H.Stars Group

H.Stars Scroll Industrial Water Chiller

H.Stars (Guangzhou) Refrigerating Equipment Group Ltd.

Company Profile

H.Stars (Guangzhou) Refrigerating Equipment Group Ltd., 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.

Introduction to the chiller

Scroll Water-cooled Industrial Water Chiller

20STB Series Industrial Water Chillers are specially designed and manufactured for industrial production processes cooling. All models are equipped with chilled water storage tank and chilled water circulating pump.

It can be used in parallel or modules with multiple units and installed in the production workshop. Units of 20WXI and above models are equipped with multiple compressors and equipped with multi-stage energy regulation, and are capable of supplying cold water centrally and are suitable for the small and medium-sized production sites.

Scroll Water-cooled Industrial Water Chiller

Scroll Water-cooled Industrial Low Temperature Water Chiller

This series is the products developed, designed and manufactured by H.Stars Group for the refrigeration, cold storage, food processing, quick freezing and industrial cooling.

The product is manufactured by adopting the combination of famous brand compressors and electronic control components. It is equipped with high-efficiency fin condenser and evaporator. The unit is controlled by microcomputer and equipped with various protection functions which is high reliability, and can exert the highest efficiency in the actual working conditions.

Scroll Water-cooled Industrial Low Temperature Water Chiller

Scroll Air-cooled Industrial Water Chiller

20STB Series Industrial Water Chillers are specially designed and manufactured for industrial production processes cooling. All models are equipped with chilled water storage tank and chilled water circulating pump.

The air-cooled type is equipped with high-efficiency fin condenser and shell and tube evaporator and is suitable for flexible small-scale production equipment.

Scroll Air-cooled Industrial Water Chiller

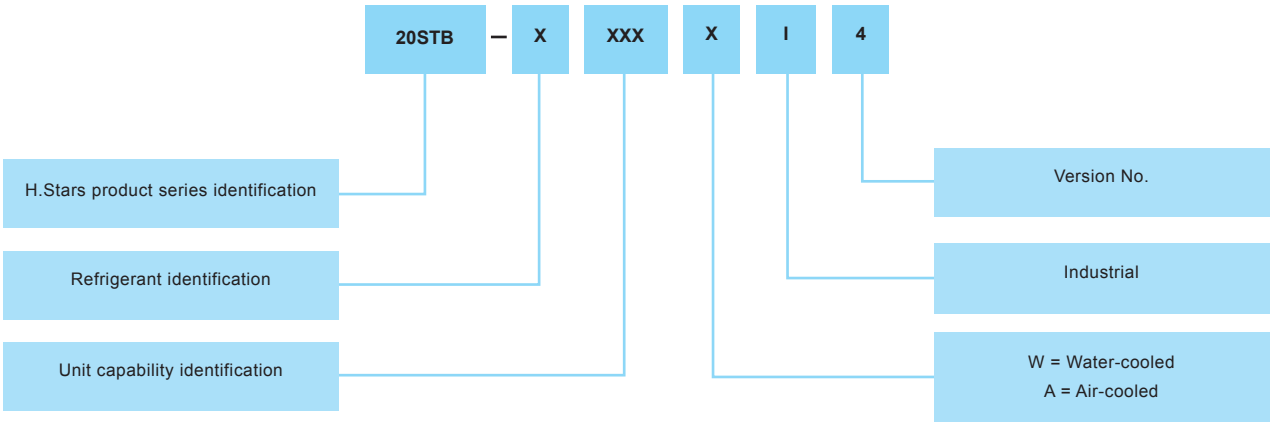
Scroll Air-cooled Industrial Low Temperature Water Chiller

This series is the products developed, designed and manufactured by H.Stars Group for the refrigeration, cold storage, food processing, quick freezing and industrial cooling.
The product is manufactured by adopting the combination of famous brand compressors and electronic control components. It is equipped with high-efficiency fin condenser and evaporator. The unit is controlled by microcomputer and equipped with various protection functions which is high reliability, and can exert the highest efficiency in the actual working conditions.

Scroll Air-cooled Industrial Low Temperature Water Chiller

Main components

Model nomenclature



Product display

Water-cooled

Air-cooled

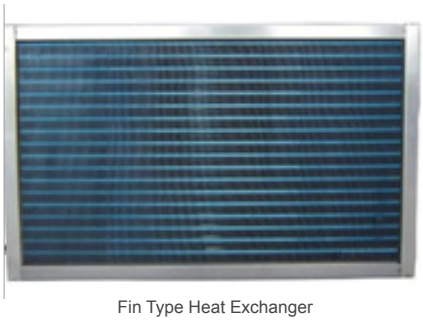
Water-cooled

Air-cooled

Main components

Fin Type Heat Exchanger

It adopts the hydrophilic aluminum foil to reduce the adhesion of water on the aluminum foil and greatly improve the heat exchange efficiency. The aluminum fins are packed in the copper tube and features uniform wind speed. With reasonable arrangement of copper pipes, it is installed in "V"-shape to improve heat exchange efficiency and reduce fan noise. The copper tube and aluminum fin are mechanically connected through expansion which is high performance and stable heat exchange. It is independently designed and manufactured with strict quality control. Configuring according to the place of use and process, it ensures that the heat transfer coefficient meets the design requirements.



Fin Type Heat Exchanger

Compressor

The unit adopts famous brand compressor with center bearing cap to achieve high energy efficiency and low sound level. The unit runs quieter and more efficient, with the scroll design of "contact-free and wear-free", it can reduce friction.

Compressor

Shell and Tube Heat Exchanger

The copper tube of the evaporator adopts 1.1mm thick copper heat exchange tube, which ensures that all products meet the high requirements of high efficiency, energy saving, safety, strong antifouling ability and durability. According to the customer's use conditions and water quality factors, different materials of heat exchange tubes can be selected, and the fouling coefficient can be increased to enhance the heat exchange efficiency, ensuring the high efficiency and energy saving and service life of the unit. It is independently designed and manufactured with strict quality control. Configuring according to the place of use and process, it ensures that the heat transfer coefficient meets the design requirements.

Shell and Tube Heat Exchanger

Fan

With special low-energy fan and reasonable fan nozzle design, it can maximize the air mobility and reduce the noise. Practice has proven that our fans run stably and have long service life. The waterproof and dustproof grade of the motor: IP54, insulation grade: F; every fan has a separate split cavity.

Fan

Controller

The controller adopts the highly integrated button-type human-machine interface control center, which greatly improves the anti-interference ability of the system. The product adopts plastic shell, which is easy to install. The front and rear panels exchange data through 485 communication, and the entire system can be integrated or separated. Siemens PLC controller can also be selected to realize ModBus RTU, TCP or S7 communication.

Controller

Standard Unit Parameter Table / 50Hz

Technical Parameters of Water-Cooled Scroll Chiller

Refrigerant: R22 Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-10WCI4	34	7	0 100	1-1/2"	7	1	29	1-1/2"	6	1	23	60	180	440
20STB-12.5WCI4	42	8		2"	8	1	31	2"	7	1	28	61	180	480
20STB-15WCI4	53	10		2"	11	1	41	2"	9	1	30	62	180	520
20STB-20WCI4	68	14	0 50 100	2"	14	1	56	2"	12	1	28	63	270	680
20STB-25WCI4	84	16		2"	17	1	56	2"	14	1	28	64	270	740
20STB-30WCI4	106	20		2-1/2"	22	1	58	2-1/2"	18	1	32	65	270	840
20STB-40WCI4	126	24	0 33 66 100	2-1/2"	26	1	55	2-1/2"	22	1	32	66	270	980
20STB-45WCI4	159	30		2-1/2"	33	1	56	2-1/2"	27	1	31	67	270	1120

Refrigerant: R407C Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-10WCI4	28	6	0 100	1-1/2"	6	1	29	1-1/2"	5	1	23	60	180	440
20STB-12.5WCI4	35	8		2"	7	1	31	2"	6	1	28	61	180	480
20STB-15WCI4	43	10		2"	9	1	41	2"	7	1	30	62	180	520
20STB-20WCI4	56	13	0 50 100	2"	12	1	56	2"	10	1	28	63	270	680
20STB-25WCI4	70	15		2"	15	1	56	2"	12	1	28	64	270	740
20STB-30WCI4	86	19		2-1/2"	18	1	58	2-1/2"	15	1	32	65	270	840
20STB-40WCI4	105	23	0 33 66 100	2-1/2"	22	1	55	2-1/2"	18	1	32	66	270	980
20STB-45WCI4	129	29		2-1/2"	27	1	56	2-1/2"	22	1	31	67	270	1120

Refrigerant: R410A Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-50WCI4	178	33	0 50 100	2-1/2"	36	1	58	2-1/2"	31	1	32	68	500	1050
20STB-75WCI4	269	50	0 33 66 100	3"	55	1	60	3"	46	1	33	69	500	1200
20STB-90WCI4	320	59		4"	65	1	62	4"	55	1	34	70	500	1350
20STB-100WCI4	356	66	0 25 50 75 100	4"	73	1	63	4"	61	1	35	71	500	1400

Notes:

1. Nominal cooling capacity condition: The inlet and outlet water temperature of the evaporator is 12°C /7°C , the inlet and outlet water temperature of the condenser is 30°C /35°C ; the fouling coefficient is 0.088 $m^2 \cdot °C$ /kW;
2. Chilled water temperature range: 5°C～ 20°C ;
3. Cooling water temperature range: 15°C ~40°C ;
4. Specifications and dimensions are subject to change due to product improvement without prior notice.

Standard Unit Parameter Table / 50Hz(Continued)

Technical Parameters of Air-Cooled Scroll Chiller

Refrigerant: R22 Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-10AI4	30	8	0 100	Copper tube with corrugated aluminum fins	14.5	1.2×1	1-1/2"	5	1	23	63	400
20STB-12.5AI4	38	9			14.5	1.2×1	2"	7	1	28	64	450
20STB-15AI4	48	12			20	2.0×1	2"	8	1	30	65	540
20STB-20AI4	61	16	0 50 100		29	1.2×2	2"	10	1	28	66	760
20STB-25AI4	76	18			29	1.2×2	2"	13	1	28	67	800
20STB-30AI4	96	24			40	2.0×2	2-1/2"	16	1	32	68	1000
20STB-40AI4	113	28	0 33 66 100		43.5	1.2×3	2-1/2"	20	1	32	69	1200
20STB-45AI4	143	36			60	2.0×3	2-1/2"	25	1	31	70	1350

Refrigerant: R407C Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-10AI4	30	8	0 100	Copper tube with corrugated aluminum fins	14.5	1.2×1	1-1/2"	5	1	23	63	400
20STB-12.5AI4	37	10			14.5	1.2×1	2"	6	1	28	64	450
20STB-15AI4	46	12			20	2.0×1	2"	8	1	30	65	540
20STB-20AI4	60	16	0 50 100		29	1.2×2	2"	10	1	28	66	760
20STB-25AI4	74	19			29	1.2×2	2"	13	1	28	67	800
20STB-30AI4	91	24			40	2.0×2	2-1/2"	16	1	32	68	1000
20STB-40AI4	111	29	0 33 66 100		43.5	1.2×3	2-1/2"	19	1	32	69	1200
20STB-45AI4	137	36			60	2.0×3	2-1/2"	24	1	31	70	1350

Refrigerant: R410A Power: 3ϕ -380V-50Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-50AI4	152	40	0 50 100	Copper tube with corrugated aluminum fins	14.5	1.2×1	1-1/2"	5	1	23	63	400
20STB-75AI4	227	60	0 33 66 00		14.5	1.2×1	2"	6	1	28	64	450
20STB-90AI4	274	72			20	2.0×1	2"	8	1	30	65	540
20STB-100AI4	303	80	0 25 50 75 100		29	1.2×2	2"	10	1	28	66	760

Notes:

1. Nominal cooling capacity condition: Air dry / wet bulb temperature 35°C /24°C , chillled water: 17°C /12°C ; the fouling coefficient is 0.088 $m^2 \cdot °C$ /kW;
2. Chilled water temperature range: 5°C～ 20°C ;
3. Ambient temperature: -5°C～ 43°C ;
4. Specifications and dimensions are subject to change due to product improvement without prior notice.

Standard Unit Parameter Table / 60Hz

Technical Parameters of Water-Cooled Scroll Chiller

Refrigerant: R22 Power: 3φ-460V-60Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-10WCI4	40	8	0 100	1-1/2"	8	1	29	1-1/2"	7	1	23	60	180	484
20STB-12.5WCI4	50	9		2"	10	1	31	2"	9	1	28	61	180	528
20STB-15WCI4	63	12		2"	13	1	41	2"	11	1	30	62	180	572
20STB-20WCI4	80	16	0 50 100	2"	17	1	56	2"	14	1	28	63	270	748
20STB-25WCI4	100	18		2"	20	1	56	2"	17	1	28	64	270	814
20STB-30WCI4	126	24		2-1/2"	26	1	58	2-1/2"	22	1	32	65	270	924
20STB-40WCI4	150	28	0 33 66 100	2-1/2"	31	1	55	2-1/2"	26	1	32	66	270	1078
20STB-45WCI4	190	36		2-1/2"	39	1	56	2-1/2"	33	1	31	67	270	1232

Refrigerant: R407C Power: 3φ-460V-60Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-10WCI4	34	8	0 100	1-1/2"	7	1	29	1-1/2"	6	1	23	60	180	484
20STB-12.5WCI4	42	9		2"	9	1	31	2"	7	1	28	61	180	528
20STB-15WCI4	51	12		2"	11	1	41	2"	9	1	30	62	180	572
20STB-20WCI4	67	15	0 50 100	2"	14	1	56	2"	12	1	28	63	270	748
20STB-25WCI4	85	18		2"	18	1	56	2"	15	1	28	64	270	814
20STB-30WCI4	103	23		2-1/2"	22	1	58	2-1/2"	18	1	32	65	270	924
20STB-40WCI4	127	28	0 33 66 100	2-1/2"	27	1	55	2-1/2"	22	1	32	66	270	1078
20STB-45WCI4	154	35		2-1/2"	32	1	56	2-1/2"	27	1	31	67	270	1232

Refrigerant: R410A Power: 3φ-460V-60Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser				Evaporator				Running noise dB (A)	Water tank capacity L	Shipping Weight Kg
				Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa			
20STB-50WCI4	213	40	0 50 100	2-1/2"	44	1	58	2-1/2"	37	1	32	68	500	1155
20STB-75WCI4	320	60	0 33 66 100	3"	65	1	60	3"	55	1	33	69	500	1320
20STB-90WCI4	384	71		4"	78	1	62	4"	66	1	34	70	500	1485
20STB-100WCI4	427	79	0 25 50 75 100	4"	87	1	63	4"	73	1	35	71	500	1540

Notes:

1. Nominal cooling capacity condition: The inlet and outlet water temperature of the evaporator is 12°C /7°C , the inlet and outlet water temperature of the condenser is 30°C /35°C ; the fouling coefficient is 0.088 $m^2 \cdot °C$ /kW;
2. Chilled water temperature range: 5°C～ 20°C ;
3. Cooling water temperature range: 15°C ~40°C ;
4. Specifications and dimensions are subject to change due to product improvement without prior notice.

Standard Unit Parameter Table / 60Hz (Continued)

Technical Parameters of Air-Cooled Scroll Chiller

Refrigerant: R22 Power: 33φ-460V-60Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-10AI4	36	10	0 100	Copper tube with corrugated aluminum fins	14.5	1.5×1	1-1/2"	6	1	23	63	440
20STB-12.5AI4	45	11			14.5	1.5×1	2"	8	1	28	64	495
20STB-15AI4	57	14			20	2.5×1	2"	10	1	30	65	594
20STB-20AI4	73	19	0 50 100		29	1.5×2	2"	13	1	28	66	836
20STB-25AI4	91	22			29	1.5×2	2"	16	1	28	67	880
20STB-30AI4	115	29			40	2.5×2	2-1/2"	20	1	32	68	1100
20STB-40AI4	136	33	0 33 66 100		43.5	1.5×3	2-1/2"	23	1	32	69	1320
20STB-45AI4	172	43			60	2.5×3	2-1/2"	30	1	31	70	1485

Refrigerant: R407C Power: 3φ-460V-60Hz

Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-10AI4	36	9	0 100	Copper tube with corrugated aluminum fins	14.5	1.5×1	1-1/2"	6	1	23	63	440
20STB-12.5AI4	44	12			14.5	1.5×1	2"	8	1	28	64	495
20STB-15AI4	55	14			20	2.5×1	2"	9	1	30	65	594
20STB-20AI4	72	19	0 50 100		29	1.5×2	2"	12	1	28	66	836
20STB-25AI4	89	23			29	1.5×2	2"	15	1	28	67	880
20STB-30AI4	109	29			40	2.5×2	2-1/2"	19	1	32	68	1100
20STB-40AI4	133	35	0 33 66 100		43.5	1.5×3	2-1/2"	23	1	32	69	1320
20STB-45AI4	164	43			60	2.5×3	2-1/2"	28	1	31	70	1485

Refrigerant: R410A Power: 3φ-460V-60Hz

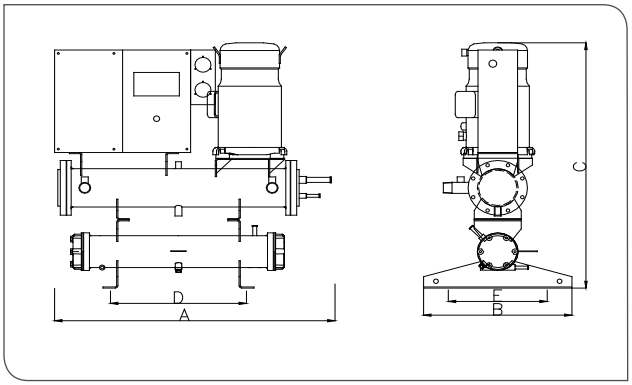
Model	Cooling capacity kW	Compressor power kW	Energy control %	Condenser			Evaporator				Running noise dB (A)	Shipping Weight Kg
				Type	Air volume ×1000 m3/h	Power kW × Unit	Inlet pipe diameter in	Water flow m3/h	Water Side Max. Pressure Mpa	Water pressure drop KPa		
20STB-50AI4	182	48	0 50 100	Copper tube with corrugated aluminum fins	58	3×2	1-1/2"	31	1	23	63	1320
20STB-75AI4	273	72	0 33 66 00		80	3×3	2"	47	1	28	64	1650
20STB-90AI4	328	86			120	3×3	2"	56	1	30	65	1760
20STB-100AI4	364	96	0 25 50 75 100		120	3×4	2"	63	1	28	66	1815

Notes:

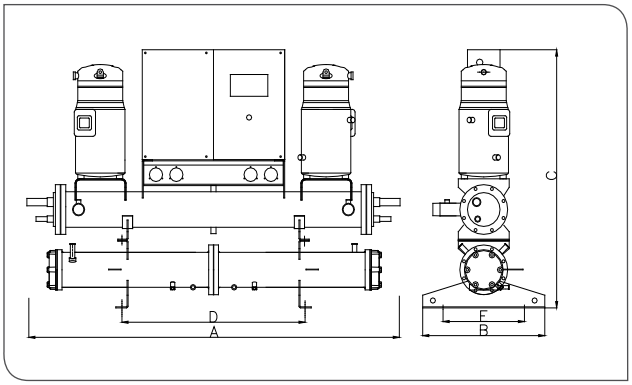
1. Nominal cooling capacity condition: Air dry / wet bulb temperature 35°C /24°C , chillled water: 17°C /12°C ; the fouling coefficient is 0.088 ㎡·°C /kW;
2. Chilled water temperature range: 5°C～ 20°C ;
3. Ambient temperature: -5°C～ 43°C ;
4. Specifications and dimensions are subject to change due to product improvement without prior notice.

Dimensions (mm)

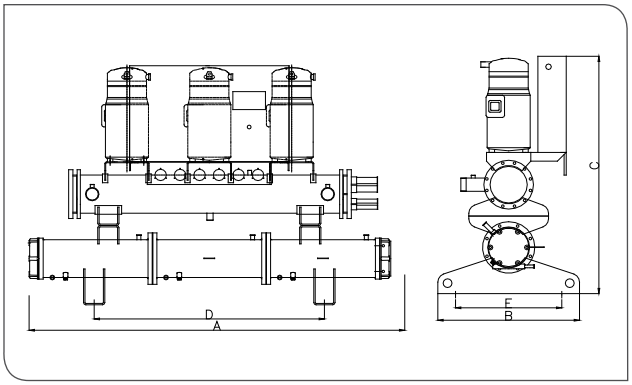
Dimensions of Water-Cooled Scroll Chiller



Model	A	B	C	D	E
20STB-(N/V)10WCI4	1200	600	1200	600	500
20STB-(N/V)12.5WCI4	1300	600	1200	600	500
20STB-(N/V)15WCI4	1500	600	1320	750	400



Model	A	B	C	D	E
20STB-(N/V)20WCI4	1900	675	1200	900	400
20STB-(N/V)25WCI4	1900	600	1220	900	400
20STB-(N/V)30WCI4	2200	600	1430	900	500
20STB-(N/V)50WCI4	2250	800	1600	1300	600

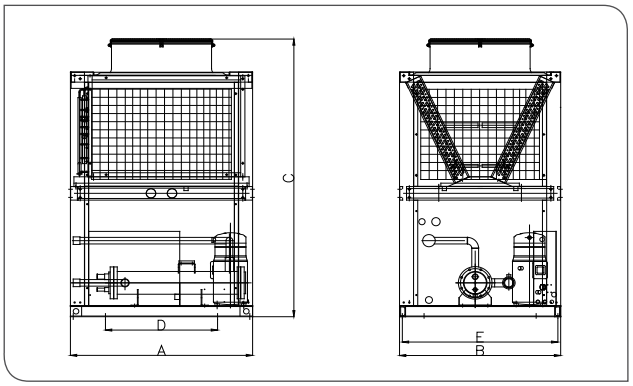


Model	A	B	C	D	E
20STB-(N/V)40WCI4	2250	800	1600	1300	600
20STB-(N/V)45WCI4	2500	800	1600	1300	600
20STB-(N/V)75WCI4	2600	900	1650	1450	600
20STB-(N/V)90WCI4	2700	800	1550	1450	650
20STB-(N/V)100WCI4	2700	800	1550	1600	650

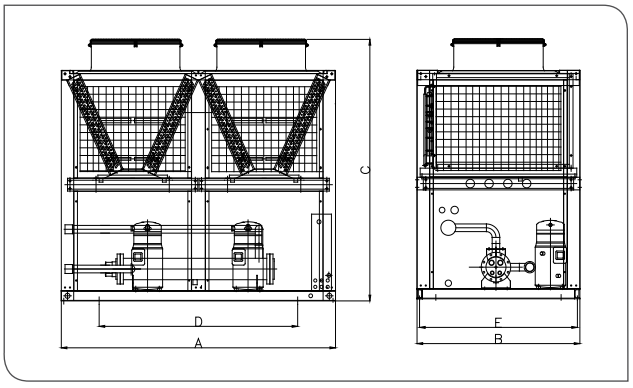
Note: The above dimensions of will be adjusted according to different projects, please confirm when ordering

Dimensions (mm)(Continued)

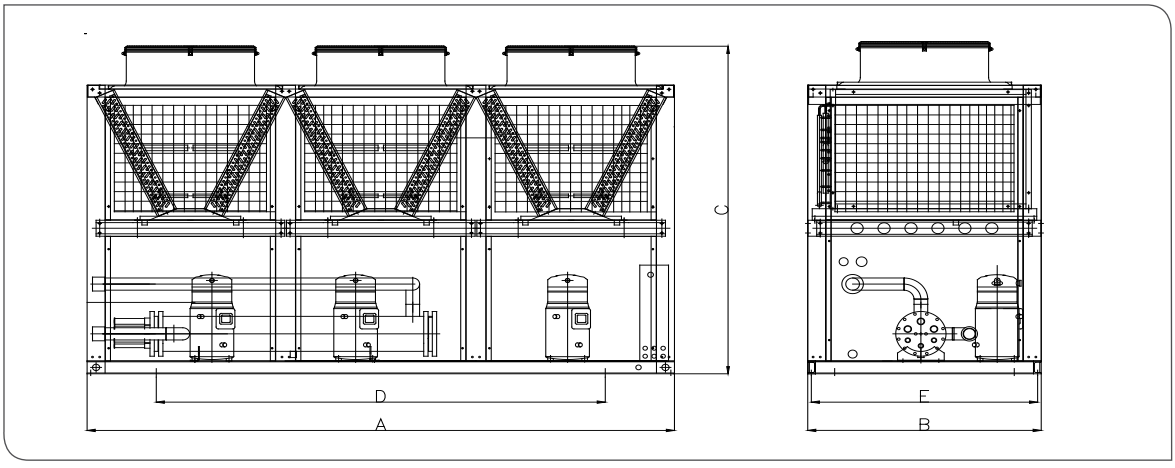
Dimensions of Air-Cooled Scroll Water Chiller



Model	A	B	C	D	E
20STB-(N/V)10AI4	1200	1040	1950	900	1000
20STB-(N/V)12.5AI4	1200	1040	1950	900	1000
20STB-(N/V)15AI4	1500	1100	1950	1200	1060



Model	A	B	C	D	E
20STB-(N/V)20AI4	2200	1040	1950	1600	1000
20STB-(N/V)25AI4	2200	1040	1950	1600	1000
20STB-(N/V)30AI4	2200	1040	1950	1600	1000
20STB-(N/V)50AI4	2350	1400	2150	1600	1360



Model	A	B	C	D	E
20STB-(N/V)40AI4	2350	1400	2150	2500	1000
20STB-(N/V)45AI4	3400	1400	2150	2500	1000
20STB-(N/V)75AI4	3500	1450	2200	2700	1360
20STB-(N/V)90AI4	3700	1400	2150	2700	1410
20STB-(N/V)100AI4	3700	1400	2150	2800	1410

Note: The above dimensions of will be adjusted according to different projects, please confirm when ordering

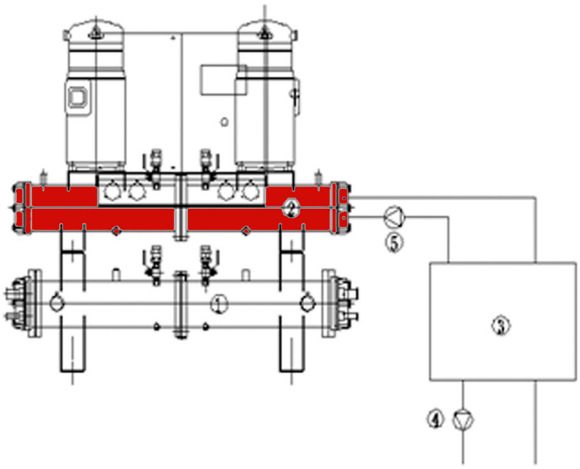
China Machinery Industry Science and Technology Award

H.Stars Group is the first manufacturer to use heat recovery technology. Patent No.: ZL03223588.7, and has won the second prize of science and technology by the Ministry of -Building Industry.

China Machinery Industry Science and Technology Award

Heat recovery technology

Recover the condensate heat from chiller units (usually discharged to the atmosphere by cooling tower), and make effective use of it. For example: a hotel needs both heating (for domestic hot water) and cooling in the summer. With the heat recovery system, the heat produced during cooling can be transferred to the building where hot water is needed through heat recovery. In the summer season, hot water above 50 ℃ can be provided free of charge, and the heat recovery reaches 30% ～ 100% of the unit's cooling capacity.



Variable Frequency Drive (VFD) technology

Efficient and energy saving

The unit adopts the world-class variable frequency drive technology to greatly improve the partial load energy efficiency of the unit, and the highest comprehensive partial load performance coefficient (IPLV) can reach more than 10.

More eco-friendly and energy saving

VFD Water Chiller can adopt R134a refrigerant according to the requirements, and won't destroy the ozone of the earth, which complies with the requirements of the Montreal Protocol; VFD, flood type evaporator and industrial application energy saving advantages.

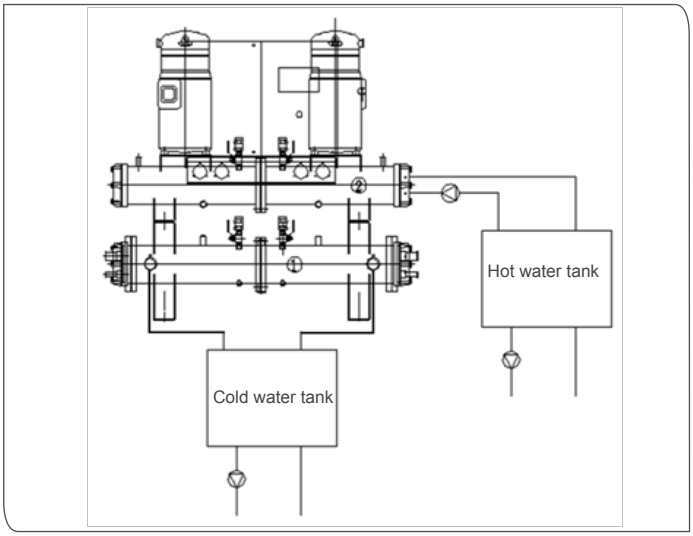
VFD advantage

The VFD Water Chiller has included the soft start function, which can reduce the impact of starting current; the converter is equipped with the DC reactor to reduce the harmonic interference to the greatest extent; there is also a low-harmonic filter option, which meets the IEEE-519 specifications for harmonic distortion at the input power of the inverter, and has harmonic filter over-temperature protection and capacitance switching function.

Note: Customers can choose special materials and configurations in the options according to application needs to increase equipment functions, prolong the service life and achieve the energy saving purpose.

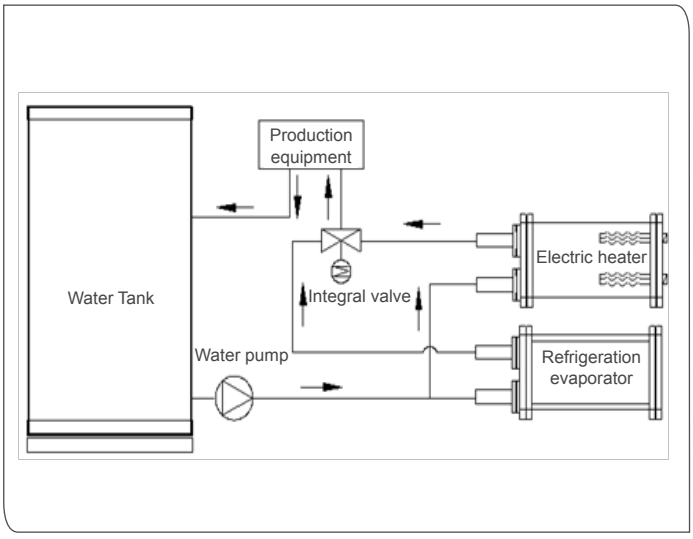
Simultaneous supply of cold and heat

The unit has the cooling and heating functions simultaneously. It can provide cold for places that need cooling, at the same time absorb the heat during cooling and convey the heat to places that need heating. Because of the simultaneous cooling and heating, the equipment is eco-friendly and energy saving, and the COP value has been greatly increased.



Integrated Unit

Industrial Integrated Unit is the integrated product designed for the industrial field. The unit integrates the chiller, chilled water storage tank, chilled water circulating water pump, process water pump, piping, various valves, and engineering control cabinet. The project is integrated in the production line, with reliable quality, compact structure and high integration. It is simple and convenient installation, and can reduce the project installation costs.



Options(Continued)

Heat Exchange Tube

Condenser Heat Exchange Tube

Red copper condenser tube | Aluminum-brass condenser tube | Nickel-copper condenser tube | Stainless steel condenser tube

Condenser heat exchange tube Specification sheet

Heat exchange tube material	Copper Tube	Aluminum Brass Tube	Nickel Copper Tube	Stainless Tube
Tube thickness option 1 (mm))	1	1.2	1	1
Tube thickness option 2 (mm))	1.1	1.3	1.1	1.15
Tube thickness option 3 (mm))	1.2	1.4	1.2	1.2
Tube thickness option 4 (mm))	1.3	1.5	1.3	1.35
Suitable for water quality	Standard non-corrosive neutral water	seawater	Alkaline water	Acid water

Evaporator Heat Exchange Tube

Red copper | Aluminum-brass | Nickel-copper | Stainless steel

Evaporator heat exchange tube specification sheet

Heat exchange tube material	Red copper	Aluminum-brass	Nickel-copper	Stainless steel
Tube thickness option 1 (mm))	1	1.2	1	1
Tube thickness option 2 (mm))	1.1	1.3	1.1	1.15
Tube thickness option 3 (mm))	1.2	1.4	1.2	1.2
Tube thickness option 4 (mm))	1.3	1.5	1.3	1.35
Suitable for water quality	Standard non-corrosive neutral water	seawater	Alkaline water	Acid water

Important notes:

Heat exchanger is the key components of the chiller unit, whose technology directly affects the quality of the product. Also, the heat exchange tube, which is the only component of the heat exchanger in contact with the ambient, closely affects the life of the unit. The thickness and material of the heat exchange tube are very important. Customers can choose the suitable material and thickness of heat exchanger tube according to the air and water quality.

Other options:

Anti-corrosion water chiller

Equipped with anti-corrosion evaporator, stainless steel pipeline, stainless steel pump or plate exchanger, it can resist the corrosive substances on the water side.

High precision water chiller

It is designed for high-end laboratory, high-end manufacturing and medical equipment with high accuracy of cold water temperature.

High temperature hot water unit

It is mainly used in industrial fields, such as chemical industry, metallurgy, electroplating, textile printing and dyeing, food, livestock slaughter and other special industries with higher water temperature requirements. It can also be used in northern winter for heating.

Non-standard voltage water chiller

A variety of different specifications such as 460V-3P-60Hz, 440V-3P-60Hz and other non-standard power units can be customized.

Anti-corrosion fin coil heat exchanger

It is made of copper foil, stainless steel sheet and other anticorrosive materials, or adopts the electrophoresis, spraying and other anticorrosive processes, thus preventing corrosion in the corrosive environments.

Stainless steel shell

All stainless steel shell units can be customized to prevent the surrounding environment from corroding and rusting the shell.

Cloud service (remote control)

Supporting Internet service function, the unit can be controlled through web page and mobile phone APP, thus realizing unattended operation on site.

Explosion-proof heat pump / chiller

The unit which is manufactured in strict accordance with the relevant requirements of the national explosion-proof standard GB3836 and has obtained explosion-proof electrical qualification certificate.

Customized equipment

Design waterproof electrical box according to IP grade.

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