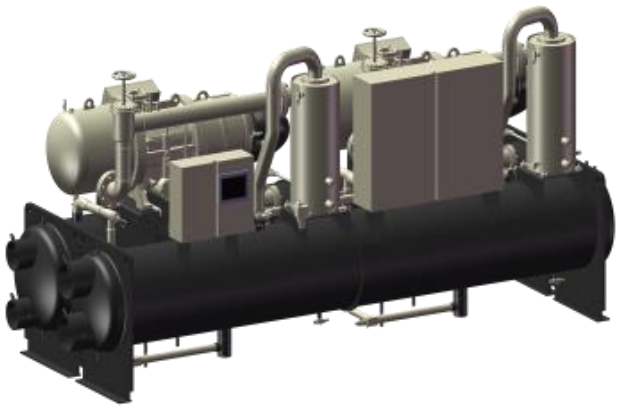
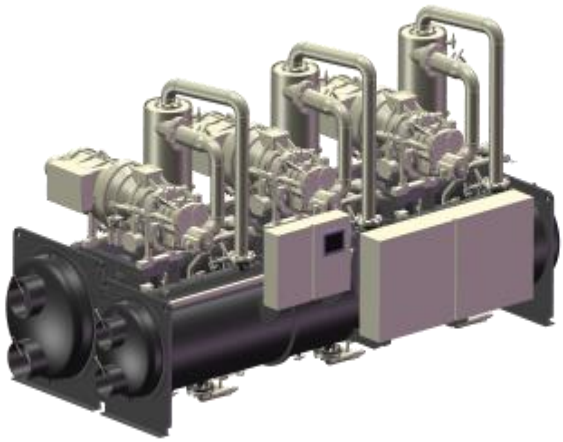
Product Catalog

High Temperature Water Source Heat Pumps
(Providing 65℃~122℃ high-temperature hot water)
56 to 568 Tons – 50 & 60 Hz R134a & R245fa Refrigerant





Withair Group (China) Limited
Withair (Nanjing) Industries Co., Ltd

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Digit 1. W: Withair® brand
Digit 2. 01: series number
Digit 3. R2: water source heat pump
Digit 4. Specification code
Digit 5. U: Ultra-temperature
Digit 6. Default: R134a A: R245fa
Digit 7. N: Normal temperature, L: Low temperature, S: Special temperature
Digit 8. V2a: 380~415V/3Ph/50Hz, V2b: 380V/3Ph/60Hz
V3a: 440~460V/3Ph/60Hz, V3b: 575V/3Ph/60Hz

NOTE: For illustration purposes only. Not all options available with all models.
Please consult your local Withair® Representative for specific availability.

Ultra-high Temperature Water Source Heat Pumps
– Offer a comprehensive solution to the USER !

Withair's Ultra-high Temperature Water Source Heat Pump can produce high-temperature hot water at 65~122℃ while cooling, and realize the dual-temperature and double-effect application of waste heat recovery. One set of ultra-high temperature heat pump equipment is used to replace the traditional two sets.

The fuel boiler and refrigeration/chiller unit equipment can fully meet the energy demand of the production process. The ultra-high temperature heat pump consumes a small amount of electricity, and while completing the task of the refrigeration/chiller unit, it can obtain free to the heat generated by the fuel boiler. The heating COP can reach above 3.5, the cooling COP can reach above 4, and the overall efficiency can reach above 7.5. that consumes 1,000 Watts of electricity can get 7,500 watts of energy (heat + cooling), which can save more than 40% of energy compared to traditional equipment, giving full play to its maximum energy efficiency advantage.

There is no combustion process in operation, no soot emission, no waste generation. It can be designed and configured according to different energy consumption characteristics to ensure the efficient and stable operation of the system.

Each unit is verified for total unit performance before shipping to insure quality standards are inherent in every unit.

A Green Commercial Heating Product

Our definition of heat pump

A heat pump is a device that increases the temperature of a fluid or enthalpy rise.

Heat Pumps

- Indoor air temperature increases: Air Conditioning Heat Pump
- Process gas temperature rise: Drying Heat Pump
- Process water temperature rise: Industrial Heat Pump
- Process water temperature rise and fall: Double Effects Heat Pump
- Steam temperature or pressure rise: Steam Compression Heat Pump
- Hot water supply: Water Heater Heat Pump
- Supply steam: Steam Heat Pump
- Supply cold water: Refrigerating Machine / Chiller

Our Screw Heat Pump Product Categories

- 100℃

Refrigerating Machine / Chiller

- 0℃

Normal Temperature Heat Pump

+45℃

High Temperature Heat Pump

+65℃

Ultra-high Temperature Heat Pump

+85℃

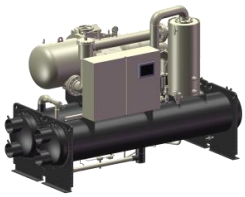
Special Temperature / Steam Heat Pump

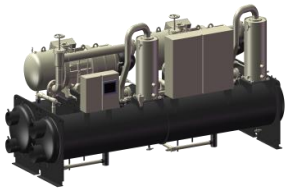
+125℃

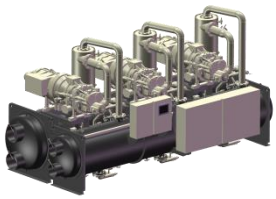
Freezing, refrigerating

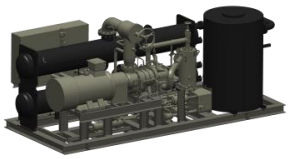
Green air conditioning

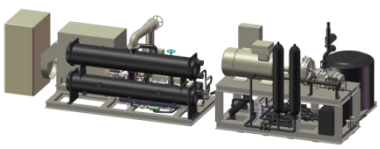
Green industrial and agricultural cooling and heating

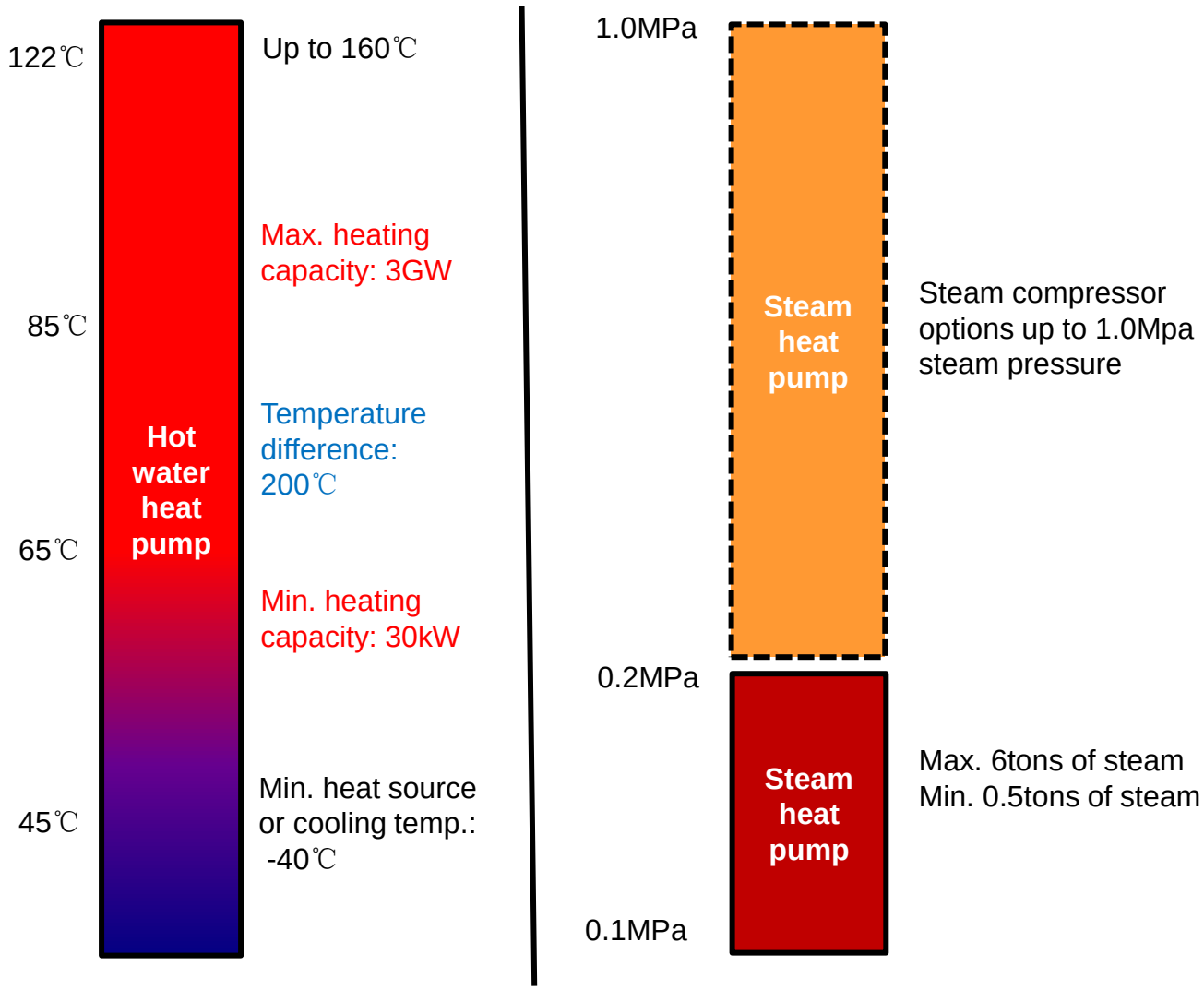











122℃
Up to 160℃
Max. heating capacity: 3GW
85℃
Temperature difference: 200℃
Hot water heat pump
65℃
Min. heating capacity: 30kW
45℃
Min. heat source or cooling temp.: -40℃
1.0MPa
Steam heat pump
Steam compressor options up to 1.0Mpa steam pressure
0.2MPa
Steam heat pump
Max. 6tons of steam
Min. 0.5tons of steam
0.1MPa

The Building Owner

- High efficiency units reduce energy consumption/operating costs and can contribute to earning points toward LEED® certification.
- Open Choices control feature gives you the flexibility to select standalone thermostat operation or easy, low cost integration with the BAS of your choice using an add-on communication module.
- R-134a refrigerant has no ozone depletion potential or phase out date, helping to minimize environmental impact and protect against refrigerant availability issues over the economic life of your equipment investment.
- High efficiency compressor selections and low vibration design promote quiet operation.
- Durable construction promotes long life, reliable operation.

The Engineer

- Boiler/cooling tower or geothermal unit selections provide flexibility in designing the system that best meets the performance and budget requirements of your project.
- Multiple configurations reduce design time and cost by allowing you to avoid obstructions and use minimum installation work.
- Multiple features and options (heat recovery, hydraulic kit, modular design, multiple operating modes, wide operating temperature range, high anti-interference ability) give you the flexibility to select units that closely match application requirements.

Installing Contractor / Service Personnel

- Small footprint design makes it easier to meet space requirements of new construction and replacement applications.
- Flush water fittings save time in making water connections using one wrench.
- Factory-installed hydraulic kit saves time and expense to field-install.
- External LCD status lights allow quick troubleshooting – no need to open up the unit.
- Easy access to the unit compressor (2-sides), and unit controls (front access).

Wide temperature range

- ✓ Maximum hot water supply temperature 122℃
- ✓ Min. heat source or cooling Temp.-40℃, min. ambient heat Temp.-28℃
- ✓ Max. Temp. difference:160℃, Min Temp. difference: 0℃
- ✓ Max. steam supply pressure: 2kg/m²,Steam compressor up to 10kg/m²

High efficiency

- ✓ High efficiency compressor technology
- ✓ Falling film heat exchanger technology
- ✓ Matching design technology of heating optimization system
- ✓ Adaptive optimal control operation technology
- ✓ Customer customization system design match

Environmental protection

- ✓ Adopt environmental refrigerant,R134a…
- ✓ Strict leak control techniques
- ✓ Oil free lubrication technology

High reliability

- ✓ Design for high temperature conditions
- ✓ Patented compressor design
- ✓ Flexible screw design
- ✓ Falling film heat exchanger design
- ✓ Unit full condition test or witness test

High stability

- ✓ Redundant design for changing working conditions to ensure stable operation when the actual working conditions deviate from the design conditions
- ✓Adaptive control ensures reduced unit downtime without compromising unit safety
- ✓ Remote monitoring, automatic fault alarm

Provide customized solution

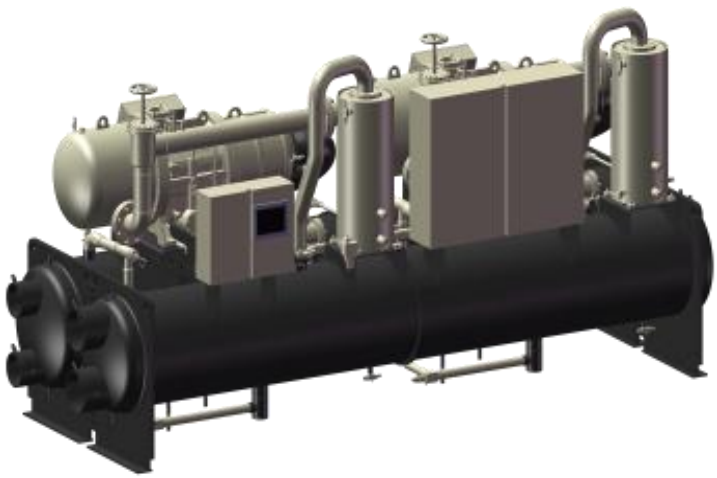
- ✓ Precise selection and design software to ensure that the unit fully meets customer requirements
- ✓ Design systems and configure equipment completely according to customer site conditions and changes
- ✓ Control and monitoring technology according to customer requirements

System optimization

- ✓ According to the actual customized system design and optimization of customers
- ✓ Customized unit selection, design and manufacture
- ✓ Customized control, remote monitoring and after service

Product Characteristics

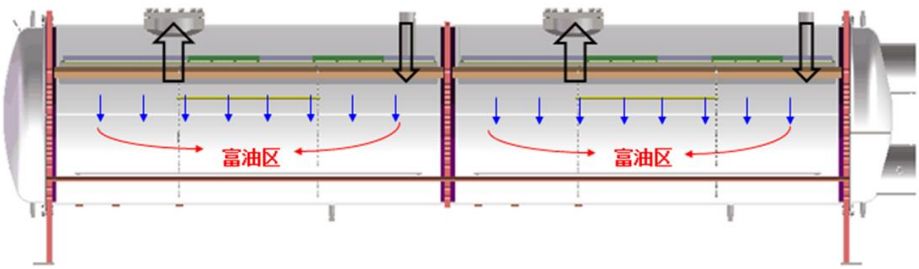
- **High efficiency & Environment-friendly**
  - ✓ High efficiency components (compressor, heat exchanger, etc.)
  - ✓ Environmental protection refrigerant: R134a
  - ✓ Patented spray type heat exchanger, higher heat exchange efficiency
  - ✓ Electronic expansion valve throttling control, to ensure optimal operating efficiency under varying conditions
- **High reliability**
  - ✓ Reliable and intelligent control
  - ✓ Patented oil return technology, high oil separation and oil return efficiency
  - ✓ Dozens of prototype performance verification tests
- **Wide application range**
  - ✓ Heat Pump, Heat Pump with Heat Recovery, Chiller, Ice-making, Ice-making + Heat Pump (Heat Recovery)
  - ✓ Energy control: 8.3 ~ 100% or Continuous (stepless) control
  - ✓ It can be used in low temperature air supply, large temperature difference and small flow, one pump variable flow and other energy-saving air conditioning systems
- **Customer experience design**
  - ✓ User-machine interface design
  - ✓ Simple operation and maintenance
  - ✓ Rich design options

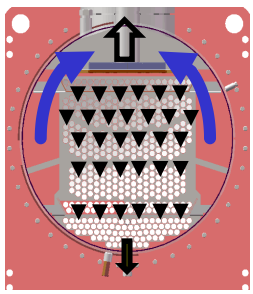


Product Characteristics

- **High efficiency twin screw compressor**
  - ✓ Semi - closed structure, suction cooling motor, high isentropic efficiency
  - ✓ Multiple content product ratio is optional to ensure the highest efficiency of the compressor under customer working conditions
  - ✓ Adopt axial and radial exhaust orifice and floating medium pressure design economizer orifice to improve compressor efficiency
  - ✓ Low noise, high reliability and good adaptability

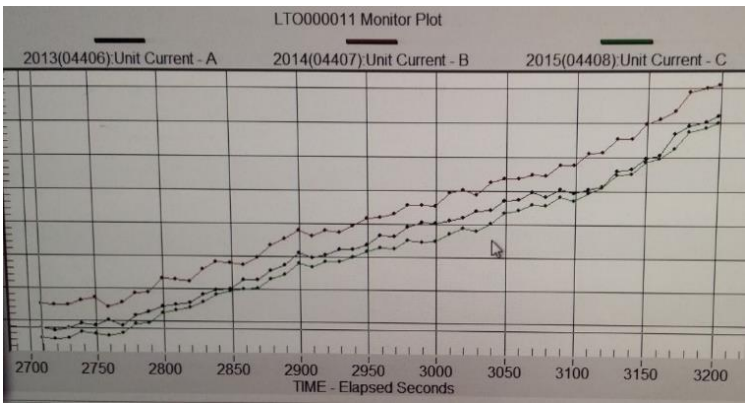
- **Patented falling-film evaporator**
  - ✓ Faster wetting speed, easier to generate vaporization core, better heat transfer performance, high efficiency
  - ✓ Compared with full liquid evaporator, less refrigerant is charged
  - ✓ The oil content in rich area is improved, and the system is easier to return oil, and the unit runs more stably
  - ✓ A tube hoop is used between the heat exchange tube and the tube support hole to reduce the friction of the heat exchange tube

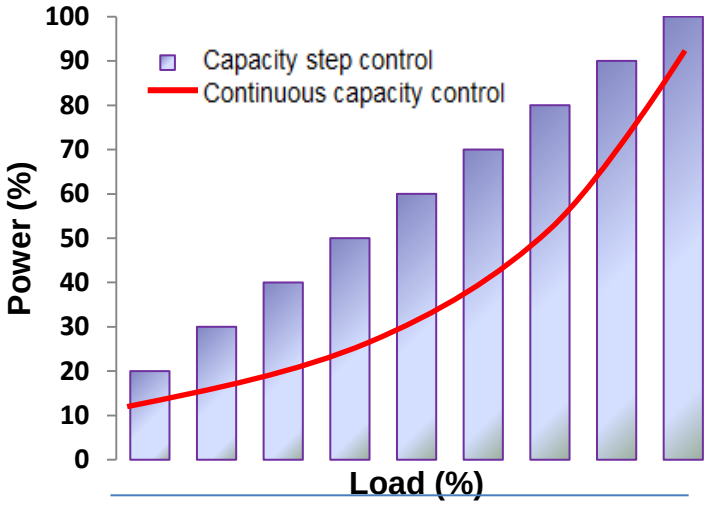




Product Characteristics

- **Precise volume control**
  - ✓ The minimum control period is 45ms
  - ✓ Adopt stepless control and PID control to load and unload





- **Multiple control functions**
  - ✓ Multiple preventive control
  - ✓ Compressor pulse capacity control
  - ✓ Compressor motor cooling control
  - ✓ Unit for oil pump control
  - ✓ Oil return and oil cooling control
  - ✓ Unit repetitive start control
  - ✓ Current soft loading control
  - ✓ Water temperature setting
  - ✓ Oil heater control
  - ✓ Hot start capacity limit control
  - ✓ .....

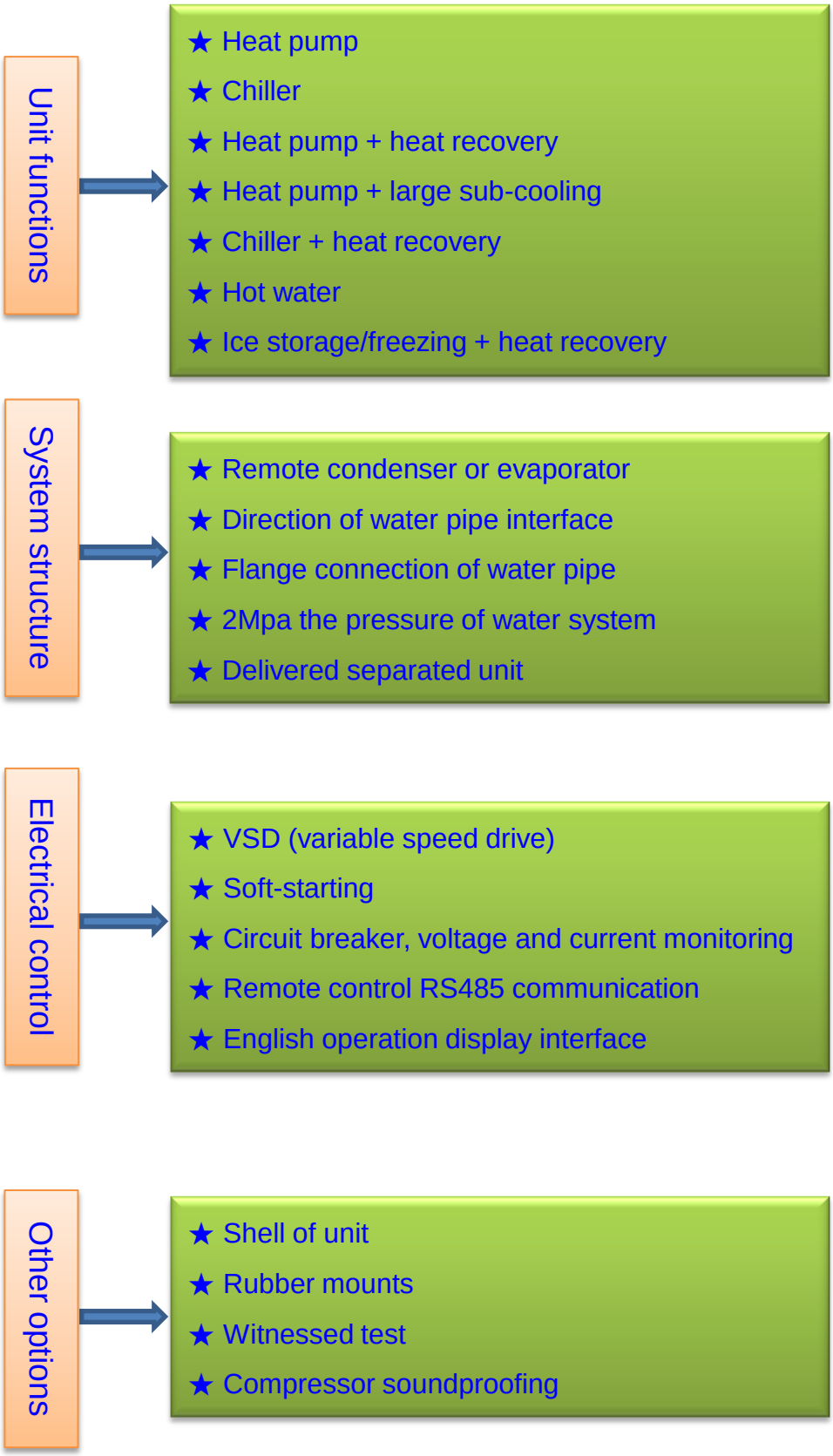
Industrial Heat Pump Products

- High temperature high pressure ratio compressor technology
  - ✓ The semi-enclosed compressor has compact structure and easy maintenance
  - ✓ Intelligent rotor and motor spray technology, improve compressor reliability and unit operating range
  - ✓ Stepless continuous adjustable capacity regulation technology to ensure efficient compression under different working conditions
- High efficient component design
  - ✓ Patented two-stage falling-film evaporator design, improve heat transfer efficiency and reduce refrigerant charging
  - ✓ High efficiency vertical centrifugal oil, efficiency up to 99.97%
  - ✓ Independent super-cooler design improves efficiency while heat recovery
- High efficient unit circulation system design
  - ✓ Optimize and match the equilibrium point of the system to realize the efficient operation of the system under various working conditions
  - ✓ Electronic expansion valve throttling control, to ensure optimal operation efficiency and the most reliable
  - ✓ Heat siphon oil return, high oil return efficiency
- Optimized adaptive control
  - ✓ Automatic intelligent control platform, nearly 20 sensors, nearly 100 control functions, can meet the needs of different customers
  - ✓ Comprehensive and diversified system control and restrictive protection ensure reliable and stable operation of the unit

Main Configuration

- Power supply: 380V, 10kV
- Compressor starting: star triangle, soft start, direct start
- Water side pressure: 1.0Mpa, 2.0Mpa
- Water pipe connection: flange, coupling
- Complete unite sound insulation dust protection cover
- Others: water inlet direction, anti-corrosion heat exchange tube, electrode descaling, field assembly, etc.

Optional Configurations



Quality Supply Chain ——Strong cooperation and creating good quality

1. Compressors

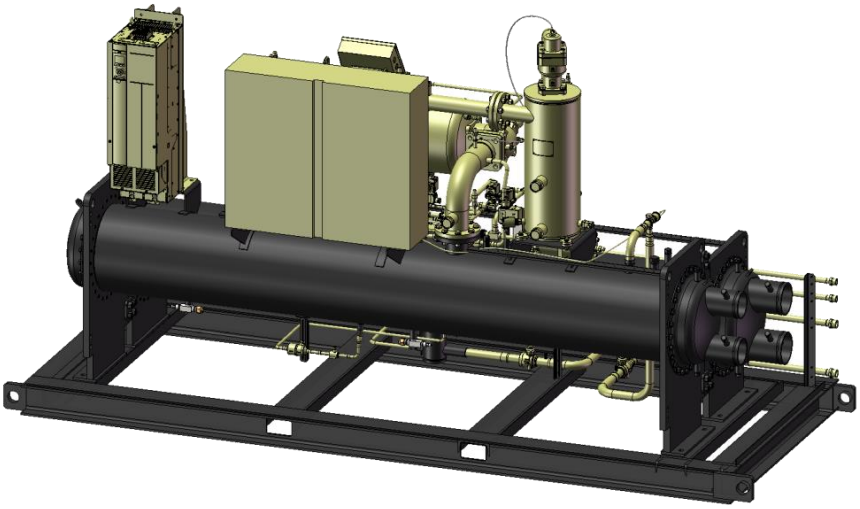
HANBELL RefComp

2. Refrigerant accessories

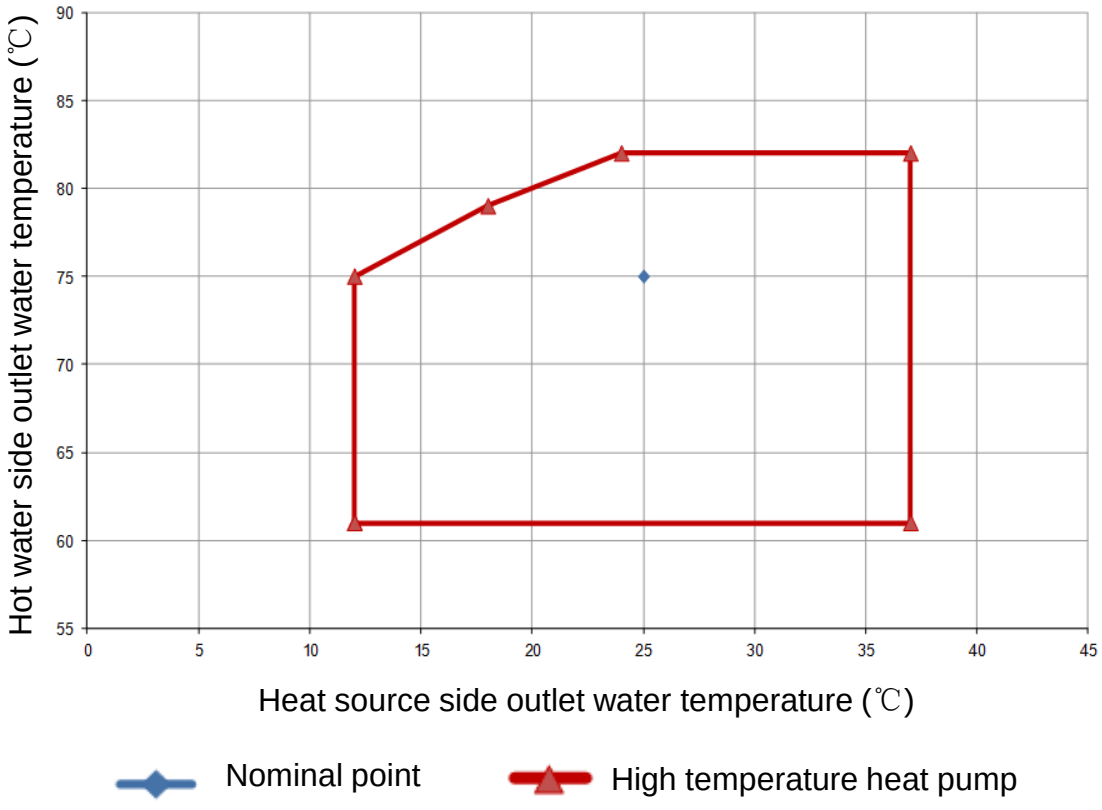
Danfoss castel SANHUA ALCO CONTROLS EMERSON Climate Technologies

3.Electric parts

Schneider Electric SIEMENS ABB CHINT CAREL



- **Heating capacity: 200 ~ 2,000kW**
- **Heating outlet water temperature: 65℃~ 82℃**
- **Heat source outlet water temperature: 12℃ ~ 37℃**
- **Refrigerant: R134a**
- **Single stage semi-enclosed screw compressor**
- **Maximum temperature rise 63℃**
- **Others: intelligent control platform, external oil separation, falling film evaporator, etc.**



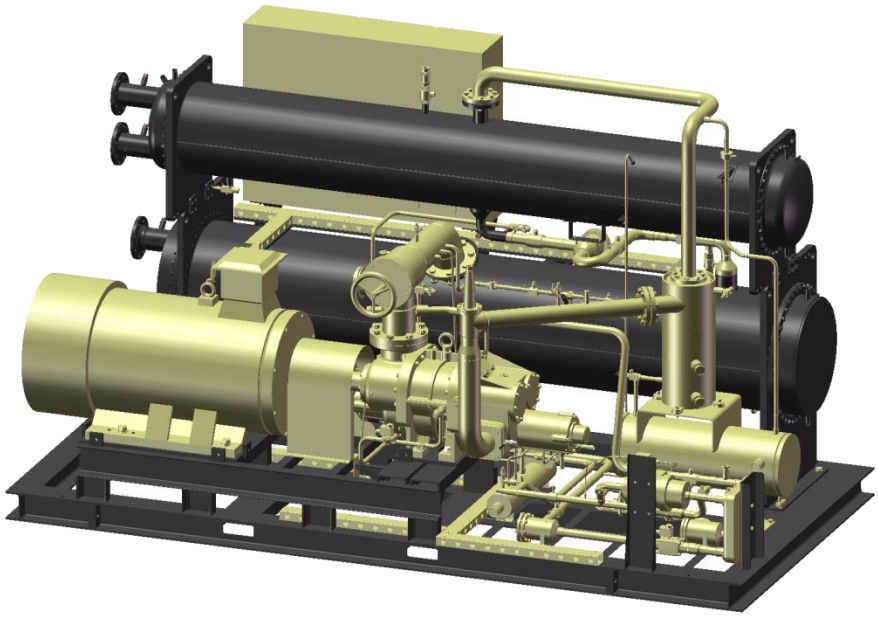
Operating range

Technical Specifications

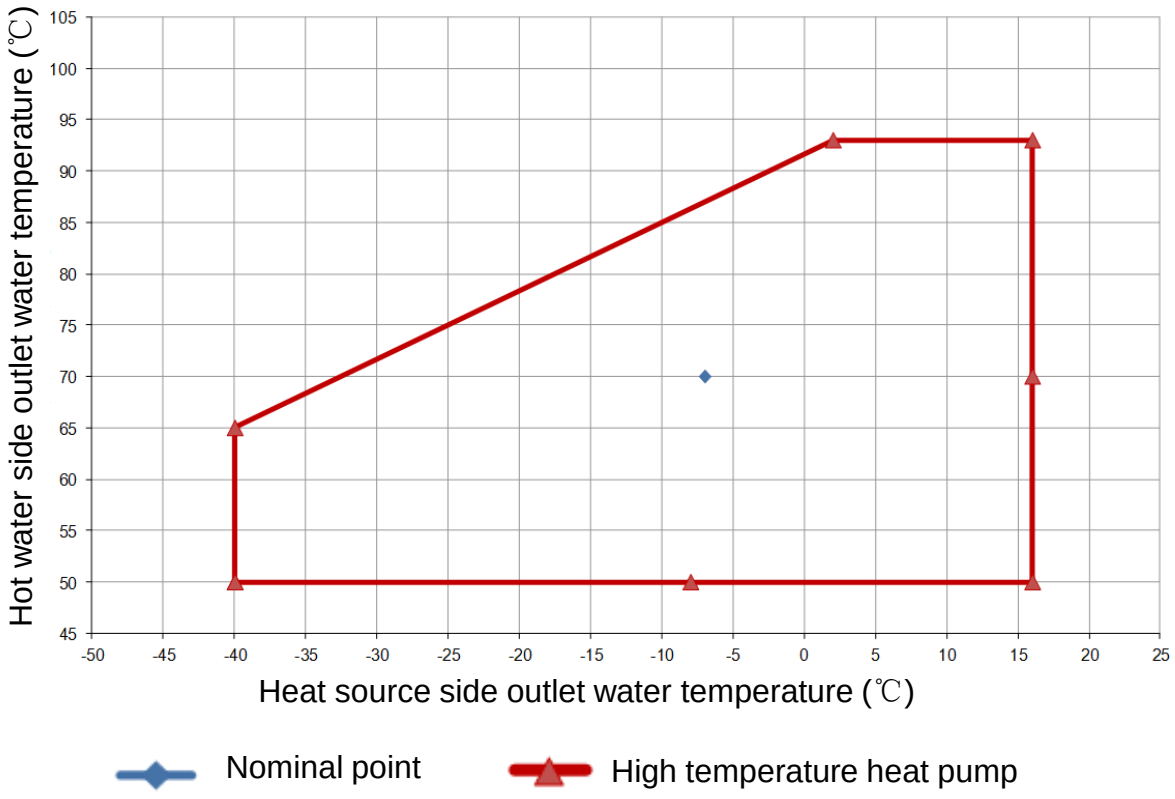
Model No.		W01R2-	200UN	300UN	400UN	500UN	600UN	700UN	800UN
Heating capacity		kW	198.0	299.0	400.0	501.0	602.0	704.0	800.0
		Tons	56.3	85.0	113.7	142.5	171.2	200.2	227.5
Cooling capacity		kW	145.0	218.0	292.0	366.0	439.0	514.0	584.0
		Tons	41.2	62.0	83.0	104.1	124.8	146.1	166.1
Condenser	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	75	75	75	75	75	75	75
	Inlet temperature	℃	65	65	65	65	65	65	65
	Fouling factor	m2.℃/kW	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow rate	m^3/h	17.0	26.0	35.0	44.0	53.0	62.0	70.0
	Pipe size	mm	Φ89	Φ89	Φ89	Φ114	Φ114	Φ114	Φ133
	Pressure drop	kPa	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Evaporator	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	25	25	25	25	25	25	25
	Inlet temperature	℃	28	28	28	28	28	28	28
	Fouling factor	m2.℃/kW	0.018	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	41.0	62.0	84.0	105.0	126.0	147.0	167.0
	Pipe size	mm	Φ114	Φ114	Φ114	Φ133	Φ133	Φ168	Φ168
	Pressure drop	kPa	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Compressor	Type		Advanced Asymmetric semi-closed twin screw compressor						
	Energy control		30～100% (Continous capacity control)						
	Power supply	V/Ph/Hz	380~415/3/50						
	Quantity		1						
	Start-up mode		Y-△						
	Input power	kW	53.0	81.0	108.0	135.0	163.0	190.0	216.0
	Rated current	A	95	145	193	241	281	328	373
	Start-up current	A	284	434	579	724	874	1019	1158
Operation control mode			PLC automatic control system, touch-screen user interface simplifies operation						
Safe protection device			High pressure, low pressure, high exhaust temperature, low water temperature, low oil flow, water flow, overload, inverse phase, lack phase, etc.						
Water pipe connection			Coupling flexible joint						
Refrigerant	Type		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Charge rate	kg	68	109	139	158	181	211	227
Lubricating oil filling capacity		L	30	30	40	40	50	50	60
Dimension	Length	mm	2969	2969	3210	3210	3458	3458	3458
	Width	mm	1175	1175	1268	1268	1536	1536	1536
	Height	mm	1836	1836	2058	2058	2240	2240	2240
Weight	Net	kg	3286	3662	4302	4950	5590	6110	6996
	Gross	kg	3452	3928	4766	5339	6099	6754	7544

Technical Specifications

Model No.		W01R2-	900UN	1000UN	1200UN	1400UN	1600UN	1800UN	2000UN
Heating capacity		kW	901.0	1002.0	1204.0	1408.0	1600.0	1800.0	2000.0
		Tons	256.2	284.9	342.3	400.3	454.9	511.8	568.7
Cooling capacity		kW	658.0	731.0	878.0	1028.0	1168.0	1316.0	1462.0
		Tons	187.1	207.8	249.6	292.3	332.1	374.2	415.7
Condenser	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	75	75	75	75	75	75	75
	Inlet temperature	℃	65	65	65	65	65	65	65
	Fouling factor	m2.℃/kW	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow rate	m^3/h	79.0	88.0	106.0	124.0	140.0	158.0	176.0
	Pipe size	mm	Φ133	Φ133	Φ168	Φ168	Φ168	Φ168	219
	Pressure drop	kPa	40.0	40.0	60.0	60.0	60.0	60.0	60.0
Evaporator	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	25	25	25	25	25	25	25
	Inlet temperature	℃	28	28	28	28	28	28	28
	Fouling factor	m2.℃/kW	0.018	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	188.0	210.0	252.0	294.0	334.0	376.0	420.0
	Pipe size	mm	Φ168	Φ219	Φ219	Φ219	Φ273	Φ273	Φ273
	Pressure drop	kPa	65.0	65.0	75.0	75.0	75.0	75.0	75.0
Compressor	Type		Advanced Asymmetric semi-closed twin screw compressor						
	Energy control		30～100%(Continous capacity control)		15～100% (Continous capacity control)				
	Power supply	V/Ph/Hz	380~415/3/50						
	Quantity		1		2				
	Start-up mode		Y-△						
	Input power	kW	243.0	271.0	326.0	380.0	432.0	486.0	542.0
	Rated current	A	420	468	281+281	328+328	373+373	420+420	468+468
	Start-up current	A	1303	1453	874+874	1019+1019	1158+1158	1303+1303	1453+1453
Operation control mode			PLC automatic control system, touch-screen user interface simplifies operation						
Safe protection device			High pressure, low pressure, high exhaust temperature, low water temperature, low oil flow, water flow, overload, inverse phase, lack phase,etc.						
Water pipe connection			Coupling flexible joint						
Refrigerant	Type		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Charge rate	kg	256	285	361	422	455	512	570
Lubricating oil filling capacity		L	60	60	100	100	120	120	120
Dimension	Length	mm	3790	3790	4680	4680	4892	4892	4892
	Width	mm	1792	1792	1992	1992	2232	2232	2232
	Height	mm	2571	2571	2521	2521	2820	2820	2820
Weight	Net	kg	7573	8196	10692	11369	12287	12987	13980
	Gross	kg	8132	8831	11466	12327	13290	14190	15241



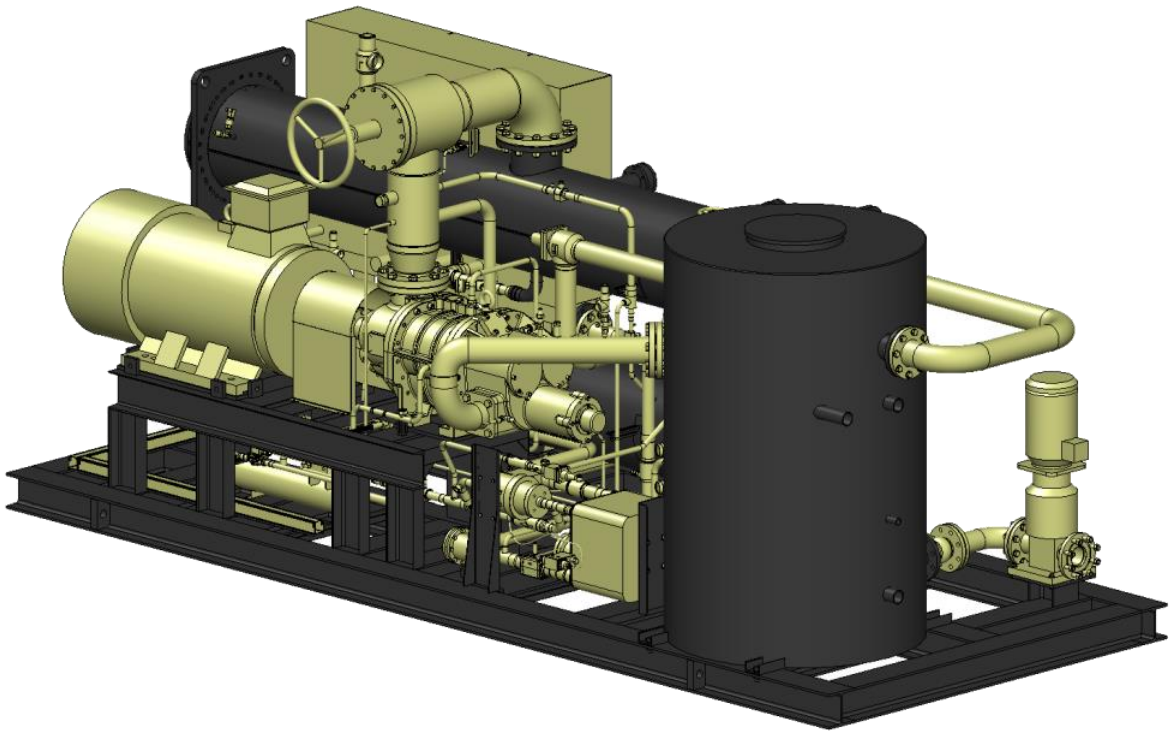
- **Heating capacity: 200~1,000kW**
- **Heating outlet water temperature: 50℃~ 95℃**
- **Heat source outlet water temperature: -40℃ ~ 15℃**
- **Refrigerant: R134a/R404a**
- **Single stage semi-enclosed screw compressor**
- **Maximum temperature rise 105℃**
- **Others: intelligent control platform, external oil separation, falling film evaporator, etc.**



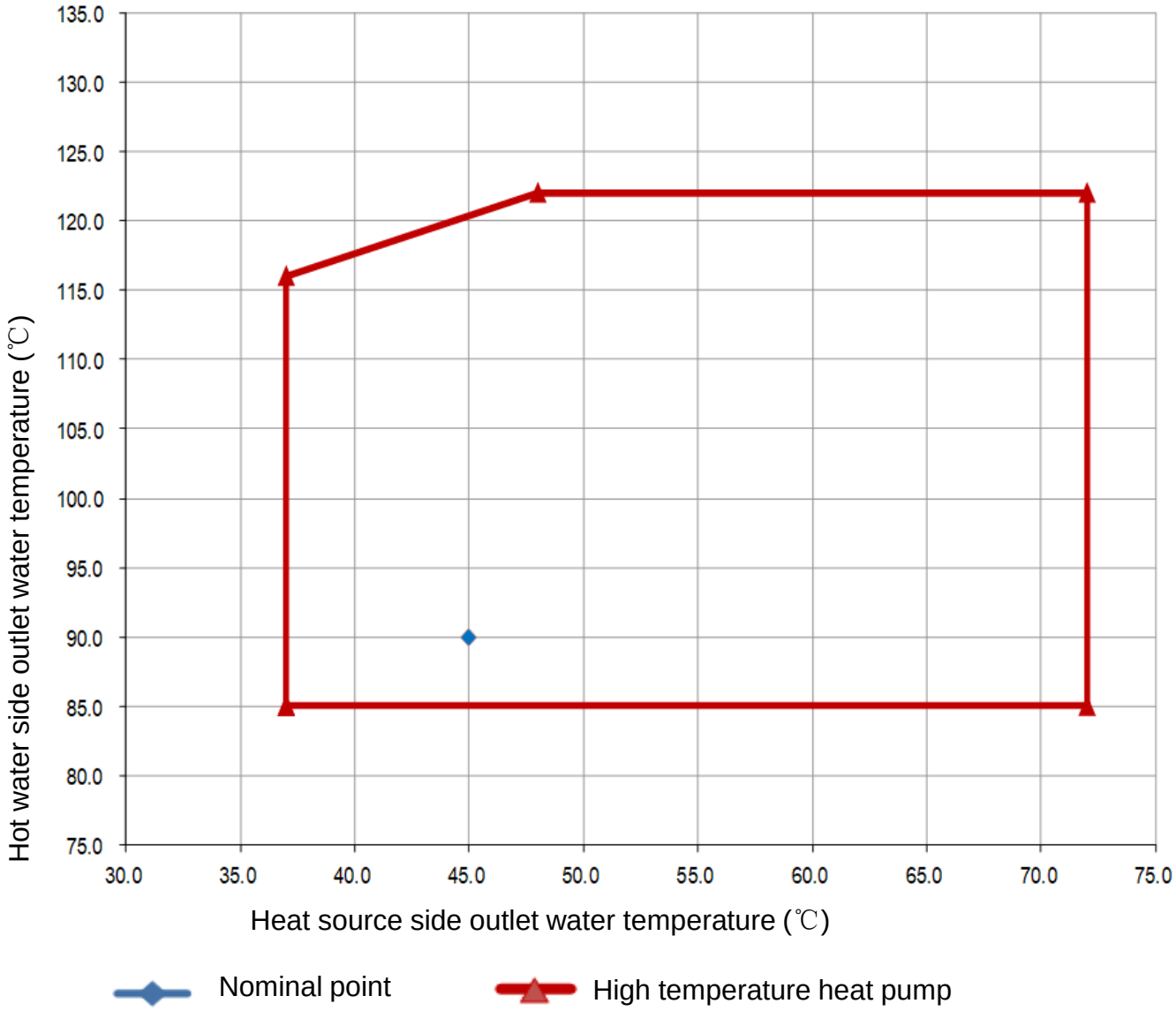
Operating range

Technical Specifications

Model No.		W01R2-	200UL	300UL	400UL	500UL	600UL	700UL	1000UL
Heating capacity		kW	197.0	299.0	400.0	499.0	598.0	800.0	998.0
		Tons	56.0	85.0	113.7	141.9	170.0	227.5	283.8
Cooling capacity		kW	112.0	171.0	229.0	285.0	342.0	458.0	570.0
		Tons	31.8	48.6	65.1	81.0	97.2	130.2	162.1
Condenser	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	70	70	70	70	70	70	70
	Inlet temperature	℃	60	60	60	60	60	60	60
	Fouling factor	m2.℃/kW	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow rate	m^3/h	17.0	26.0	34.0	43.0	51.0	69.0	86.0
	Pipe size	mm	Φ89	Φ89	Φ89	Φ114	Φ114	Φ133	Φ133
	Pressure drop	kPa	40.0	40.0	40.0	40.0	60.0	60.0	60.0
Evaporator	Medium		Water	Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger						
	Outlet temperature	℃	-7	-7	-7	-7	-7	-7	-7
	Inlet temperature	℃	-4	-4	-4	-4	-4	-4	-4
	Fouling factor	m2.℃/kW	0.018	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	32.0	49.0	66.0	82.0	98.0	131.0	164.0
	Pipe size	mm	Φ89	Φ114	Φ114	Φ133	Φ133	Φ168	Φ168
	Pressure drop	kPa	65.0	65.0	65.0	65.0	75.0	75.0	75.0
Compressor	Type		Advanced Asymmetric semi-closed twin screw compressor						
	Energy control		30～100% (Continous capacity control)				15～100% (Continous capacity control)		
	Power supply	V/Ph/Hz	380~415/3/50						
	Quantity		1						
	Start-up mode		Y-△						
	Input power	kW	85.0	128.0	171.0	214.0	256.0	342.0	428.0
	Rated current	A	152	229	306	383	229+229	306+306	383+383
	Start-up current	A	456	686	917	1148	686+686	917+917	1148+1148
Operation control mode			PLC automatic control system, touch-screen user interface simplifies operation						
Safe protection device			High pressure, low pressure, high exhaust temperature, low water temperature, low oil flow, water flow, overload, inverse phase, lack phase, etc.						
Water pipe connection			Coupling flexible joint						
Refrigerant	Type		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Charge rate	kg	67	109	139	158	200	260	300
Lubricating oil filling capacity		L	30	30	40	40	60	80	80
Dimension	Length	mm	2969	2969	3210	3210	4290	4680	4680
	Width	mm	1275	1275	1468	1468	1792	1992	1992
	Height	mm	1836	1836	2058	2058	2271	2521	2521
Weight	Net	kg	3286	3662	4302	4950	7196	9692	10280
	Gross	kg	3452	3928	4766	5339	7831	10466	11141



- **Heating capacity: 200~1,400kW**
- **Heating outlet water temperature: 83℃ ~ 122℃**
- **Heat source outlet water temperature: 37℃ ~ 72℃**
- **Refrigerant: R245fa**
- **Single stage semi-enclosed screw compressor**
- **Maximum temperature rise 80℃**
- **Others: intelligent control platform, external oil separation, falling film evaporator, etc.**



Operating range

Technical Specifications

Model No.		W01R2-	200US	300US	400US	500US	600US	700US
Heating capacity		kW	198.0	299.0	400.0	501.0	598.0	699.0
		Tons	56.3	85.0	113.7	142.5	170.0	198.7
Cooling capacity		kW	156.0	229.0	306.0	384.0	458.0	535.0
		Tons	44.4	65.1	87.0	109.2	130.2	152.1
Condenser	Medium		Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger					
	Outlet temperature	℃	90	90	90	90	90	90
	Inlet temperature	℃	80	80	80	80	80	80
	Fouling factor	m2.℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow rate	m^3/h	18.0	27.0	36.0	44.0	53.0	62.0
	Pipe size	mm	Φ89	Φ89	Φ89	Φ114	Φ114	Φ114
	Pressure drop	kPa	35.0	35.0	35.0	35.0	35.0	35.0
Evaporator	Medium		Water	Water	Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger					
	Outlet temperature	℃	45	45	45	45	45	45
	Inlet temperature	℃	48	48	48	48	48	48
	Fouling factor	m2.℃/kW	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	44.0	66.0	88.0	110.0	132.0	154.0
	Pipe size	mm	Φ114	Φ114	Φ133	Φ168	Φ168	Φ168
	Pressure drop	kPa	60.0	60.0	60.0	60.0	60.0	60.0
Compressor	Type		Advanced Asymmetric semi-closed twin screw compressor					
	Energy control		25～100% (Continous capacity control)					
	Power supply	V/Ph/Hz	380~415/3/50					
	Quantity		1					
	Start-up mode		Y–△, Solid state, Soft, Direct					
	Input power	kW	42.0	70.0	94.0	117.0	140.0	164.0
	Rated current	A	75	125	168	209	250	293
	Start-up current	A	225	375	504	627	751	879
Operation control mode			PLC automatic control system, touch-screen user interface simplifies operation					
Safe protection device			High pressure, low pressure, high exhaust temperature, low water temperature, low oil flow, water flow, overload, inverse phase, lack phase,etc.					
Water pipe connection			Coupling flexible joint					
Refrigerant	Type		R245fa	R245fa	R245fa	R245fa	R245fa	R245fa
	Charge rate	kg	96	140	182	221	264	308
Lubricating oil filling capacity		L	40	40	50	50	60	60
Dimension	Length	mm	3289	3289	3748	3748	4180	4180
	Width	mm	1461	1461	1736	1736	2092	2092
	Height	mm	1952	1952	2240	2240	2571	2571
Weight	Net	kg	3862	4550	5445	6451	7573	8694
	Gross	kg	4128	5039	6160	7190	8312	9574

Technical Specifications

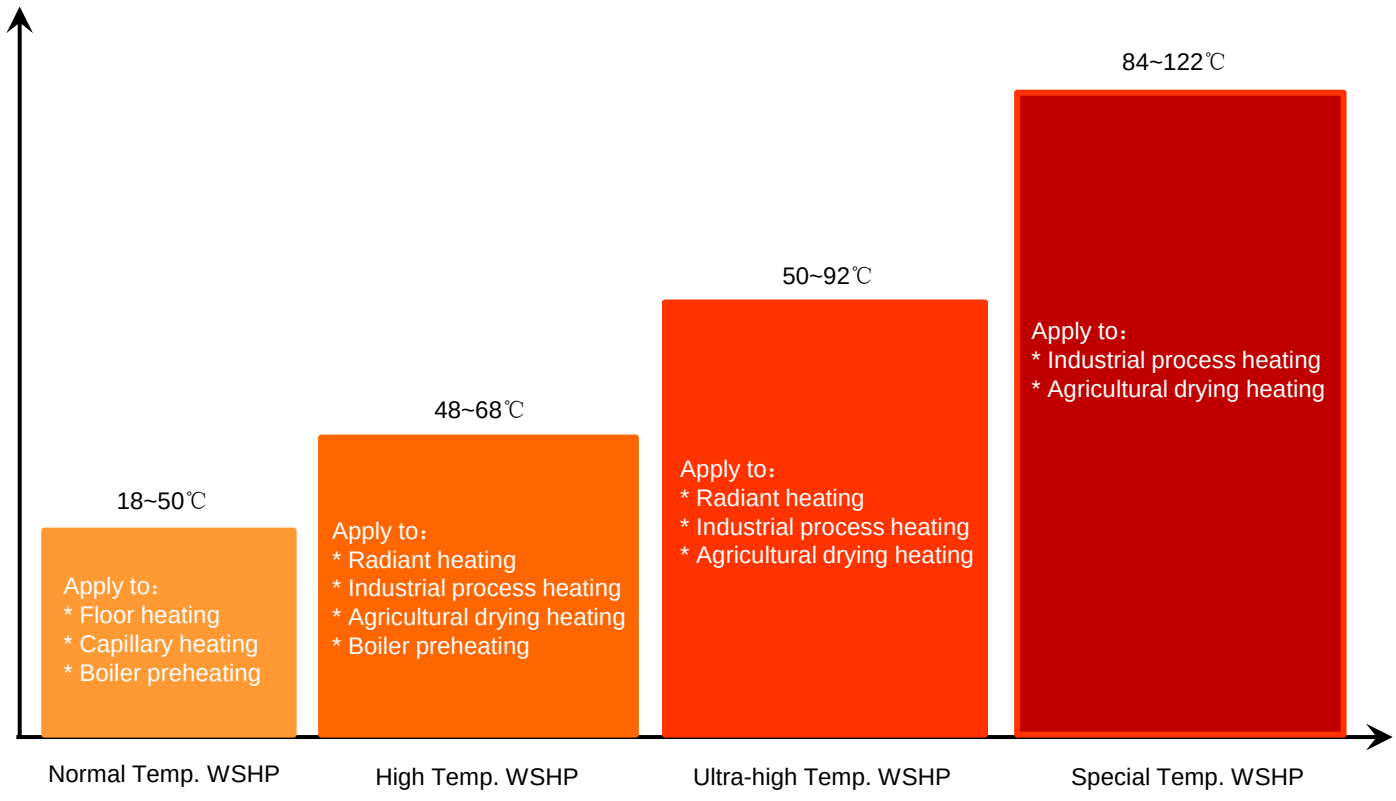
Model No.		W01R2-	800US	1000US	1200US	1400US
Heating capacity		kW	800.0	1002.0	1196.0	1398.0
		Tons	227.5	284.9	340.1	397.5
Cooling capacity		kW	612.0	768.0	916.0	1070.0
		Tons	174.0	218.4	260.4	304.2
Condenser	Medium		Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger			
	Outlet temperature	℃	90	90	90	90
	Inlet temperature	℃	80	80	80	80
	Fouling factor	m2.℃/kW	0.044	0.044	0.044	0.044
	Water flow rate	m^3/h	71.0	89.0	106.0	124.0
	Pipe size	mm	Φ133	Φ133	Φ168	Φ168
	Pressure drop	kPa	55.0	55.0	55.0	55.0
Evaporator	Medium		Water	Water	Water	Water
	Type		High efficiency shell and tube heat exchanger			
	Outlet temperature	℃	45	45	45	45
	Inlet temperature	℃	48	48	48	48
	Fouling factor	m2.℃/kW	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	44.0	66.0	88.0	110.0
	Pipe size	mm	Φ219	Φ219	Φ219	Φ219
	Pressure drop	kPa	70.0	70.0	70.0	70.0
Compressor	Type		Advanced Asymmetric semi-closed twin screw compressor			
	Energy control		25～100% (Continous capacity control)			
	Power supply	V/Ph/Hz	380~415/3/50			
	Quantity		2			
	Start-up mode		Y–△, Solid state, Soft, Direct			
	Input power	kW	188.0	234.0	280.0	328.0
	Rated current	A	168+168	209+209	250+250	293+293
	Start-up current	A	504+504	627+627	751+751	879+879
Operation control mode			PLC automatic control system, touch-screen user interface simplifies operation			
Safe protection device			High pressure, low pressure, high exhaust temperature, low water temperature, low oil flow, water flow, overload, inverse phase, lack phase,etc.			
Water pipe connection			Coupling flexible joint			
Refrigerant	Type		R245fa	R245fa	R245fa	R245fa
	Charge rate	kg	364	442	527	616
Lubricating oil filling capacity		L	90	90	110	110
Dimension	Length	mm	5680	5680	6254	8654
	Width	mm	1897	1897	2232	2232
	Height	mm	2371	2371	2620	2620
Weight	Net	kg	10392	11369	12980	14672
	Gross	kg	11565	12527	14341	16074

Industrial Heat Pump	Unit Series	Heat source side outlet water Temp. range (℃)	Hot water side outlet water Temp. range (℃)	Supply heating side Temp. difference range (℃)	Max. water Temp. difference (℃)	Refrigerant
Ultra Temp. Heat Pump	UN Normal Temp. Water Source Heat Pump	12 ~ 37	65 ~ 82	3 ~ 25	63	R134a
	UL Low Temp. Water Source Heat Pump	-40 ~ 15	50 ~ 95	3 ~ 25	105	R134a/R404a
Special Temp. Heat Pump	US Low Temp. Water Source Heat Pump	37 ~ 72	84 ~ 122	3 ~ 25	82	R245fa

The temperature of the waste heat or cooling terminal must be within this range.

The heating temperature needs to be within this range.

The temperature difference between inlet and outlet water of the heat exchanger on the heating side determines whether the heat storage tank is needed.



Benefits At A Glance

Withair® designed the complete line of Water to Water Heat Pumps for high efficiency, individually-zoned comfort control in offices, schools, assisted living facilities, manufacturing facilities and other commercial buildings. Our reputation for outstanding reliability and quiet operation has been reinforced in thousands of successful installations.

Using feedback from building owners, consulting engineers, contractors and service engineers, we designed the latest version Water Source Heat Pumps to give you maximum flexibility to design, install, operate and maintain the ideal water source heat pump system for your building project. And we incorporated non-ozone depleting R-410A refrigerant, which–along with high Energy Efficiency Ratios (EER's)–helps preserve our environment and precious energy resources.

For Building Owners and Managers

- Quiet operation
- Easy to maintain
- Reliable operation
- Reduces operating expenses
- Environmentally sound refrigerant
- Building automation system compatible

For Consulting Engineers

- HFC refrigerants
- High-efficiency optimization
- Ideal for replacement projects
- Compliant local code requirements
- Quick response technical support services

For Contractors

- 100% run-tested
- Compact footprint
- Diagnostic controls
- Easy to break down
- Ideal for replacement
- Reliable performance
- Reduces installation expenses

Premium manufacturer in HVACR products for Heating,Cooling and Indoor Air Quality.

Learn more at www.withair.cn or follow us info@withair.cn

About Withair ®

Withair® is the premium manufacturer in sustainable energy solutions supplying HVACR products & services for heating, cooling, hot water, indoor air quality, industrial refrigeration, and heat recovery that reflect today's demand for sustainable construction, comfortable indoor climate and industrial cooling & heating process application.