heat Recovery Unit, Heat Pump Unit, Condensing Unit, Glycol Chiller, Shell and Tube Heat Exchanger, Air Handling Unit, Fan Coil Unit, Cooling Tower, etc. all type of HVAC products.

H.Stars Group has been dedicated in quality and innovation and is technically strong in commercial and industrial application as a HVAC manufacturer. Apart from obtaining plenty of energy-saving product patents, H.Stars Group has achieved CE certifications for Pressure Vessel and standard chillers, BR1, ASME, ISO9001:2000, ISO14001:2004 and other certifications.

A good reputation of H.Stars Group has been built and delivers a full HVAC service to customers worldwide. Our products are widely applied in industries for cooling of Laser generators, Welding electrodes, Cutting machines, Electric spark machines, Extrusion process, Hydraulic System, Electroplating, Ultrasonic Cleaning, Ion Plating film, Electronic facility, Electrical appliance components, Compressed Gas Dehumidification, Dairy and Beverage Cooling processing, Pharmaceutical and Biological products, Medical equipment, Glass Coating, Tempered Glass and Cultivation Sea Food.

H.Stars Group will continue to develop energy saving and environmental friendly equipment to create "The Efficiency Planet" as our obligation. By focusing on customers' needs and wants in order to contribute more our potentials, from now on, H.Stars Group will hand in hand with you to be a shining star in the foreseeable future.



### **H.Stars (Guangzhou) Refrigerating Equipment Group Ltd**

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Instagram: [www.instagram.com/hstars\\_chiller\\_maker](https://www.instagram.com/hstars_chiller_maker)