AirTrojan

FLOODED TYPE CHILLERS

[Your satisfaction is always our cherished desire!]

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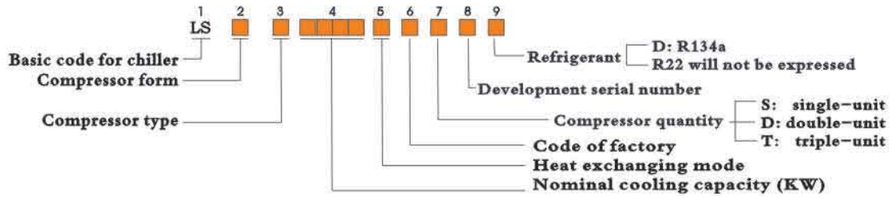
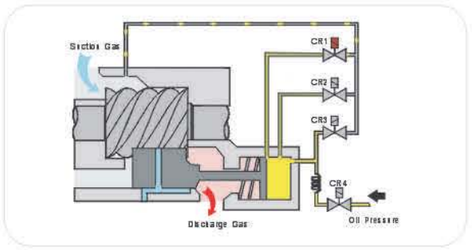
Features

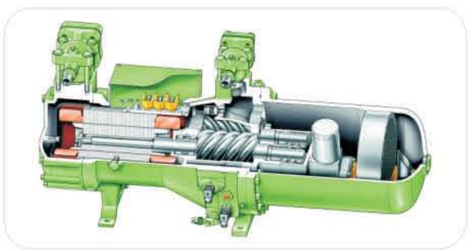
Descriptions of Model number



Well-known brand compressor

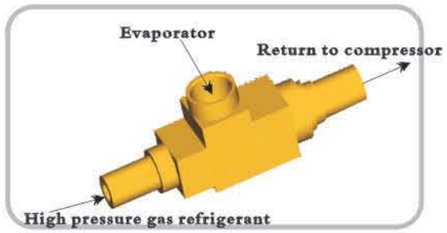
German BITZER twin screw compressor is available, which runs with high efficiency and reliability. Continuous or four-stage capacity control and good IPLV performance are available.





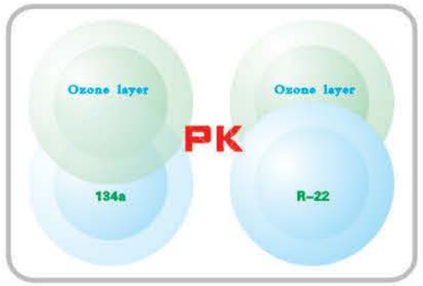
- **High efficiency streamline**
  Further improved geometrical shape
  High hardness
  High edge line speed
  Patented finishing process
- **Slide valve with complete economizer interface**
  Continuous and multi-grade energy adjustment
  Air suction position of economizer varies with slide valve
  Partial load efficiency is high
- **Optimized oil-way design**
  Three-stage oil separation
  Long lifespan oil filter
  Low pressure bearing compartment
- **Four energy adjusting solenoid valves can realize below:**
  Four-stage (25%-50%-75%-100%) energy adjustment
  25% to 100% continuous energy adjustment
- **Patented pressure compensation shell with double layer**
  Stable performance. The shell will not expand even in high pressure and noise is greatly reduced.
- **Reliable low pressure bearing compartment and long lifespan bearing**
  Two axial direction bearing is solid and durable.
  Sealing ring is used to separate bearing compartment and high pressure.
  Reduce axial bearing pressure.
- **Complete standard configuration**
  Oil heater
  Built-in pressure relief valve
  One-way air discharge valve
  Air discharge stop valve

Patent Features



Jet pump

Electronic expansion valve



Environment protection refrigerant HFC134aPKR-22

Classic patent design

- **The liquid level is controlled by discharge temperature of compressor to make the system stable and no liquid compression. It's not a traditional floating ball liquid level design, the problem of liquid flowing back can be avoided.**
- **The patent jet pump plus the oil return system of the compressor oil level switch, working with the auto forced oil feeding device of the oil separator, prevent the system from oil loss, completely resolving the problem of the compressor stop due to oil loss.**

Excellent ALCO

- **ALCO electronics expansion valve is used for the refrigerant flow control, ensuring the load change adjustment and measurement is performed in one step.**
- **Multi-functions: used as expansion valve, hot air bypass valve, air suction pressure adjusting valve, condensation pressure adjusting valve, liquid level controller and etc.**
- **Hermetic design**
- **Driven by stepping motor**
- **Short duration from fully close to fully open**
- **High accuracy**
- **Long service lifespan**
- **Total shut-off function, replacing solenoid valve**
- **The flow change appears in linear manner**
- **Wide range of refrigerant**
- **Continuous refrigerant regulation. No liquid hammer occurs in the cooling loop.**
- **Motor integrates with valve, high reliability.**
- **The valve plate and valve port of ceramic material are abrasion proof.**
- **Europe patent number: No. 0743476; America patent number: No. 5735501; Japan patent number: No. 28225789.**
- **Balanced valve port design.**
- **Stainless steel valve body with anti corrosion.**
- **Suitable for all CFCs, HCFCs and HFCs.**

Environment protection concept is well expressed

- **Environment protection refrigerant HFC134a, which is recognized globally.**
- **Zero ODP (Ozone depletion Potentials)**
- **The regulations on HCFC (R22 included) in Montreal Protocol are:Stop using HCFC (R22 included) by 2020 in developed countries.The production will start to be frozen in China from 2016 and stopped completely by 2040.**

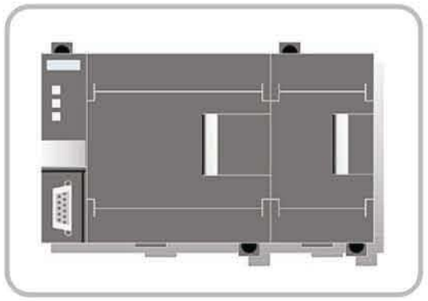
COP reaches to 5.6

- **Computerized lectotype. Optimal configuration of parts.**
- **Minimum KW/TON. The precision meets customer requirement. High COP design and COP reaches to 5.6.**
  Comparing with traditional dry type, it has higher heat transfer efficiency.
  Patent flooded type evaporator structure
  Completely moist heat transfer surface inside evaporator
  High efficient external oil separation, ensuring the minute amount of oil inside evaporator.

Control features

Operator-centered interface

- Controller with advanced Siemens PLC plus four-color touch screen. It is beautiful and top grade and easy to operate.
- PLC control and touch screen display
- Figure interface is clear at a glance.
- Easy operation and reliable running.
- Strong anti-interference.
- PLC and touch screen are relatively independent. Even if the touch screen is damaged, the machine can be controlled by operation panel or remote switch.
- PLC may use two RS-485 interfaces, one connecting to the panel and the other to the mulit-unit network.
- The panel can be placed inside the room 1200m away from the control board. At the same time, the touch screen has RS-232 interface which can connect to printer or PC to realize centralized control. The unit controller also has communication module, supporting PROFIBUS protocol and communicating with the centralized control system, achieving the remote control.



PLC

Touch screen

Safety protection with valves

Air suction and discharge stop valve, ball valve and angle valves are available, for easy installation and repair.

Pressure difference water flow controller ensures the safety running of the machine.

AirTrojan VS other brands

Item	200RT	A 360RT
Jet pump	Patent design	General
Oil return amount control	Automatic	Fixed amount
Liquid level control	Discharge temperature	None
Expansion device	Linear expansion valve	Orifice plate
Liquid compression, oil lack	Never	Yes
Practical capacity	198RT (98.5%)	320.6RT (89.1%)
Practical COP	5.40	4.4

Pressure difference water flow controller

Condenser

Each pressure vessel has BR1 manufacture certificate and design certificate and applies approved high-efficiency horizontal shell-and-tube condenser and high-efficiency evaporator. And its heat exchanger tube is fin-type structured. The system procedure features brief structure, stable heat exchange, little failure spots and easy maintenance. The heat exchanger tube applies high-efficiency mesh copper tube whose barrel applies seamless steel tube 20 for fluid conveyance or is wrapped with steel plate. The tube plate is produced with steel plate and machined by CNC lathe. The square tube plate for supporting the machine features exquisite appearance and compact structure and is easy to install and transport. All pressure vessels are safe and reliable and comply with relevant standards and regulations as GB150 Steel Pressure Vessels, GB151 Tubular Heat Exchangers, JB/T4750-2003 Pressure Vessels for Refrigerating Plants and Pressure Vessel safety and Technical Supervision Regulations, etc.

High heat transfer efficiency copper tube

Square tube plate

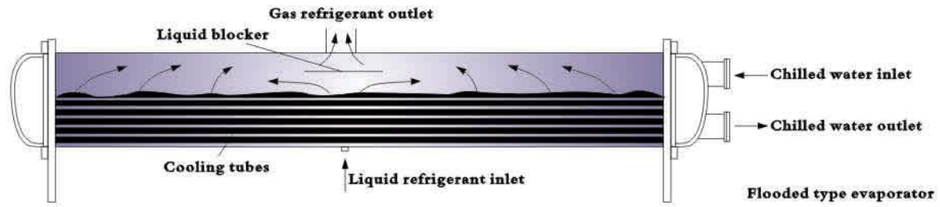
3Shell-and-tube heat exchanger

Flooded Type Evaporator

With the boiling heat transfer principle, put the cooling tube into the fluid refrigerant beside the tube and take away the heat with the cooling water in the tube in the heat exchange process.

- In the flooded type evaporator, the cooling water flows in the tube and can reach turbulent flow state with higher heat transfer factor. While the refrigerant beside the tube is boiling with increased heat transfer efficiency.
- The dry type direct expansion system is limited by temperature induction condition of temperature induction expansion valve and the temperature at the evaporator outlet shall be 5-8℃ higher to maintain 15-20% of the total cooling tube area as an anhydrous area, in which the over-heated refrigerant steam provides lower refrigerating enthalpy difference and inhibits the temperature increase of the steam. The flooded type evaporator is free from the limitation of over-heat, therefore the cooling can submerge completely in the fluid refrigerant, while the refrigerant can give full play of the refrigerating enthalpy difference, increasing the steam temperature by 2-3℃ and promoting the capacity of the evaporator.

The cooling water works in the tube, facilitating scale cleaning and preventing the cooling water channel from being jammed by deposits due to long-term operation.



Flooded type evaporator

All machines pass the factory testing.

All water cooled chillers have been fully assembled and tested in factory, and refrigerant and refrigerant oil have been filled. The final users only need to connect the water piping and circuit before the machine is put into use, shortening the time of field installation and debugging.

Specifications

Twin-Screw Single Unit Series (R-22)

Item \ Model			LSBLG 350MTSA	LSBLG 400MTSA	LSBLG 455MTSA	LSBLG 600MTSA	LSBLG 685MTSA	LSBLG 785MTSA	LSBLG 870MTSA	LSBLG 980MTSA
Power supply			3Φ-380V-50Hz							
Cooling capacity		kcal/hr	301,000	344,000	391,300	516,000	589,100	675,100	748,200	842,800
		kW	350	400	455	600	685	785	870	980
Power input		kW	64	73	83	109	124	142	157	177
Operating current		A	121	141	156	194	235	258	293	324
Starting current		A	520	612	665	465	586	650	805	805
Capacity control		%	25%100% continuous or four-grade capacity control							
Compressor	Type		Semi-hermetic screw type							
	Quantity		1							
	Starting method		Winding			Y-△				
	Oil heater	W	300×1	300×1	300×1	300×1	300×1	300×1	300×1	300×1
Cooling oil	Type		B320SH							
	Charge volume	L	22×1	22×1	22×1	35×1	35×1	35×1	35×1	35×1
Refrigerant	Type		R-22							
	Charge volume	kg	200	230	265	345	390	445	495	550
	Control method		Electric expansion valve							
Evaporator	Type		Flooded type							
	Chilled water flow	m^3/h	60	69	78	103	118	135	150	169
	Head loss	M	6	6.2	6.3	6.4	6.4	6.5	6.5	6.6
	Water pipe connector		DN125	DN125	DN125	DN125	DN150	DN150	DN150	DN150
Condenser	Type		Shell and tube type							
	Cooling water flow	m^3/h	78	89	102	134	153	176	195	219
	Head loss	M	6.3	6.5	6.6	6.7	6.7	6.8	6.8	6.9
	Water pipe connector		DN125	DN125	DN125	DN125	DN150	DN150	DN150	DN150
Unit weight		kg	2500	2800	3500	4500	4900	5300	5800	6800
Operating weight		kg	2690	3020	3750	4825	5270	5735	6270	7330
Operating noise		dB	83	83	85	87	87	87	87	87
Package size	Length	mm	3700	3700	3800	3900	3950	3950	4100	4200
	Width	mm	1900	1900	2000	2100	2150	2250	2300	2300
	Height	mm	2000	2000	2000	2100	2100	2200	2300	2300

Note:
1.The above specifications are based on chilled water inlet12℃,chilled water outlet 7℃;Cooledwater inlet30℃; Cooledwater outlet 35℃;
condition test : fouling factor 0.0001m²℃/W.The cooling capacity can also be achieved at cooled water inlet32℃; Cooledwater outlet 37℃;
condition test: fouling factor 0.000088m²℃/W.
2.Protective devices: high/low pressure switch, anti-freezing switch, fusible plug, overload protective device, coil overheat protector, auto temperature switch, reverse phase protector.
3.Noise test: measured at a distance of 1m and a height of 1.5m in front of the machine.
4.The compressor can be added with continuous capacity adjustment control.
5.For special specifications, please offer your requirements prior to placing your order.
6.The above specifications are subject to changes without notice.

Twin-Screw Double Unit Series (R-22)

Item \ Model			LSBLG 700MTDA	LSBLG 800MTDA	LSBLG 910MTDA	LSBLG 1200MTDA	LSBLG 1370MTDA	LSBLG 1570MTDA	LSBLG 1740MTDA	LSBLG 1960MTDA
Power supply			3Φ-380V-50Hz							
Cooling capacity		kcal/hr	602,000	688,000	782,600	1,032,000	1,178,200	1,350,200	1,496,400	1,685,600
		kW	700	800	910	1200	1370	1570	1740	1960
Power input		kW	129	147	167	219	249	284	314	353
Operating current		A	241	283	313	387	469	516	585	648
Starting current		A	641	753	821	659	821	908	1098	1129
Capacity control		%	25%100% continuous or four-grade capacity control							
Compressor	Type		Semi-hermetic screw type							
	Quantity		2							
	Starting method		Winding			Y-△				
	Oil heater	W	300×2	300×2	300×2	300×2	300×2	300×2	300×2	300×2
Cooling oil	Type		B320SH							
	Charge volume	L	22×2	22×2	22×2	35×2	35×2	35×2	35×2	35×2
Refrigerant	Type		R-22							
	Charge volume	kg	400	460	530	690	780	890	990	1115
	Control method		Electric expansion valve							
Evaporator	Type		Flooded type							
	Chilled water flow	m^3/h	120	138	157	206	236	270	299	337
	Head loss	M	6.4	6.6	6.6	6.8	7.0	7.2	7.4	7.6
	Water pipe connector		DN150	DN150	DN150	DN150	DN200	DN250	DN250	DN250
Condenser	Type		Shell and tube type							
	Cooling water flow	m^3/h	157	179	203	268	306	351	389	438
	Head loss	M	6.7	6.9	6.9	7.3	7.5	7.7	7.9	8.1
	Water pipe connector		DN150	DN150	DN150	DN200	DN200	DN250	DN250	DN250
Unit weight		kg	5500	5800	6500	7300	7900	8300	8800	9300
Operating weight		kg	5880	6235	7000	7950	8640	9150	9745	10365
Operating noise		dB	83	83	85	87	87	87	87	87
Package size	Length	mm	3950	3950	4000	4100	4200	4300	4400	4500
	Width	mm	2150	2150	2300	2400	2450	2600	2700	2700
	Height	mm	2100	2200	2300	2400	2500	2600	2600	2600

Note:
1.The above specifications are based on chilled water inlet12℃,chilled water outlet 7℃;Cooledwater inlet30℃; Cooledwater outlet 35℃;
condition test : fouling factor 0.0001m²℃/W.The cooling capacity can also be achieved at cooled water inlet32℃; Cooledwater outlet 37℃;
condition test: fouling factor 0.000088m²℃/W.
2.Protective devices: high/low pressure switch, anti-freezing switch, fusible plug, overload protective device, coil overheat protector, auto temperature switch, reverse phase protector.
3.Noise test: measured at a distance of 1m and a height of 1.5m in front of the machine.
4.The compressor can be added with continuous capacity adjustment control.
5.For special specifications, please offer your requirements prior to placing your order.
6.The above specifications are subject to changes without notice.

Twin-Screw Single Unit Series (R-134a)

Item \ Model			LSBLG 350MTSAD	LSBLG 400MTSAD	LSBLG 460MTSAD	LSBLG 530MTSAD	LSBLG 600MTSAD	LSBLG 680MTSAD
Power supply			3Φ-380V-50Hz					
Cooling capacity		kcal/hr	301,000	344,000	395,600	455,800	516,000	584,800
		kW	350	400	460	530	600	680
Power input		kW	64	73	84	96	108	122
Operating current		A	122	131	149	164	202	215
Starting current		A	612	665	436	465	520	650
Capacity control		%	25%100% continuous or four-grade capacity control					
Compressor	Type		Semi-hermetic screw type					
	Quantity		1					
	Starting method		Part winding		Y-△			
	Oil heater	W	300×1					
Cooling oil	Type		BSE170					
	Charge volume	L	22×1	22×1	28×1	28×1	28×1	28×1
Refrigerant	Type		R-134a					
	Charge volume	kg	200	230	265	305	345	390
	Control method		Electric expansion valve					
Evaporator	Type		Flooded type					
	Chilled water flow	m^3/h	60	69	79	91	103	117
	Head loss	M	6	6.2	6.3	6.3	6.4	6.4
	Water pipe connector		DN125	DN125	DN125	DN125	DN125	DN150
Condenser	Type		Shell and tube type					
	Cooling water flow	m^3/h	78	89	103	119	134	152
	Head loss	M	6.3	6.4	6.4	6.5	6.6	6.7
	Water pipe connector		DN125	DN125	DN125	DN125	DN125	DN150
Unit weight		kg	2500	2800	3500	4000	4500	4900
Operating weight		kg	2690	3020	3750	4288	4825	5270
Operating noise		dB	83	83	85	87	87	87
Package size	Length	mm	3700	3700	3800	3900	3900	3950
	Width	mm	1900	1900	2000	2100	2100	2150
	Height	mm	2000	2000	2000	2100	2100	2100

Note:
1.The above specifications are based on chilled water inlet12℃,chilled water outlet 7℃;Cooledwater inlet30℃; Cooledwater outlet 35℃;
condition test : fouling factor 0.0001m℃/W.The cooling capacity can also be achieved at cooled water inlet32℃; Cooledwater outlet 37℃;
condition test: fouling factor 0.000088m℃/W.
2.Protective devices: high/low pressure switch, anti-freezing switch, fusible plug, overload protective device, coil overheat protector, auto temperature switch, reverse phase protector.
3.Noise test: measured at a distance of 1m and a height of 1.5m in front of the machine.
4.The compressor can be added with continuous capacity adjustment control.
5.For special specifications, please offer your requirements prior to placing your order.
6.The above specifications are subject to changes without notice.

Twin-Screw Single Unit Series (R-134a)

Item \ Model			LSBLG 700MTDAD	LSBLG 800MTDAD	LSBLG 925MTDAD	LSBLG 1065MTDAD	LSBLG 1200MTDAD	LSBLG 1365MTDAD
Power supply			3Φ-380V-50Hz					
Cooling capacity		kcal/hr	602,000	688,000	795,500	915,900	1,032,000	1,173,900
		kW	700	800	925	1065	1200	1365
Power input		kW	129	147	169	193	216	244
Operating current		A	244	263	299	328	404	429
Starting current		A	734	797	585	629	722	865
Capacity control		%	25%100% continuous or four-grade capacity control					
Compressor	Type		Semi-hermetic screw type					
	Quantity		2					
	Starting method		Part winding		Y-△			
	Oil heater	W	300×2					
Cooling oil	Type		BSE170					
	Charge volume	L	22×2	22×2	28×2	28×2	28×2	28×2
Refrigerant	Type		R-134a					
	Charge volume	kg	400	460	530	610	690	780
	Control method		Electric expansion valve					
Evaporator	Type		Flooded type					
	Chilled water flow	m^3/h	120	138	159	183	206	235
	Head loss	M	6.4	6.6	6.6	6.8	6.9	7.0
	Water pipe connector		DN150	DN150	DN150	DN150	DN150	DN200
Condenser	Type		Shell and tube type					
	Cooling water flow	m^3/h	157	179	207	238	268	305
	Head loss	M	6.7	6.8	6.8	7.1	7.3	7.5
	Water pipe connector		DN150	DN150	DN150	DN200	DN200	DN200
Unit weight		kg	5500	5800	6500	6900	7300	7800
Operating weight		kg	5880	6235	7000	7480	7950	8540
Operating noise		dB	83	83	87	87	87	87
Package size	Length	mm	3950	3950	4600	4600	4600	4600
	Width	mm	2150	2250	2400	2400	2500	2550
	Height	mm	2100	2200	2300	2300	2400	2500

Note:
1.The above specifications are based on chilled water inlet12℃,chilled water outlet 7℃;Cooledwater inlet30℃; Cooledwater outlet 35℃;
condition test : fouling factor 0.0001m℃/W.The cooling capacity can also be achieved at cooled water inlet32℃; Cooledwater outlet 37℃;
condition test: fouling factor 0.000088m℃/W.
2.Protective devices: high/low pressure switch, anti-freezing switch, fusible plug, overload protective device, coil overheat protector, auto temperature switch, reverse phase protector.
3.Noise test: measured at a distance of 1m and a height of 1.5m in front of the machine.
4.The compressor can be added with continuous capacity adjustment control.
5.For special specifications, please offer your requirements prior to placing your order.
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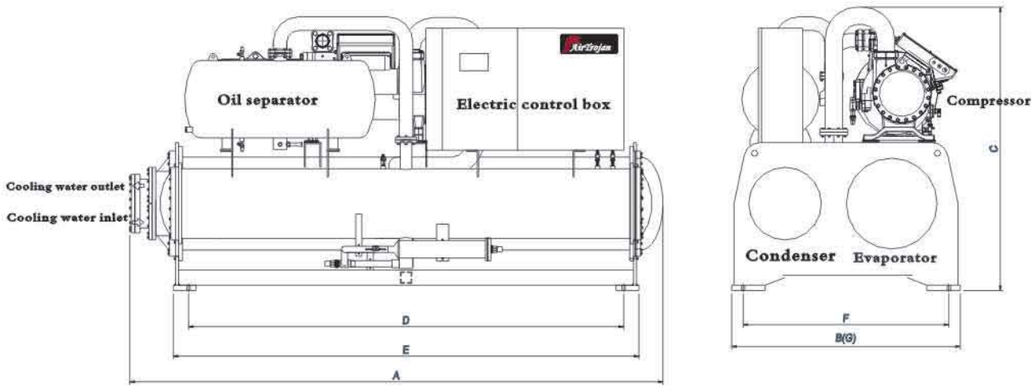
Outline Dimensions

Dimensions (single unit)



R–22 series

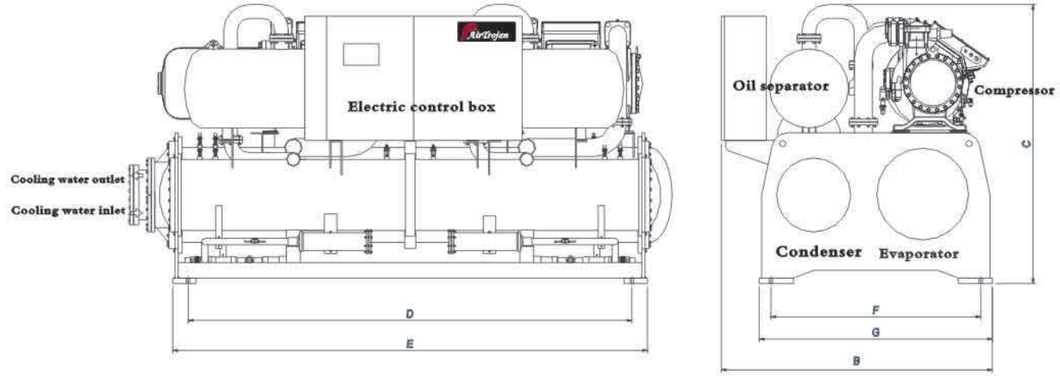
Model	Size (mm)							Pipe coupling form and size	
	A	B	C	D	E	F	G	Condenser	Evaporator
LSBLG350MTSA	3300	1500	1700	2605	2805	1350	1500	DN125	DN125
LSBLG400MTSA	3300	1500	1700	2605	2805	1350	1500	DN125	DN125
LSBLG455MTSA	3400	1600	1700	2705	2905	1450	1600	DN125	DN125
LSBLG600MTSA	3500	1700	1800	2805	3005	1550	1700	DN125	DN125
LSBLG685MTSA	3550	1750	1800	2855	3055	1600	1750	DN150	DN150
LSBLG785MTSA	3550	1850	1900	2855	3055	1700	1850	DN150	DN150
LSBLG870MTSA	3700	1900	2000	3005	3205	1750	1900	DN150	DN150
LSBLG980MTSA	3800	1900	2000	3105	3305	1750	1900	DN150	DN150

R–134a series

Model	Size (mm)							Pipe coupling form and size	
	A	B	C	D	E	F	G	Condenser	Evaporator
LSBLG350MTDAD	3300	1500	1700	2605	2805	1350	1500	DN125	DN125
LSBLG400MTDAD	3300	1500	1700	2605	2805	1350	1500	DN125	DN125
LSBLG460MTDAD	3400	1600	1700	2705	2905	1450	1600	DN125	DN125
LSBLG530MTDAD	3500	1700	1800	2805	3005	1550	1700	DN125	DN125
LSBLG600MTDAD	3500	1700	1800	2805	3005	1550	1700	DN125	DN125
LSBLG680MTDAD	3550	1750	1800	2855	3055	1550	1750	DN150	DN150

Remarks:
1.A, B and C stand for length, width and height of the machine respectively, D and E for the interval between the foundation bolts.
2.The aperture of the bolt holes of above machine is □20mm (with 16 (5/8?) hexagonal screws).

Dimensions (double unit)



R–22 series

Model	Size (mm)							Pipe coupling form and size	
	A	B	C	D	E	F	G	Condenser	Evaporator
LSBLG700MTDA	3550	1750	1800	2855	3055	1350	1500	DN150	DN150
LSBLG800MTDA	3550	1750	1800	2855	3055	1350	1500	DN150	DN150
LSBLG910MTDA	3600	1900	2000	2905	3105	1500	1650	DN150	DN150
LSBLG1200MTDA	3700	2000	2100	3005	3205	1600	1750	DN200	DN150
LSBLG1370MTDA	3800	2050	2200	3105	3305	1650	1800	DN200	DN200
LSBLG1570MTDA	3900	2200	2300	3205	3405	1800	1950	DN250	DN250
LSBLG1740MTDA	4000	2300	2300	3305	3505	1900	2050	DN250	DN250
LSBLG1960MTDA	4100	2300	2300	3405	3605	1900	2050	DN250	DN250

R–134a series

Model	Size (mm)							Pipe coupling form and size	
	A	B	C	D	E	F	G	Condenser	Evaporator
LSBLG700MTDAD	3550	1750	1800	2855	3055	1350	1500	DN150	DN150
LSBLG800MTDAD	3550	1850	1900	2855	3055	1450	1600	DN150	DN150
LSBLG925MTDAD	4200	2000	2000	3505	3705	1550	1700	DN150	DN150
LSBLG1065MTDAD	4200	2000	2000	3505	3705	1550	1700	DN200	DN150
LSBLG1200MTDAD	4200	2100	2100	3505	3705	1650	1800	DN200	DN150
LSBLG1365MTDAD	4200	2150	2200	3505	3705	1650	1800	DN200	DN200

Installation

The piping of water system

1)The water inlet and outlet pipes of the machine and the valves shall have good heat preservation, avoiding the cooling loss and condensation.

2)To ensure enough water supply in the evaporator and condenser and pipe system, the water flow switch shall be installed on the water outlet side of the evaporator and condenser and shall be in interlock control with the compressor. Thus it can avoid the inner frozen, too low pressure, bad oil return due to water lack or high pressure protection due to too high condensation pressure.

3)Multiple heat exchangers and water cooled chillers are in parallel connection. To keep the water flow of each heat exchanger the same, the resistance in pipes between the chillers and heat exchangers shall be equal.

4)In case of hermetic loop type water system, to reduce the expansion or contraction of water volume and to avoid the influence on water pipes by compensation water pressure, expansion water tank shall be equipped at water return position. The water surface of the expansion water tank shall be at least one meter higher than the highest point of the water system pipe.

5)The chilled water pump shall be installed at the inlet side of evaporator.

6)To avoid air staying in the water system, auto air discharge valves shall be installed at the high points of water pipes. And the water pipe in transverse direction shall be constructed at the upward slope of 1/250 degree. Rust shall be removed before water pipes are fixed. And the pipes shall be free of slag and be kept clean before the machine is put into operation.

7)Water pipe outlet shall have shockproof hose to avoid the vibration of the machine transmitted into the room.

8)Thermometer and pressure gauge shall be installed at water outlet/inlet of the machine, for easy maintenance and daily check.

9)When the water cooled chiller is running, the water flow or the nonfreezing solution flow inside the evaporator shall be above the minimum.

10)Pipe connection base for piping accessory shall be set at the water in/out pipes, for the easy water pipe separation in case of check and repair is needed.

11)The weight of water pipes shall not be borne by the machine. The water outlet/inlet of water pump shall be connected with related water pipes through the shockproof water pipes or rubber connector, to avoid the transmission of vibration and noise and interference.

12)The condenser and cooling water pipes are recommended to be installed as shown in Figure 1.

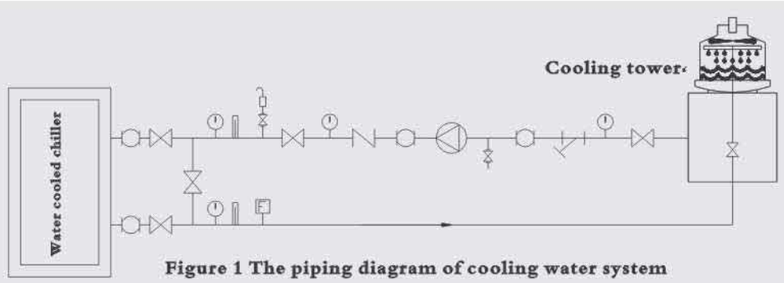


Figure 1 The piping diagram of cooling water system

13. The evaporator and chilled water pipes are recommended to be installed as shown in Figure 2.

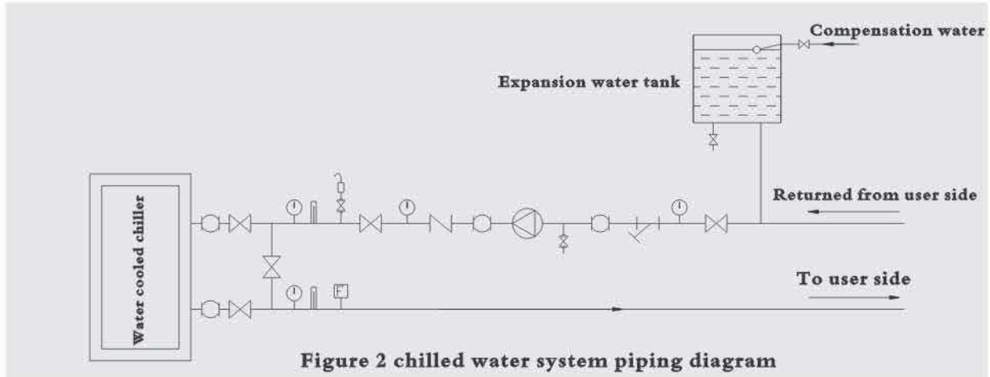


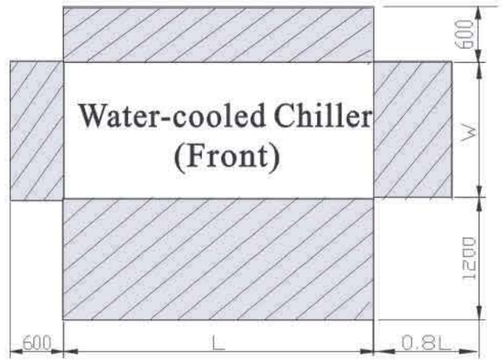
Figure 2 chilled water system piping diagram

Water filter
Stop valve
Shockproof connector
Water pump
Pressure gauge
Thermometer
Auto air discharge valve
Check valve
Water drain valve
Water flow switch
Water flow direction

Hoisting and foundation installation

How to select installation place

- Choose the ground which can bear the weight of the machine under operating condition. The ground shall be solid enough, and not to generate the resonance and noise easily.
- Keep the machine away from rain, wind blowing, direct sunlight or other heat sources.
- The ambient temperature shall be controlled within 040? and the relative humidity within 75%.
- The location is well ventilated and has less dust.
- Near power supply and convenient for construction.
- Easy for maintenance and check. Preserve the service space as shown in the figure below. In the figure, L indicates the length of machine. Please refer to water cooled chiller catalogue. For the cleaning space of 0.8L for the condenser, please consider one among left or right side.

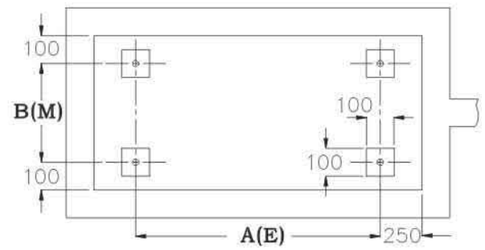


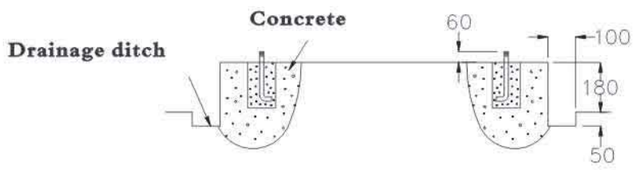
Unit: mm

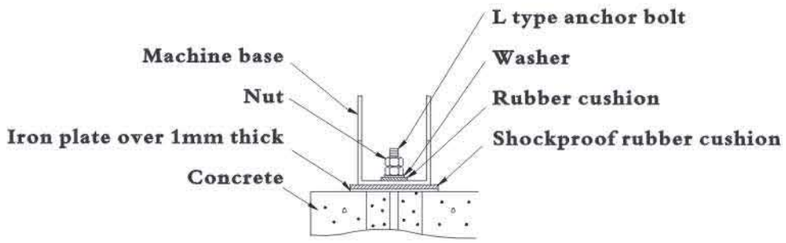
Foundation platform

- The cement foundation platform shall be constructed by referring to the machine weight under operating condition. Place on the bamboo steel with at least 9.5cm diameter (#3), and pack at the interval of 10 cm and totally in two layers.
- When cement foundation platform is constructed on concrete floor, the floor surface shall be made coarse. After cleaning the floor, water it and then start to construct.
- The cement foundation platform uses the concrete at the proportion of 1:2:4. Bury anchor bolts according to related requirements. The foundation platform surface shall be polished and kept horizontal.
- After the concrete of the foundation platform dries completely, the machine can be installed on it.
- Good drainage shall be ensured around the foundation platform. No accumulated water or other conditions which will affect the environment around the machine.

Refer to water cooled chiller catalogue for A, B (E, M) in the figure below.







Figure−2 unit: mm

Hoisting

Prepare the hoisting plan in advance, including the installation date, dimensions, weight, carry path, preservation holes and hoisting devices, as shown in Table−1.

Item		Check weight
Handling	Route	1. check the corridors, stair doors, and handling routes.
		2. check the roofs, undergrounds, and handling routes.
	Unloading	1. check the weight of the equipment.
		2. prepare the unloadingequipment.
		3. check the storage space.
	Handling	1. the large unit that can be disassembled shall be disassembled before handling, and assembled at site.
		2. if unable to be disassembled, the unit shall be handled through the openings on the wall or ground for the equipment.
Modify routes		If necessary, the wall and floor shall be modified to facilitate the handling.

Table−1

1.The machine hoisting shall comply with the safety regulations on building site. In hoisting, someone shall be assigned for as a hoisting guide. Warning methods shall be taken to ensure the safety of machine and persons on spot.

2.Rollers or hooks shall be used in the machine convey and hoisting. Do not direct beat and not apply rope on the weak parts such as copper pipes, valve body, and control box etc. Protection cushion shall be placed at the contact points between the machine and ropes, as shown below.

Handle with care. Avoid shaking and collision, preventing the machine and building from being damaged and the person injury.