Inquiry Us

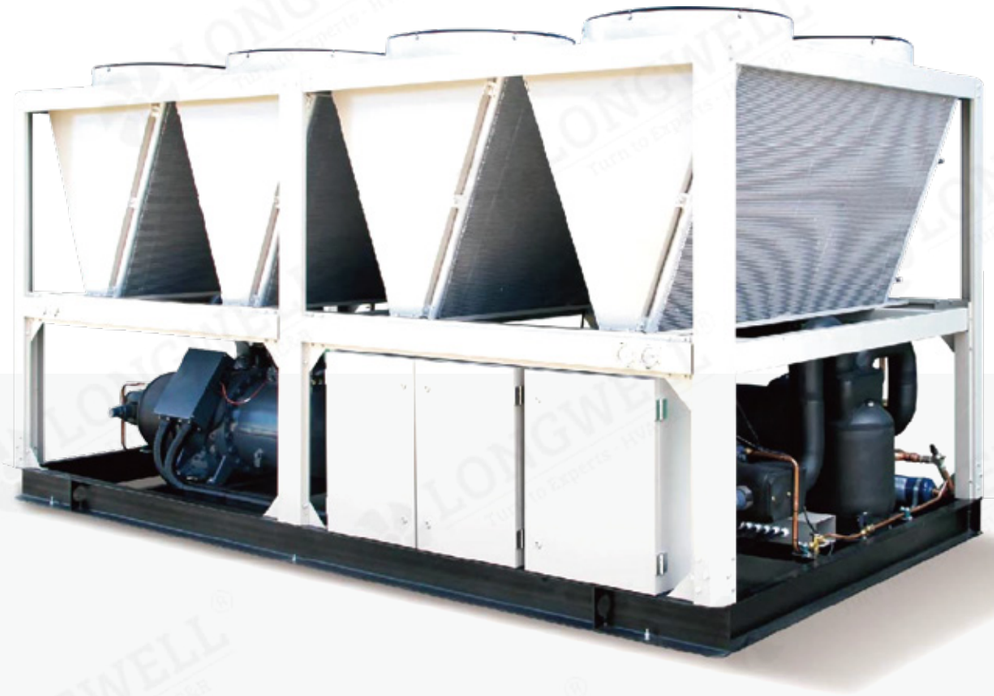
Website

LONGWELL®
Turn to Experts - HVAC&R

Ningbo Longwell Electric Technology Co., Ltd

Headquarter: NO.100, South of Xuxiang River, Yuyao, Zhejiang Province, China 315400
Tell: +86 574 6218 9863
Fax: +86 574 6218 9863
Phone: 0086 183 5827 4663
Web: www.longwellfans.com | www.longwell-group.com | www.longwell-media.com
Email: sales@zjlongwell.com

LONGWELL®
Turn to Experts - HVAC&R

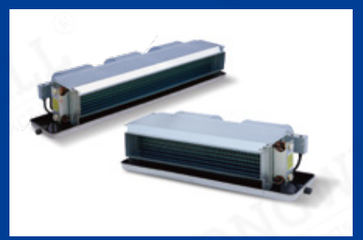


Longwell Technology Ventilation Equipment

Screw-Type Air-Cooled Chiller Heat Pump Unit

Ningbo Longwell Electric Technology Co., Ltd

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com



Fan Coil Unit



Combined Air Conditioner



Air Source Heat Pump Unit



Screw-Type Air-Cooled Chiller Heat Pump Unit



Precision Constant Temperature and Humidity Unit



Rooftop Air Conditioning Unit



Screw-Type Water-Cooled Chiller Unit



Water and Ground Source Heat Pump Unit



Cabinet Air Handling Unit--Suspended Ceiling



Air Handling Unit-Horizontal



Remote Jet Unit



Air Handling Unit-Vertical

CATALOGUE

01-02	About Longwell	06	Type Code	19	External Dimension Diagram
03-04	Factory Display	07-10	Product Features	20	Installation Base
05	Certificate Display	11-18	Technical Specifications	21-24	Installation Instructions

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

About Longwell

The Ventilation and Drive Technology Partner for Mission-Critical Environments

Longwell Technology - Ventilation Equipment Division - primarily engages in the production and sales of central air conditioning equipment. Our products are sold all over the country and exported to more than 50 countries and regions worldwide. LONGWELL central air conditioning series includes a comprehensive range of products, such as air source heat pump units, Air-cooled chillers (heat pump) units, water (ground) source heat pump units, sewage source heat pump units, seawater source heat pump units, water-cooled chiller units, constant temperature and humidity units, heat pump drying units, combined air conditioners, roof air conditioning units, air handling units, remote jet units, fan coil units, etc. These products are widely used in factories, schools, hotels, hospitals, office buildings, shopping malls, residential communities, and other buildings.

We have passed the ISO9001 Quality Management System Certification, ISO45001 Occupational Health and Safety Management System Certification, ISO14001 Environmental Management System Certification, etc. Our company is committed to survival by product quality and development by technological innovation, continually researching and producing green, clean, environmentally friendly and energy-saving innovative products. With full work enthusiasm, swift and decisive actions, higher standards, continuous improvement, and innovation, we will strive to create more value for our customers.



Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Factory Display

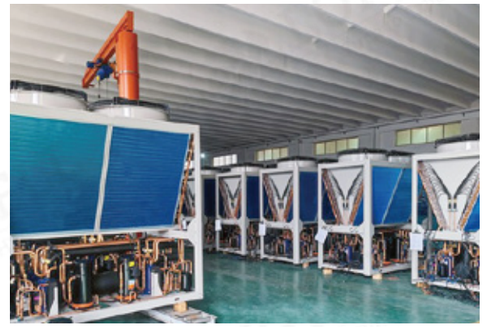
LONGWELL central air conditioning series includes a comprehensive range of products, such as air source heat pump units, Air-cooled chillers (heat pump) units, water (ground) source heat pump units, sewage source heat pump units, seawater source heat pump units, water-cooled chiller units, constant temperature and humidity units, heat pump drying units, combined air conditioners, roof air conditioning units, air handling units, remote jet units, fan coil units, etc. These products are widely used in factories, schools, hotels, hospitals, office buildings, shopping malls, residential communities, and other buildings.















Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Certificate Display

We have passed the ISO9001 Quality Management System Certification, ISO45001 Occupational Health and Safety Management System Certification, ISO14001 Environmental Management System Certification, etc.


Patent


Patent


ISO


ISO


CRAA


CRAA


CRAA


CRAA

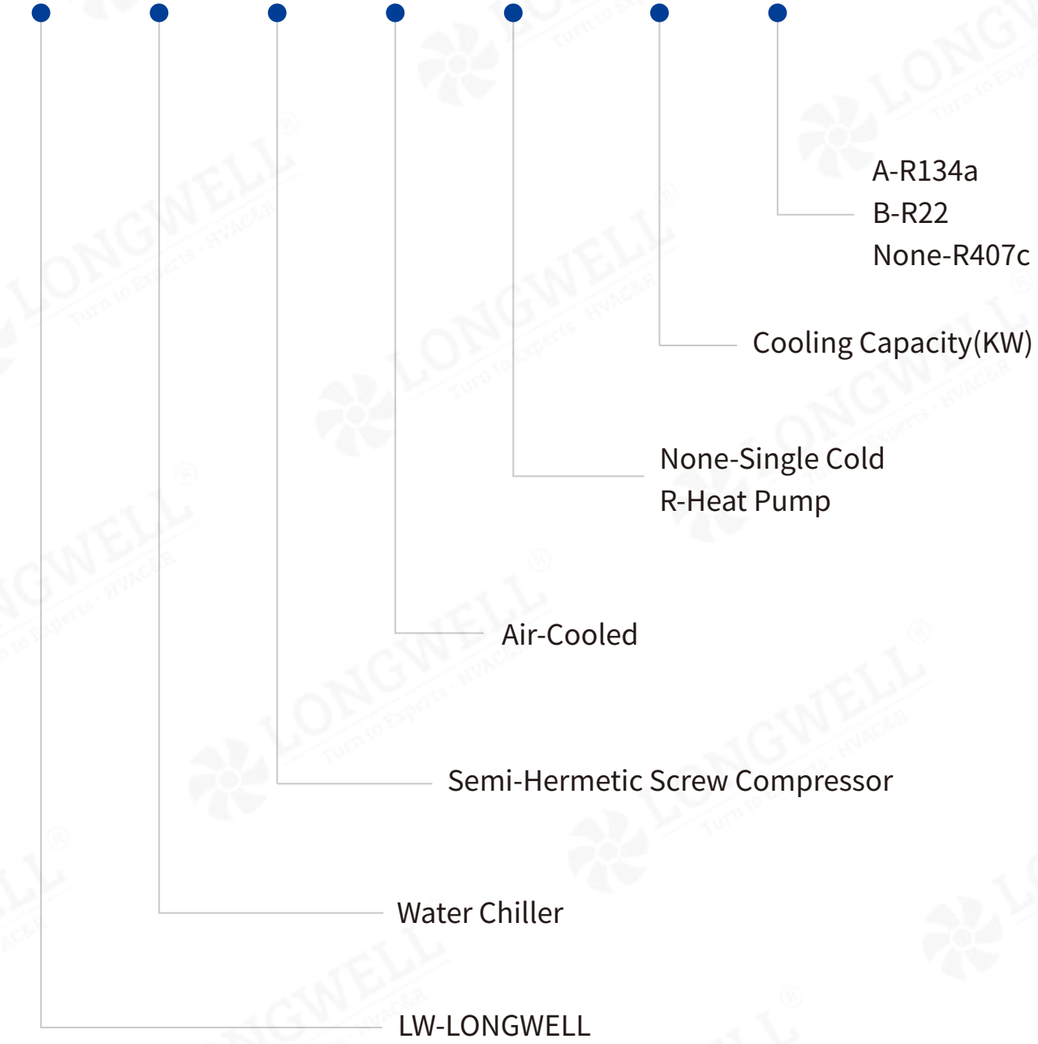

Patent


Patent


Patent

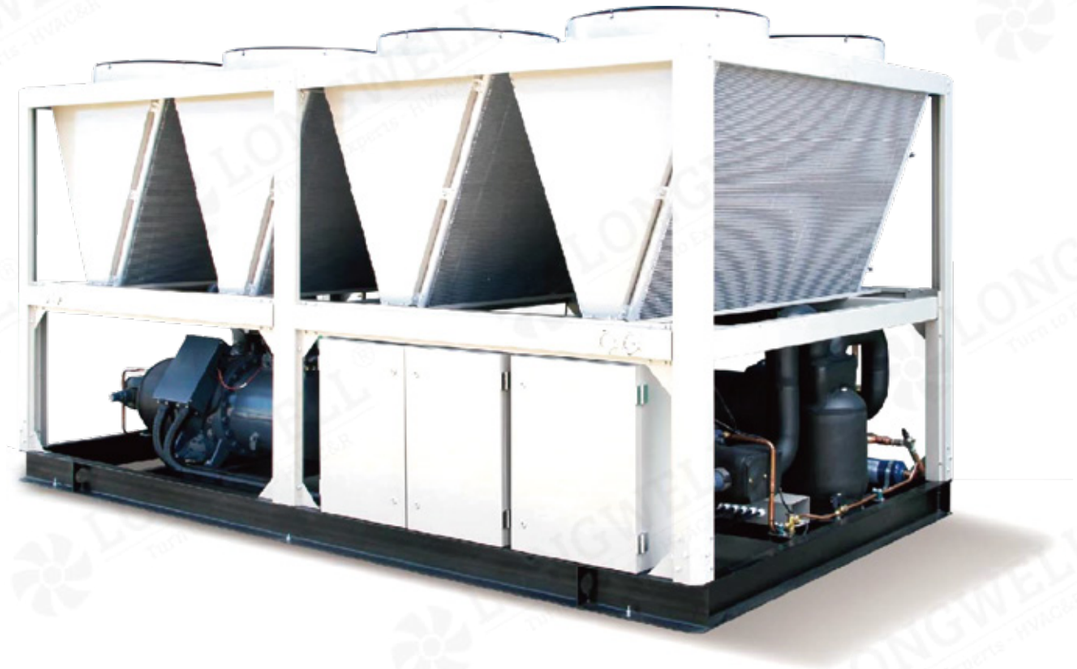

Patent

Type Code



Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Screw-Type Air-Cooled Chiller Heat Pump Unit



User-Friendly Human-Machine Interface

The next generation LCD touchscreen control display, with menu-based management, clearly presents unit operation parameters, facilitating simple and convenient operation. It also offers the option to switch to English language display.

Through the control interface menu, users can quickly access inlet/outlet water temperatures, inlet air temperature, current water temperature setpoint, temperatures and pressures of each refrigeration circuit's evaporator/condenser, as well as operating times of each compressor, and other operational parameters.

Provides three control modes: local, remote (wired), and network-based.

Automatically monitors all control and safety parameters of the unit in real-time during operation, and provides alarms when necessary, along with common troubleshooting solutions.

The control system is equipped with an RS485 standard serial communication interface for use with remote or dedicated diagnostic tools for analysis and assessment. It also provides password protection to prevent incorrect operations.

Energy Efficiency

Using the new generation semi-enclosed twin-screw compressor, with compact structure, mature technology, high compression efficiency, energy saving of over 10%, stable operation, combined with optimally matched refrigeration system and reliable control technology, ensuring efficient operation of the unit; adopting new efficient heat transfer tubes with high heat transfer efficiency.

The electronic expansion valve with a regulation level of up to 3810 levels ensures precise and sensitive control, accurately adjusting the condensing pressure for higher refrigeration efficiency, dynamically controlling the superheat of refrigerant at the evaporator outlet, and achieving higher efficiency in heat transfer surface area utilization.

Advanced economizer cycle design significantly increases the refrigeration capacity of the unit and further enhances the refrigeration efficiency of the unit.

Multi-circuit, multi-compressor design with low starting current, high efficiency at partial loads, and providing excellent standby capability.

Utilizing intelligent defrost control logic, optimizing defrost cycle activation time to avoid unnecessary heat loss, while enhancing the stability of hot water outlet temperature, resulting in excellent heating performance.

Environmental Leadership

The unit directly extracts heat from the air, eliminating the need for boilers or cooling towers, consuming minimal electrical energy to achieve both heating and cooling. This maximizes the conservation of primary energy sources. During operation, the unit produces no emissions or pollution, making it environmentally friendly with low carbon footprint.

Utilizing environmentally leading refrigerant HFC-134a, free of chlorine elements, causing no harm to the atmospheric ozone layer, with no phase-out deadline. It boasts outstanding refrigeration performance, saving electricity consumption, reducing CO_2 emissions, and having a low global warming potential.

Advanced 'leak-free' refrigeration circuit design, with welded refrigeration piping connections, abandoning traditional capillary tube designs in favor of electronic expansion valves and electronic temperature/pressure sensors, fundamentally eliminating all potential leakage possibilities.

Easy Installation

The unit is designed with a modular structure, allowing for production and transportation in standard modular units, which can be assembled into a complete unit on-site during installation. Standard modular units are lightweight and compact, saving significant costs during transportation and hoisting processes.

The clamp-type water pipe connection is convenient and reliable, reducing installation difficulty while effectively isolating the transmission of vibrations.

The unit is equipped with sensitive and maintenance-free electronic flow switches installed at the factory, with completed wiring, saving installation time on-site.

The quick self-check function allows for a step-by-step inspection of electrical components, electronic expansion valves, fan motors, compressors, and other parts before unit operation.

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Quiet Operation

Utilizing semi-enclosed screw compressors, with direct motor drive, low compressor speed, ensuring smooth compression process; "V" type finned heat exchanger optimized in shape and size, facilitating uniform and quiet airflow over the coil surface; operation of low-noise axial fans is quieter.

Reliable Quality

The compressors, refrigeration system components, and electronic control elements used in the unit are all sourced from well-known domestic and international brands, ensuring precise control and reliable performance.

Utilizing semi-enclosed screw compressors with high-grade bearing selection, lubrication oil circuit design without oil pump, and all components being field-serviceable, ensuring extremely safe and reliable compressor operation.

The adaptive control logic effectively avoids frequent starts and stops of the compressor. When the condensing pressure abnormally rises, the compressor automatically unloads. In case of unexpected circumstances, the unit automatically adjusts the refrigeration capacity and continues to operate reliably.

The unit is equipped with protections including low temperature of chilled water outlet, high and low-pressure protection, high exhaust temperature protection, oil level protection, oil pressure differential protection, motor protection, voltage protection, and flow protection.

Control Interface



Screw-Type Air-Cooled Chiller Heat Pump Unit



Technical Specifications Sheet

Model	LWLSBFR-	330A	430A	500A	660A
Nominal Cooling Capacity(kw)		322	422	500	660
Nominal Heating Capacity(kw)		317	422	500	634
Cooling Power(kw)		90.3	122.4	134.3	186
Heating Power(kw)		87.9	122.4	139.1	175.7
Energy Modulation Range		30%～100%	30%～100%	30%～100%	15%～100%
Refrigerant		R134a			
Charge Quantity	Circuit A	115	150	175	115
	Circuit B	-	-	-	115
	Circuit C	-	-	-	-
	Circuit D	-	-	-	-
Compressor		Semi-hermetic screw compressor			
Cooling Method		Refrigerant suction cooling			
Quantity	Circuit A	1	1	1	1
	Circuit B	-	-	-	1
	Circuit C	-	-	-	-
	Circuit D	-	-	-	-
Fan Type		Low-noise axial fan			
Number of Fans		6	8	10	12
Total Air Volume(L/s)		27660	36112	45139	54168
Water-Side Heat Exchanger		Shell and tube heat exchanger			
Water Capacity(L)		70	79	94	119
Nominal Water Flow Rate	Refrigeration(L/s)	15.3	20.1	23.8	31.4
	Heating	15.1	20.1	23.8	30.3
Nominal Water Pressure Drop	Refrigeration(L/s)	21.6	23	23.3	25.8
	Heating	21	23	23.3	24.1
Maximum Hydraulic Pressure(KPa)		1000			
Water-Side Piping		Clamp-type			
Nominal Diameter(in)		6	6	6	6
Outer Diameter of Pipe(mm)		168	168	168	168
Main Power Supply		380V-3Ph-50Hz			
Control Power Supply		Powered by the main power supply through an internal transformer.			
Startup Method		Y-Δ Star-delta starting			
Fan Power(kw)		10.3	13.7	17.2	20.3
Rated Operating Current	Circuit A+B	178	243	271	368
	Circuit C+D	-	-	-	-
Maximum Operating Current	Circuit A+B	243	341	397	485
	Circuit C+D	-	-	-	-
Maximum Starting Current	Circuit A+B	388	587	587	631
	Circuit C+D	-	-	-	-
Unit Length(mm)		3827	4798	5992	7186
Unit Width(mm)		2253	2253	2253	2253
Unit Height(mm)		2297	2297	2297	2297
Unit Weight(kg)		3953	5366	5783	7486
Operating Weight(kg)		4023	5445	5877	7605

Remarks:
1. Nominal refrigeration condition: inlet/outlet water temperature 12/7°C, outdoor air dry bulb temperature 35°C.
2. Nominal heating condition: inlet/outlet water temperature 40/45°C, outdoor dry/wet bulb temperature 7/6°C.
3. Fouling factor is 0.018m^2.°C/kW.
4. The above information may be subject to change due to product improvements or other reasons.

Technical Specifications Sheet

Model	LWLSBFR-	750A	830A	1000A	1160A	1320A
Nominal Cooling Capacity(kw)		744	822	1000	1160	1320
Nominal Heating Capacity(kw)		739	817	1000	1134	1268
Cooling Power(kw)		212.8	224.6	268.6	320.3	371.9
Heating Power(kw)		210.3	227	278.2	314.8	351.4
Energy Modulation Range		13%～100%	12%～100%	15%～100%	8%～100%	8%～100%
Refrigerant		R134a				
Charge Quantity	Circuit A	150	175	175	175	115
	Circuit B	115	-	-	-	115
	Circuit C	-	115	175	115	115
	Circuit D	-	-	-	115	115
Compressor		Semi-hermetic screw compressor				
Cooling Method		Refrigerant suction cooling				
Quantity	Circuit A	1	1	1	1	1
	Circuit B	1	-	-	-	1
	Circuit C	-	1	1	1	1
	Circuit D	-	-	-	1	1
Fan Type		Low-noise axial fan				
Number of Fans		14	16	20	22	24
Total Air Volume(L/s)		63772	72799	90278	99307	108336
Water-Side Heat Exchanger		Shell and tube heat exchanger				
Water Capacity(L)		135	164	188	213	238
Nominal Water Flow Rate	Refrigeration(L/s)	35.4	15.3/23.8	23.8/23.8	31.4/23.8	31.4/31.4
	Heating	35.2	15.1/23.8	23.8/23.8	30.3/23.8	30.3/30.3
Nominal Water Pressure Drop	Refrigeration(L/s)	29.3	21.6/23.3	23.3/23.3	25.8/23.3	25.8/25.8
	Heating	27.4	21/23.3	23.3/23.3	24.1/23.3	24.1/24.1
Maximum Hydraulic Pressure(KPa)		1000 1000				
Water-Side Piping		Clamp-type				
Nominal Diameter(in)		6	6+6	6+6	6+6	6+6
Outer Diameter of Pipe(mm)		168	168+168	168+168	168+168	168+168
Main Power Supply		380V-3Ph-50Hz				
Control Power Supply		Powered by the main power supply through an internal transformer.				
Startup Method		Y-Δ Star-delta starting				
Fan Power(kw)		24	27.5	34.4	37.5	40.6
Rated Operating Current	Circuit A+B	426	271	271	271	368
	Circuit C+D	-	178	271	368	368
Maximum Operating Current	Circuit A+B	584	397	397	397	485
	Circuit C+D	-	243	397	485	485
Maximum Starting Current	Circuit A+B	829	587	587	587	631
	Circuit C+D	-	388	587	631	631
Unit Length(mm)		8380	9819	11984	13178	14372
Unit Width(mm)		2253	2253	2253	2253	2253
Unit Height(mm)		2297	2297	2297	2297	2297
Unit Weight(kg)		8919	9736	11566	13269	14972
Operating Weight(kg)		9054	9900	11754	13482	15210

Remarks:
1. Nominal refrigeration condition: inlet/outlet water temperature 12/7°C, outdoor air dry bulb temperature 35°C.
2. Nominal heating condition: inlet/outlet water temperature 40/45°C, outdoor dry/wet bulb temperature 7/6°C.
3. Fouling factor is 0.018m^2.°C/kW.
4. The above information may be subject to change due to product improvements or other reasons.

Cooling Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature 25°C			Ambient Temperature 30°C			Ambient Temperature 35°C		
		Refrigerating capacity(KW)	Power(KW)	Water flow rate(L/s)	Refrigerating capacity(KW)	Power(KW)	Water flow rate(L/s)	Refrigerating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	5°C	322	72.6	15.3	313	79.7	14.9	303	87.6	14.4
LWLSBFR-430A	5°C	415	102.5	19.8	403	112.6	19.2	390	123.7	18.5
LWLSBFR-500A	5°C	503	108.4	23.9	487	18.5	23.2	471	129.8	22.4
LWLSBFR-660A	5°C	665	149.4	31.7	643	164	30.6	621	180	29.6
LWLSBFR-750A	5°C	734	175.7	35	712	193	33.9	688	211.9	32.8
LWLSBFR-830A	5°C	825	181	39.2	800	198.2	38.1	774	217.4	36.8
LWLSBFR-1000A	5°C	1005	216.8	47.8	974	237	46.4	942	259.6	44.8
LWLSBFR-1160A	5°C	1168	257.8	55.6	1131	282.5	53.8	1093	309.8	52
LWLSBFR-13200A	5°C	1330	298.8	63.4	1287	327.9	61.2	1243	360	59.2
LWLSBFR-330A	6°C	332	73.8	15.8	323	81.1	15.4	313	89	14.9
LWLSBFR-430A	6°C	429	104.3	20.4	416	114.5	19.8	403	125.7	19.2
LWLSBFR-500A	6°C	518	110.2	24.7	502	120.5	23.9	485	132	23.1
LWLSBFR-660A	6°C	685	152	32.6	663	166.8	31.6	641	182.9	30.5
LWLSBFR-750A	6°C	756	178.4	36	733	195.8	34.9	708	214.9	33.7
LWLSBFR-830A	6°C	850	184	40.5	825	201.6	39.3	798	221	38
LWLSBFR-1000A	6°C	1036	220.4	49.4	1004	241	47.8	971	264	46.2
LWLSBFR-1160A	6°C	1203	262.2	57.3	1165	287.3	55.5	1127	314.9	53.6
LWLSBFR-13200A	6°C	1370	304	65.2	1326	333.6	63.2	1282	365.8	61
LWLSBFR-330A	7°C	342	75.2	16.3	333	82.5	15.9	322	90.3	15.3
LWLSBFR-430A	7°C	444	106.1	21.1	430	116.4	20.5	422	122.4	20.1
LWLSBFR-500A	7°C	534	112.2	25.4	517	122.6	24.6	500	134.3	23.8
LWLSBFR-660A	7°C	707	154.7	33.7	684	169.7	32.6	660	186	31.4
LWLSBFR-750A	7°C	778	181.1	37.1	754	198.6	35.9	744	212.8	35.4
LWLSBFR-830A	7°C	876	187.4	41.7	850	205.1	40.5	822	224.6	39.1
LWLSBFR-1000A	7°C	1067	224.4	50.8	1034	245.2	49.2	1000	268.6	47.6
LWLSBFR-1160A	7°C	1241	266.9	59.1	1201	292.3	57.2	1160	320.3	55.2
LWLSBFR-13200A	7°C	1414	309.5	67.4	1368	339.4	65.2	1320	371.9	62.8
LWLSBFR-330A	8°C	351	76.3	16.7	341	83.7	16.3	331	91.8	15.8
LWLSBFR-430A	8°C	458	107.9	21.8	444	118.3	21.1	429	129.9	20.4
LWLSBFR-500A	8°C	550	114.2	26.2	532	124.7	25.4	514	136.5	24.5
LWLSBFR-660A	8°C	729	157.6	34.7	705	172.6	33.6	681	189.2	32.4
LWLSBFR-750A	8°C	800	183.8	38.1	775	201.5	36.9	754	221.7	35.9
LWLSBFR-830A	8°C	901	190.5	42.9	874	208.4	41.7	846	228.3	40.3
LWLSBFR-1000A	8°C	1099	228.4	52.4	1065	249.4	50.8	1029	273	49
LWLSBFR-1160A	8°C	1278	271.8	60.9	1237	297.3	59	1195	325.7	56.9
LWLSBFR-13200A	8°C	1458	315.1	69.4	1410	345.3	67.2	1362	378.4	64.8
LWLSBFR-330A	10°C	370	78.7	17.6	360	86.3	17.1	348	94.5	16.6
LWLSBFR-430A	10°C	489	111.8	23.3	473	122.5	22.5	457	134.2	21.7
LWLSBFR-500A	10°C	582	118.4	27.7	564	129.2	26.9	545	141.2	25.9
LWLSBFR-660A	10°C	773	163.4	36.8	748	178.8	35.6	723	195.6	34.4
LWLSBFR-750A	10°C	846	189.5	40.3	819	207.5	39	791	227.4	37.7
LWLSBFR-830A	10°C	952	197.1	45.3	924	215.5	44	893	235.7	42.5
LWLSBFR-1000A	10°C	1165	236.8	55.4	1128	258.4	53.8	1089	282.4	51.8
LWLSBFR-1160A	10°C	1355	281.8	64.5	1312	308	62.5	1267	336.8	60.3
LWLSBFR-13200A	10°C	1545	326.9	73.6	1495	357.7	71.2	1445	391.2	68.8

Remarks:
1. The above data is based on a working condition with a temperature difference of 5°C between the inlet and outlet of the chilled water.
2. The above content may vary due to product improvements or other reasons;
3. The refrigeration capacity of multi-module units is calculated by stacking the capacities of individual modules.

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Cooling Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature 40°C			Ambient Temperature 45°C		
		Refrigerating capacity(KW)	Power(KW)	Water flow rate(L/s)	Refrigerating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	5°C	293	96.2	13.9	281	105.7	13.4
LWLSBFR-430A	5°C	376	136	17.9	361	149.5	17.2
LWLSBFR-500A	5°C	454	142.5	21.6	436	156.7	20.8
LWLSBFR-660A	5°C	598	197.6	28.5	573	217.1	27.3
LWLSBFR-750A	5°C	663	232.6	31.6	638	255.5	30.4
LWLSBFR-830A	5°C	747	238.7	35.5	718	262.4	34.2
LWLSBFR-1000A	5°C	908	285	43.2	872	313.4	41.6
LWLSBFR-1160A	5°C	1053	340.1	50.1	1010	373.8	48.1
LWLSBFR-13200A	5°C	1197	395.2	57	1147	434.1	54.6
LWLSBFR-330A	6°C	302	97.8	14.4	291	107.3	13.8
LWLSBFR-430A	6°C	388	138.1	18.5	373	151.8	17.8
LWLSBFR-500A	6°C	468	144.8	22.3	449	159.1	21.4
LWLSBFR-660A	6°C	617	200.7	29.4	591	220.4	28.2
LWLSBFR-750A	6°C	683	235.8	32.5	656	258.8	31.2
LWLSBFR-830A	6°C	769	242.6	36.7	740	266.4	35.2
LWLSBFR-1000A	6°C	936	289.6	44.6	899	318.2	42.8
LWLSBFR-1160A	6°C	1085	345.5	51.7	1040	379.5	49.6
LWLSBFR-13200A	6°C	1235	401.4	58.8	1182	440.8	56.4
LWLSBFR-330A	7°C	311	99.3	14.8	299	109	14.2
LWLSBFR-430A	7°C	401	140.3	19.1	385	154.1	18.3
LWLSBFR-500A	7°C	482	147.2	22.9	463	161.6	22
LWLSBFR-660A	7°C	636	204	30.3	609	224	29
LWLSBFR-750A	7°C	702	239.1	33.4	674	262.3	32.1
LWLSBFR-830A	7°C	793	246.5	37.7	761	270.6	36.2
LWLSBFR-1000A	7°C	763	294.4	45.8	925	323.2	44
LWLSBFR-1160A	7°C	1118	351.2	53.2	1072	385.6	51
LWLSBFR-13200A	7°C	1272	407.9	60.6	1218	448	58
LWLSBFR-330A	8°C	320	100.8	15.2	308	110.7	14.7
LWLSBFR-430A	8°C	413	142.6	19.7	397	156.5	18.9
LWLSBFR-500A	8°C	496	149.6	23.6	476	164.2	22.7
LWLSBFR-660A	8°C	655	207.3	31.2	628	227.5	29.9
LWLSBFR-750A	8°C	722	242.4	34.4	693	265.9	33
LWLSBFR-830A	8°C	815	250.4	38.8	784	274.9	37.4
LWLSBFR-1000A	8°C	991	299.2	47.2	952	328.4	45.4
LWLSBFR-1160A	8°C	1150	356.9	54.8	1103	391.7	52.6
LWLSBFR-13200A	8°C	1310	414.6	62.4	1255	455.1	59.8
LWLSBFR-330A	10°C	337	103.7	16.1	324	113.8	15.4
LWLSBFR-430A	10°C	439	147.3	20.9	421	161.4	20.1
LWLSBFR-500A	10°C	525	154.7	25	503	169.7	24
LWLSBFR-660A	10°C	694	214.3	33.1	665	235.2	31.7
LWLSBFR-750A	10°C	762	249.3	36.3	731	273.3	34.8
LWLSBFR-830A	10°C	862	258.4	41.1	827	283.5	66.7
LWLSBFR-1000A	10°C	1049	309.4	50	1007	339.4	48
LWLSBFR-1160A	10°C	1219	369	58.1	1169	404.9	55.7
LWLSBFR-13200A	10°C	1389	428.7	66.2	1330	470.4	63.4

Remarks:
1. The above data is based on a working condition with a temperature difference of 5°C between the inlet and outlet of the chilled water.
2. The above content may vary due to product improvements or other reasons;
3. The refrigeration capacity of multi-module units is calculated by stacking the capacities of individual modules.

Heating Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature -10°C			Ambient Temperature -5°C			Ambient Temperature 0°C		
		Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	30°C	198	60.9	9.5	226	56.4	10.9	259	59.3	12.4
LWLSBFR-430A	30°C	255	76.6	12.1	293	80.6	14	337	85.6	16
LWLSBFR-500A	30°C	312	83.1	15	360	87.8	17.3	413	93.6	19.9
LWLSBFR-660A	30°C	389	113.1	18.7	453	110.2	21.8	520	117	25
LWLSBFR-750A	30°C	445	127.6	21.3	521	133.9	24.9	597	142.9	28.7
LWLSBFR-830A	30°C	510	144	24.5	586	144.2	28.2	672	152.9	32.3
LWLSBFR-1000A	30°C	624	166.2	30	719	175.6	34.6	826	187.2	39.8
LWLSBFR-1160A	30°C	701	196.2	33.7	813	198	39.1	933	210.6	44.9
LWLSBFR-13200A	30°C	778	226.2	37.4	906	220.4	43.6	1040	234	50
LWLSBFR-330A	35°C	203	63.3	9.7	229	62.5	11	261	65.7	12.6
LWLSBFR-430A	35°C	260	84.8	12.4	299	89.3	14.2	342	94.7	16.3
LWLSBFR-500A	35°C	316	91.7	15.2	362	96.8	17.4	415	103.1	20
LWLSBFR-660A	35°C	401	116.4	19.3	458	122.4	22	523	129.7	25.2
LWLSBFR-750A	35°C	458	136.2	22	528	148.6	25.2	604	158.3	28.9
LWLSBFR-830A	35°C	519	155	24.9	591	159.3	28.4	676	168.8	32.6
LWLSBFR-1000A	35°C	632	183.4	30.4	725	193.6	34.8	830	206.2	40
LWLSBFR-1160A	35°C	717	208.1	34.5	820	219.2	39.4	938	232.8	45.2
LWLSBFR-13200A	35°C	802	232.8	38.6	916	244.8	44	1046	259.4	50.4
LWLSBFR-330A	40°C	205	66.7	9.9	232	69.4	11.2	264	72.8	12.7
LWLSBFR-430A	40°C	267	94.2	12.7	304	99	14.5	347	104.9	16.5
LWLSBFR-500A	40°C	320	101.3	15.4	366	106.9	17.6	418	113.8	20.1
LWLSBFR-660A	40°C	406	129.4	19.6	463	136	22.3	528	143.9	25.4
LWLSBFR-750A	40°C	467	156	22.4	535	165	25.6	611	175.6	29.2
LWLSBFR-830A	40°C	525	168	25.3	598	176.3	28.8	682	186.6	32.8
LWLSBFR-1000A	40°C	641	202.6	30.8	732	213.8	35.2	835	227.6	40.2
LWLSBFR-1160A	40°C	726	230.7	35	829	242.9	39.9	946	257.7	45.5
LWLSBFR-13200A	40°C	812	258.8	39.2	926	272	44.6	1056	287.8	50.8

Remarks:
1. The above data is based on a working condition with a hot water inlet and outlet temperature difference of 5°C;
2. The above content may vary due to product improvements or other reasons;
3. The heating capacity of multi-module units is calculated by stacking single-module units.

Heating Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature 7°C			Ambient Temperature 10°C		
		Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	30°C	311	64.5	14.9	337	67.2	16.2
LWLSBFR-430A	30°C	403	94.1	19.2	435	98.7	20.7
LWLSBFR-500A	30°C	497	104	23.9	537	109.7	25.8
LWLSBFR-660A	30°C	626	128.8	30.1	679	135.1	32.6
LWLSBFR-750A	30°C	718	158.4	34.4	778	166.7	37.1
LWLSBFR-830A	30°C	808	168.5	38.8	874	176.9	42
LWLSBFR-1000A	30°C	993	208	47.8	1074	219.4	51.6
LWLSBFR-1160A	30°C	1123	232.8	54	1216	244.8	58.4
LWLSBFR-13200A	30°C	1252	257.6	60.2	1358	270.2	65.2
LWLSBFR-330A	35°C	313	71.2	15.1	338	74.1	16.3
LWLSBFR-430A	35°C	406	104.1	19.3	438	109.1	20.9
LWLSBFR-500A	35°C	497	114.4	23.9	537	120.6	25.9
LWLSBFR-660A	35°C	628	142.4	30.2	680	149.2	32.7
LWLSBFR-750A	35°C	721	175.3	34.4	781	154.4	37.3
LWLSBFR-830A	35°C	810	185.6	39	875	194.7	42.2
LWLSBFR-1000A	35°C	995	228.8	47.8	1075	241.2	51.8
LWLSBFR-1160A	35°C	1125	256.8	54.1	1217	269.8	58.6
LWLSBFR-13200A	35°C	1256	284.8	60.4	1360	298.4	65.4
LWLSBFR-330A	40°C	315	78.7	15.2	340	81.8	16.4
LWLSBFR-430A	40°C	411	115.3	19.5	442	120.7	21
LWLSBFR-500A	40°C	499	126.1	24	538	132.8	25.9
LWLSBFR-660A	40°C	630	157.5	30.4	681	164.7	32.8
LWLSBFR-750A	40°C	726	194.1	34.7	783	203.9	37.4
LWLSBFR-830A	40°C	814	204.8	39.2	878	214.6	42.3
LWLSBFR-1000A	40°C	997	252.2	48	1076	265.6	51.8
LWLSBFR-1160A	40°C	1129	283.6	54.4	1219	297.5	58.7
LWLSBFR-13200A	40°C	1260	315	60.8	1362	329.4	65.6

Remarks:
1. The above data is based on a working condition with a hot water inlet and outlet temperature difference of 5°C;
2. The above content may vary due to product improvements or other reasons;
3. The heating capacity of multi-module units is calculated by stacking single-module units.

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Heating Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature -10°C			Ambient Temperature -5°C			Ambient Temperature 0°C		
		Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	45°C	208	74.5	10	236	77.5	11.4	268	80.7	12.9
LWLSBFR-430A	45°C	274	104.5	13	311	109.9	14.8	353	116.4	16.8
LWLSBFR-500A	45°C	325	122.2	15.7	370	118.3	17.8	421	125.8	20.3
LWLSBFR-660A	45°C	411	144	19.8	467	151	22.6	532	159.6	25.7
LWLSBFR-750A	45°C	475	173	22.8	541	182.6	26	616	194.9	29.6
LWLSBFR-830A	45°C	533	186.7	25.7	606	195.8	29.2	689	206.5	33.2
LWLSBFR-1000A	45°C	649	224.4	31.4	739	236.6	35.6	842	251.6	40.6
LWLSBFR-1160A	45°C	736	256.2	35.5	837	269.3	40.4	953	285.4	46
LWLSBFR-13200A	45°C	822	288	39.6	934	302	45.2	1064	319.2	51.4
LWLSBFR-330A	50°C	212	82.4	10.2	239	85.5	11.6	271	89.5	13.1
LWLSBFR-430A	50°C	281	116.1	13.4	318	122.1	15.1	359	129.4	17.1
LWLSBFR-500A	50°C	329	124.3	15.9	374	131	18.1	425	139.3	20.5
LWLSBFR-660A	50°C	416	160.2	20.1	473	167.5	22.8	537	176.8	26
LWLSBFR-750A	50°C	484	193	23.2	551	203.4	26.3	624	216.2	30
LWLSBFR-830A	50°C	541	206.7	26.1	613	216.5	29.7	696	228.8	33.6
LWLSBFR-1000A	50°C	659	248.6	31.1	748	262	36.2	850	278.6	41
LWLSBFR-1160A	50°C	745	284.5	36	847	298.5	40.9	962	316.1	46.5
LWLSBFR-13200A	50°C	832	320.4	40.2	946	335	45.6	1074	353.6	52
LWLSBFR-330A	55°C	216	92	10.4	243	94.9	11.8	275	99.1	13.3
LWLSBFR-430A	55°C	290	129.2	13.8	326	135.9	15.5	367	144.1	17.5
LWLSBFR-500A	55°C	335	138.3	16.2	380	145.8	18.1	409	146.6	19.8
LWLSBFR-660A	55°C	423	178.9	20.5	478	186	23.2	543	194.3	26.1
LWLSBFR-750A	55°C	495	215.1	23.8	560	226.1	26.9	634	238.4	30.2
LWLSBFR-830A	55°C	551	230.3	26.6	623	240.7	29.9	684	245.7	33.1
LWLSBFR-1000A	55°C	670	276.6	32.4	760	291.5	36.2	818	393.2	39.6
LWLSBFR-1160A	55°C	758	317.2	36.7	858	331.8	41.3	952	340.9	45.9
LWLSBFR-13200A	55°C	846	357.8	41	956	372	46.4	1086	388.6	52.2

Remarks:
1. The above data is based on a working condition with a hot water inlet and outlet temperature difference of 5°C;
2. The above content may vary due to product improvements or other reasons;
3. The heating capacity of multi-module units is calculated by stacking single-module units.

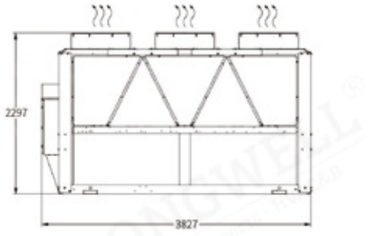
Heating Performance Parameter Table

Model	Outlet Water Temperature	Ambient Temperature 7°C			Ambient Temperature 10°C		
		Heating capacity(KW)	Power(KW)	Water flow rate(L/s)	Heating capacity(KW)	Power(KW)	Water flow rate(L/s)
LWLSBFR-330A	45°C	317	87.9	15.1	342	90.3	16.5
LWLSBFR-430A	45°C	422	122.4	20.1	446	133.8	21.3
LWLSBFR-500A	45°C	500	139.1	23.8	539	146.6	26
LWLSBFR-660A	45°C	634	175.7	30.3	683	181.8	33
LWLSBFR-750A	45°C	739	210.3	35.2	787	225.6	37.8
LWLSBFR-830A	45°C	817	227	38.9	881	236.9	42.5
LWLSBFR-1000A	45°C	1000	278.2	47.6	1078	293.2	52
LWLSBFR-1160A	45°C	1134	314.8	51.1	1222	328.4	59
LWLSBFR-13200A	45°C	1268	351.4	60.6	1366	363.6	66
LWLSBFR-330A	50°C	321	96.2	15.5	346	99.7	16.7
LWLSBFR-430A	50°C	426	141.9	20.3	452	148.7	21.5
LWLSBFR-500A	50°C	503	153.9	24.3	541	162.1	26.1
LWLSBFR-660A	50°C	639	192.5	30.9	687	200.1	33.2
LWLSBFR-750A	50°C	744	238.2	35.4	792	250	38
LWLSBFR-830A	50°C	824	250.1	39.8	881	261.8	42.8
LWLSBFR-1000A	50°C	1005	307.8	48.6	1082	324.2	52.2
LWLSBFR-1160A	50°C	1142	346.4	55.2	1228	362.8	59.3
LWLSBFR-13200A	50°C	1278	385	61.8	1374	401.4	66.4
LWLSBFR-330A	55°C	325	106.3	15.7	349	110.2	16.9
LWLSBFR-430A	55°C	428	157.9	20.4	458	165.4	21.8
LWLSBFR-500A	55°C	506	170.5	24.5	544	179.6	26.3
LWLSBFR-660A	55°C	643	212.8	31.1	691	221.8	33.5
LWLSBFR-750A	55°C	745	264.4	35.7	799	277.3	38.4
LWLSBFR-830A	55°C	831	276.8	40.2	893	289.8	43.2
LWLSBFR-1000A	55°C	1012	341	49	1087	359.2	52.6
LWLSBFR-1160A	55°C	1149	383.3	55.6	1235	401.4	59.8
LWLSBFR-13200A	55°C	1286	425.6	62.2	1382	443.6	67

Remarks:
1. The above data is based on a working condition with a hot water inlet and outlet temperature difference of 5°C;
2. The above content may vary due to product improvements or other reasons;
3. The heating capacity of multi-module units is calculated by stacking single-module units.

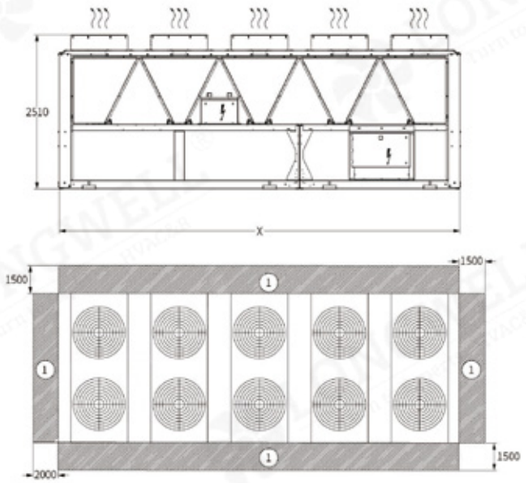
Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

LWLSBFR-330A External Dimension Diagram



①:Recommended Maintenance and Air Circulation Space

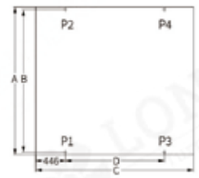
LWLSBFR-430A~1230A External Dimension Diagram



①:Recommended Maintenance and Air Circulation Space

Model	X	Model	X	Model	X	Model	X
LWLSBFR-430A	4798	LWLSBFR-660A	7186	LWLSBFR-830A	3827+5992	LWLSBFR-1160A	7168+5992
LWLSBFR-500A	5992	LWLSBFR-750A	8380	LWLSBFR-1000A	5992+5992	LWLSBFR-13200A	7168+7168

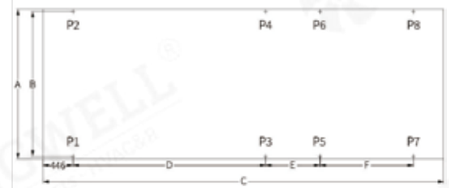
Basic and Weight Distribution



LWLSBFR-330A /
LWLSBFR-830A ModuleB



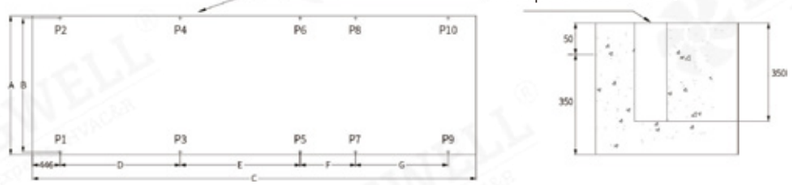
LWLSBFR-430A



LWLSBFR-500/830A / LWLSBFR-1000A
ModuleA/B / LWLSBFR-1160A ModuleA

This is the outline dimension of the unit base,
with additional allowance for the foundation.

The foundation is pre-drilled
with square holes 100×100



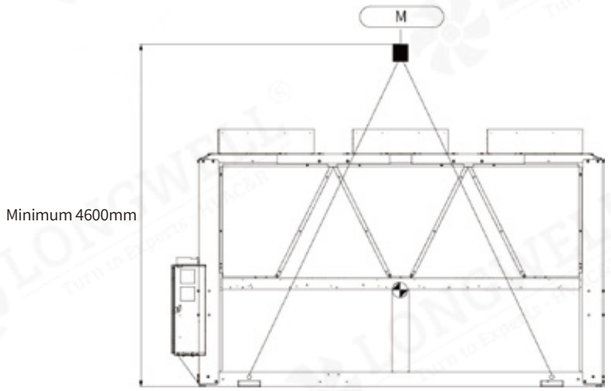
LWLSBFR-660/750A / LWLSBFR-1160A ModuleB / LWLSBFR-1360A Module A/B

Model	Unit Base Dimension(mm)						
	A	B	C	D	E	F	G
LWLSBFR-330A	2231	2157	3582	2690	-	-	-
LWLSBFR-430A	2231	2157	4776	1942	1942	-	-
LWLSBFR-500A	2231	2157	5970	2690	892	1496	-
LWLSBFR-660A	2231	2157	7164	1942	1942	892	1496
LWLSBFR-750A	2231	2157	8658	1942	1942	892	2690
LWLSBFR-830A ModuleA	2231	2157	5970	2690	892	1496	-
LWLSBFR-830A ModuleB	2231	2157	3582	2690	-	-	-
LWLSBFR-1000A ModuleA/B	2231	2157	5970	2690	892	1496	-
LWLSBFR-1160A ModuleA	2231	2157	5970	2690	892	1496	-
LWLSBFR-1160A ModuleB	2231	2157	7164	1942	1942	892	1496
LWLSBFR-1230A ModuleA/B	2231	2157	7164	1942	8942	892	1496

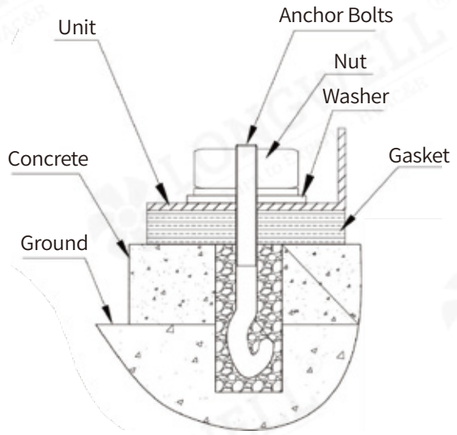
Model	Weight Distribution(Kg)										Operating Weight
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	
LWLSBFR-330A	1030	991	1020	982	-	-	-	-	-	-	4023
LWLSBFR-430A	912	948	890	925	868	902	-	-	-	-	5445
LWLSBFR-500A	737	736	735	737	734	734	732	732	-	-	5877
LWLSBFR-660A	764	758	765	761	760	762	761	759	760	755	7605
LWLSBFR-750A	1017	990	963	938	910	886	886	862	812	790	9054
LWLSBFR-830A ModuleA	737	736	735	737	734	734	732	732	-	-	5877
LWLSBFR-830A moduleB	1030	991	1020	982	-	-	-	-	-	-	4023
LWLSBFR-1000A ModuleA/B	737	736	735	737	734	734	732	732	-	-	5877
LWLSBFR-1160A ModuleA	737	736	735	737	734	734	732	732	-	-	5877
LWLSBFR-1160A ModuleB	764	758	765	761	760	762	761	759	760	755	7605
LWLSBFR-1230A ModuleA/B	764	758	765	761	760	762	761	759	760	755	7605

Ningbo Longwell Electric Technology Co., Ltd
https://www.longwellfans.com Email:sales@zjlongwell.com

Schematic Diagram of Unit Hoisting

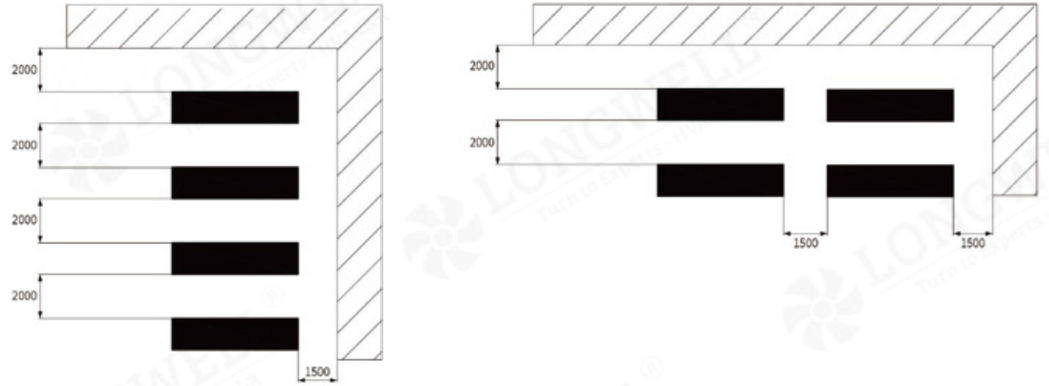


Installation Diagram of Anchor Bolts

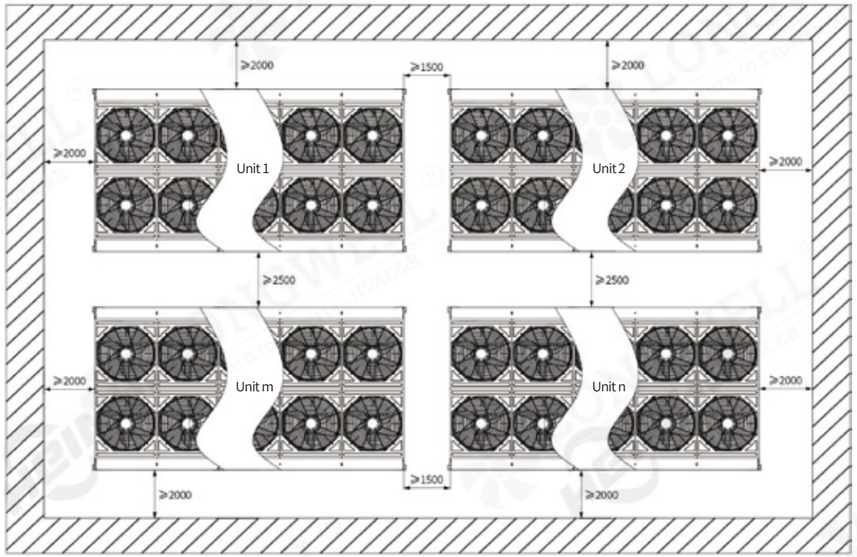


1. These components are not included in the product. Please select shock absorbers that match the operating weight configuration of the unit.
2. The foundation plane should ensure sufficient strength. It is recommended to use reinforced concrete or steel for construction.
3. Please ensure that the product is installed in a sufficiently load-bearing position, as any insufficient load-bearing capacity may result in the collapse of the unit, potentially causing injury or fatalities.
4. Please ensure that the product will not drop during forklift transportation.
5. Please ensure there are installation measures to withstand strong winds and earthquakes, as any installation defects may result in the collapse of the unit, potentially causing injury or fatalities.
6. Please pay attention to load-bearing ground and drainage systems (i.e., the intermediate part between the unit and the operating system). When supporting the foundation, also pay attention to pipelines and wiring.

Spacing Between Multiple Units of Installation

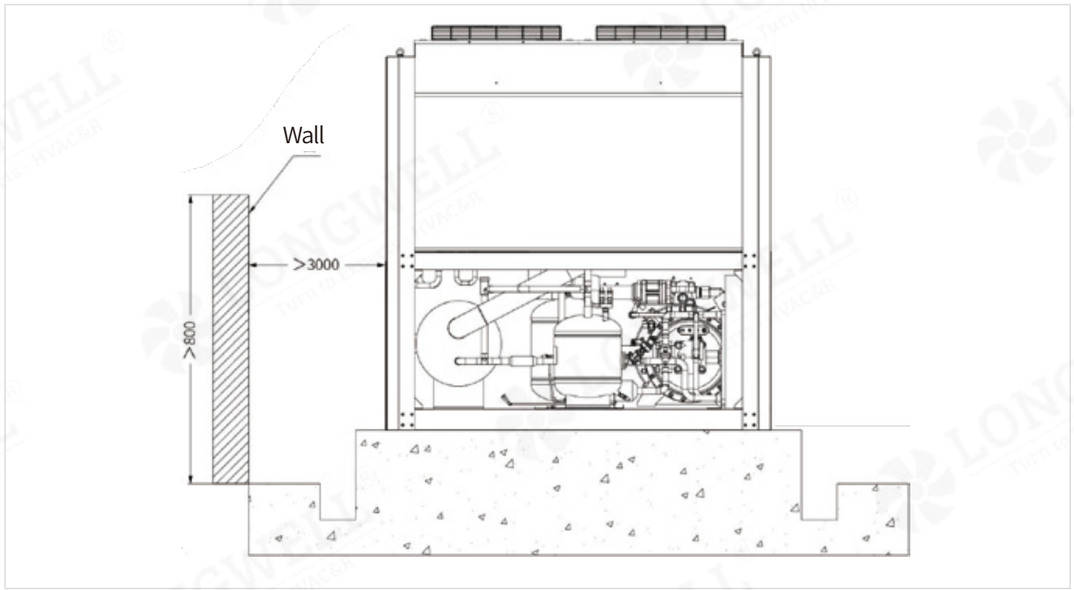


Installation Layout Diagram

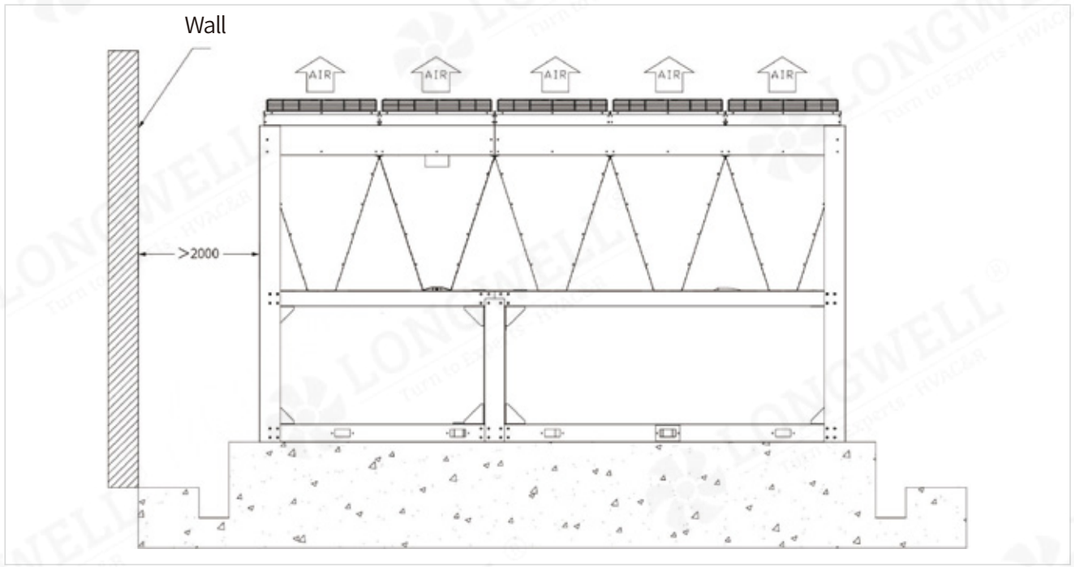


1. To ensure sufficient maintenance space, maximize the installation area as much as possible.
2. It is preferable that the unit layout meets the requirements of the unit layout plan. Otherwise, it may result in adverse consequences such as reduced cooling or heating capacity. Obstacles exceeding 1.8 meters are considered special space requirements.
3. For special space requirements, please contact our company.

Installation Layout Diagram



When the front or rear of the unit is close to a wall, if the wall height above the ground exceeds 800mm, the distance between the wall and the unit surface should be greater than 3000mm.



When the side of the unit is close to a wall, the distance between the wall and the unit should be greater than 2000mm.

Installation Precautions

1. The water system pressure of the unit evaporator does not exceed 1.0Mpa. If it exceeds, it is a special model.
2. When designing the water pipes, do not subject the air conditioning equipment to external forces.
3. Install dedicated chilled water pumps for each unit whenever possible. Avoid using chilled water pumps with a speed of 2950r/min (which may resonate with the compressor). If necessary to use, additional vibration isolation devices must be installed.
4. Install a filter with a mesh size of 30 meshes in the chilled water pipeline of the air-cooled heat pump unit system.
5. For the convenience of unit management and maintenance, in addition to installing shut-off valves on the respective pipelines near the chilled water inlet and outlet, please install the following devices:
   1) Install pressure gauges near the chilled water inlet and outlet;
   2) Install air vents in each chilled water pipeline system.
6. After the system installation is completed, conduct a water pressure test, pressurize to 0.8Mpa, with a pressure drop not exceeding 0.02Mpa within 30 minutes. Check for any leakage on the external pipes. Once qualified, proceed with insulation.
7. The water pump should be controlled for start and stop by the unit control system to ensure interlock protection.
8. Prior to installation, it is necessary to inspect all components to ensure they are intact and undamaged, paying particular attention to vulnerable parts such as pressure gauges, copper pipelines, etc.
9. When transporting the unit, try to keep it level to prevent tilting. The equipment should be securely strapped, and soft materials should be used as padding between the lifting straps and the equipment contact points.
10. The unit can be installed on the roof or in places such as courtyards.
11. Sufficient ventilation space and maintenance operation space must be left around the unit to ensure its normal operation and maintenance.
12. Valves and pipes of the air conditioning system's water pipelines should be insulated.
13. The highest point of the water system should have an expansion tank and an air vent, while the lowest point should have a drain valve.
14. It is recommended to equip heat pump units with auxiliary electric heaters in areas where the ambient temperature may reach 0°C or below. Single cooling units do not require this configuration.

Water Quality Requirements

Proper water treatment can effectively prevent corrosion inside copper pipes, the accumulation of algae, and the formation of scale. Poor water quality can lead to serious problems such as copper pipe rupture or corrosion of heat transfer pipes, resulting in unit malfunctions. Although the chilled water system is a closed-loop system, it is still advisable to conduct appropriate water quality treatment. Water treatment methods should be determined according to GB18430.1-2007 'Steam compression cycle chilled water (heat pump) units' or by professional water treatment personnel. During unit operation, regular water analysis should be conducted to ensure that water quality meets the requirements outlined in the table below.

Project			Baseline Value	Tendency	
				Corrosion	Scalling
Baseline Item	Alkalinity pH(25°C)		6.5~8.0	○	○
	Conductivity(25°C)	μS/cm	<800	○	○
	Chloride Ions Cl^-	mg(Cl^-)/L	<200	○	
	Sulfate Ions SO^{2-}	mg(SO^{2-})/L	<200	○	
	Acid Consumption(pH=4.8)	mg($CaCO_3$)/L	<100		○
	Total Hardness	mg($CaCO_3$)/L	<200		○
Reference Project	Iron (Fe)	mg(Fe)/L	<1.0	○	○
	Sulfide Ions(S^{2-})	mg(S^{2-})/L	Not detectable	○	
	Ammonium Ions (NH^+)	mg(NH^+)/L	<1.0	○	
	Silica SiO_2	mg(SiO_2)/L	<50		○

Note: ○ indicates factors related to corrosion or scale formation tendency