GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

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Note:
Gree is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.

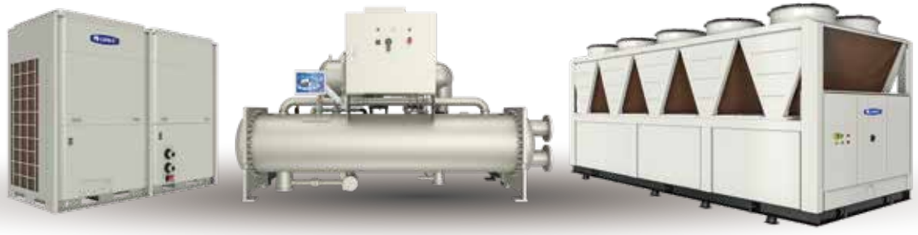
All features and specifications are subject to change without prior notice.

GC-2103-03

Distributor information

AIR CONDITIONER

Chiller



MADE IN CHINA
LOVED BY THE WORLD

Gree Electric Appliances, Inc. of Zhuhai was founded in 1991 and was listed on the Shenzhen Stock Exchange in November 1996. At the beginning, Gree was only a company that assembled residential air conditioners. Now it has grown into a diversified global technological industrial group that has expanded its business to air conditioners, home appliances, high-end equipment and communication equipment under three brand names: GREE, KINGHOME and TOSOT. Gree is the number one brand of air conditioners in the world in 2019*.

- 2005, Gree has topped No.1 in production and sales volume of residential air conditioners for 14 consecutive years.
- 2015, Gree's sales revenue exceeded 15.08 billion USD.
- 2016, Gree's sales revenue exceeded 16.51 billion USD.
- 2017, Gree's sales revenue exceeded 22.21 billion USD.
- 2018, Gree entered into the list of Forbes Global 2000 again and ranked No. 294, moving up 70 places compared with the previous year.
- 2018, Gree’s sales revenue exceeded 30.23 billion USD.
- 2019, Gree entered into Fortune Global 500. Gree' s return on equity （ROE）ranked the first among the 129 Chinese enterprises on the list.
- 2020, Gree has ranked the 436th on the list of Fortune Global 500.

Thanks to 400 million users' choices, Gree brands are sold widely to more than 160 countries and regions. Action makes the future and innovation makes achievement. Looking forward, Gree will press ahead with its business philosophy of passion, innovation and realization. We aim to build a centenary air conditioning enterprise and create a better life for humankind..

*Gree is the number one brand of air conditioners in the world in 2019
Footnote:“Source Euromonitor International Limited; Consumer Appliances 2020; retail volume sales in units, 2019 data.”

CONTENTS

Air-cooled Chiller

Mini Chiller(Heat Pump)

Gree Mini Chiller includes split type, integral type, modular integral type and inverter type. It can be connected to several fan coil units to achieve air conditioning through supplying hot water or cold water to the fan coil units. It doesn't need cooling tower and specialized room. You can select indoor terminals flexibly according to indoor decoration. It is well suited to hotels, restaurants, villas, offices, etc.

Item	Water side (water temperature)				Air side (outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	7~12	2.5~6	35	–	16~43
Heating	40	45	45~50	2.5~6	7	6	-15~28

Features

Excellent Anti-freezing Control

Dual anti-freezing control is adopted. Anti-freezing control of waterflow switch and temperature point is adopted in water system. Meanwhile, anti-freezing control board is added to control the refrigerant side, so as to ensure safe and reliable operation of unit under low temperature or low load condition.

High Efficiency and Energy Saving

For the models above 10kW, optimized design of dual systems is adopted. The unit will automatically select single system operation or dual systems operation according to the load changes, so as to achieve balance between "supply and demand" and ensure reliable and high-efficiency operation of unit.

Convenient Installation and Maintenance

- The terminal is low-pressure water system pipeline with simple installation and without expensive refrigerant charging cost;
- Installation is convenient as the unit is equipped with water pump, expansion tank, automatic water makeup valve and safety valve; (available for split type and integral type)
- Specialized room and special foundation are not needed, convenient for installation and maintenance.

Multiple Control Functions and Protection Functions

8 control functions:

- Memory control;
- Subroom control;
- Fault diagnosing and alarming;
- Compressor balance operation control (dual systems);
- Multi-modular control;
- Capacity regulation control of multiple compressors;
- Control of auxiliary electric heating;
- Auto defrosting control

Multiple protection functions:

- Compressor high/low pressure protection;
- Air switch protection;
- Phase sequence protection;
- Over-current protection;
- Anti-freezing protection;
- Overheating protection;
- Waterflow switch protection;
- Electromagnetic interference prevention and lightning stroke prevention;
- Compressor high discharge temperature protection;
- Temperature sensor protection;
- Auto anti-freezing protection in winter

Integral Type (Fixed-frequency)

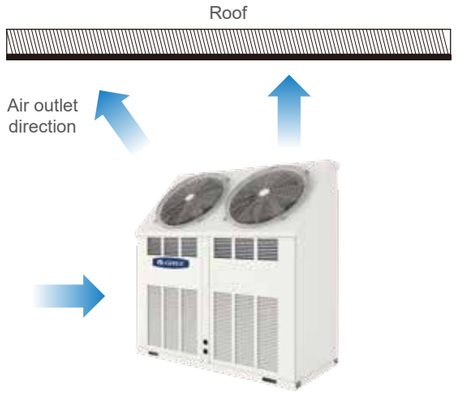
21.5/22.8kW

31/42kW

Features

Up-inclined Air Outlet Design with High Flexibility

The unit's cooling and heating performance will not be affected by seasonal wind and installation place thanks to this design, especially suitable for installation site with limited floor height and building distance.

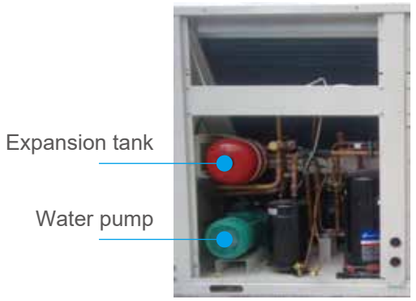


Scroll Compressor with High Efficiency

High-quality scroll compressor is adopted with the advantages of less moving parts, smaller noise and vibration, higher reliability and efficiency, etc.

Cost-effective Installation and Convenient Operation

The unit is equipped with water pump, expansion tank, automatic water makeup valve and safety valve. Installation of expansion water tank is not needed, which greatly reduces installation cost.



50Hz

R410A

Model	Heat pump		HLR22SNa-M	HLR25SNa-M	HLR35SNa-M	HLR45SNa-M
Capacity	Cooling	kW	21.5	22.8	31	42
	Heating	kW	25	25	37.5	49
EER/COP		W/W	2.50/2.91	2.59/2.81	2.61/3.00	2.30/2.80
Power supply		Ph/V/Hz	3/380-415/50	3/380-415/50	3/380-415/50	3/380-415/50
Power input	Cooling	kW	8.6	8.8	11.9	18.3
	Heating	kW	8.6	8.9	12.5	17.5
Compressor	Type	–	Scroll	Scroll	Scroll	Scroll
	Quantity	–	2	2	2	2
Refrigerant charge volume		kg	3.6×2	4.8×2	6.5×2	7.3×2
Water flow volume		l/s	0.92	1.2	1.4	2.2
		GPM	4.06	5.29	6.17	9.7
Built-in chilled water pump	Pump power input	kW	0.75	0.75	1.50	1.50
	Delivery lift	m	22	24	25	27
Built-in expansion vessel volume		L	8	8	8	8
Chilled water outlet/inlet screw thread		inch	1"Female BSP	1"Female BSP	1-1/2"Female BSP	1-1/2"Female BSP
Sound pressure level		dB(A)	66	66	68	68
Dimension (W×D×H)	Outline	mm	1460×530×1850	1460×530×1850	1750×800×1760	1750×800×1760
	Package	mm	1540×710×2100	1540×710×2100	1910×960×1970	1910×960×1970
Net weight/Gross weight		kg	380/387	380/392	680/690	755/765
Loading quantity	40'GP/40'HQ	set	23/23	23/23	12/12	12/12
Standard controller	Wired	–	Z12301A			

Integral Type (Inverter)

Wired controller Z263Q

Inner groove copper

Self-diagnosis

Comprehensive protection

Memory function

- Compressor inverter control regulates water temperature precisely.
- Integral installation is convenient and cost-saving.
- Precise system pressure control improves the anti-freezing function of the system.
- Two-stage compression technology is adopted to greatly improve the performance of system.

Item	Water side (water temperature)				Air side (outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	7~25	2~8	35	24	10~48
Heating	40	45	25~60	2~8	7	6	-20~35

Model	Heat pump		HLR8Pd/Na-K	HLR10Pd/Na-K	HLR12Pd/Na-M	HLR14Pd/Na-M
Capacity	Cooling	kW	6.20	7.50	9.50	11.00
	Heating	kW	8.00	10.00	12.00	14.00
EER/COP		W/W	3.1/3.6	3.1/3.4	3.2/3.7	3.1/3.4
Power supply		V/Ph/Hz	220-240V ~ 50Hz		380-415V 3N~ 50Hz	
Power input	Cooling	kW	2.00	2.40	2.97	3.55
	Heating	kW	2.25	2.90	3.24	4.12
Compressor	Type	-	Inverter rotary	Inverter rotary	Inverter rotary	Inverter rotary
	Quantity	-	1	1	1	1
Refrigerant charge volume		kg	3.5	3.5	4.0	4.0
Water flow volume		l/ s	0.30	0.36	0.45	0.53
		GPM	4.70	5.68	7.20	8.33
Built-in chilled water pump	Pump power input	kW	0.14	0.14	0.14	0.14
	Delivery lift	m	11	11	11	11
Built-in expansion vessel volume		L	10	10	10	10
Chilled water outlet/inlet screw thread		inch	1	1	1	1
Sound pressure level		dB(A)	53	53	54	54
Dimension(W×D×H)	Outline	mm	1390×412×890	1390×412×890	1390×367×1430	1390×367×1430
	Package	mm	1463×438×1035	1463×438×1035	1429×421×1585	1429×421×1585
Net weight/Gross weight		kg	140/155	140/155	194/210	194/210
Loading quantity	40'GP/40'HQ	set	80/80	80/80	43/43	43/43

Model		HLR20Pd/NaA-M	HLR25Pd/NaA-M	HLR30Pd/NaA-M	HLR35Pd/NaA-M
Capacity	Cooling	kW	20	25	28	32
	Heating	kW	25	30	33	37
EER/COP		W/W	3.13/3.21	2.91/3.45	3.11/3.24	3.08/3.49
Power supply		V/Ph/Hz	380V 3N~50Hz			
Power input	Cooling	kW	6.4	8.6	9	10.4
	Heating	kW	7.8	8.7	10.2	10.6
Compressor	Type	-	Inverter rotary	Inverter rotary	Inverter rotary	Inverter rotary
	Quantity	-	1	1	1	1
Refrigerant charge volume		kg	7	9	8.2	9.7
Water flow volume		m^3/h	3.44	4.3	4.82	5.5
		l/s	0.96	1.19	1.34	1.53
		GPM	12.62	15.78	17.69	20.19
Built-in chilled water pump	Pump power input	kW	0.75	0.75	0.75	0.75
	Delivery lift	m	35	35	35	35
Built-in expansion vessel volume		L	8	8	8	8
Sound pressure level		db(A)	61	63	63	62
Dimension(W×D×H)	Outline	mm	930×765×1605	930×765×1605	1340×765×1605	1340×765×1605
	Package	mm	1010×885×1775	1010×885×1775	1400×875×1775	1400×875×1775
Net weight/Gross weight		kg	286/297	302/313	378/390	387/399
Loading quantity	40'GP/40'HQ	set	26/26	26/26	21/21	21/21

Modular Air-cooled Scroll Chiller(Heat Pump)

D Series

65/80kW

130/160kW

249/280kW

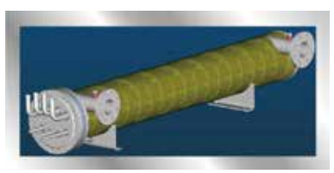
D series modular air-cooled scroll chillers can be widely used at newly-built or retrofitted industrial and civil buildings in various sizes, such as hotels, apartments, restaurants, office buildings, shopping malls, theaters, gyms, workshops, hospitals and other places where there are high requirements on noise level and air quality but it is troublesome to install the cooling tower.

Item	Water side (water temperature)				Air side (outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	5~20	2.5~6	35	-	15~45
Heating	40	45	35~50	2.5~6	7	6	-15~24

Features

High-efficiency Shell and Tube Heat Exchanger

As for the shell and tube heat exchanger, water inside it flows along the tube, which leaves large heat exchanging space and effectively prevents clogging caused by foreign matters or scale. As for the plate heat exchanger, the distance between plates is less than 3mm, which is vulnerably clogged owing to the bad water quality and causes the heat exchanger frozen up.

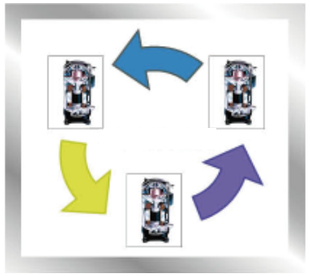


U-shaped Pipe Two-pass Design

The dual flow design of the U-shaped tube can enhance the heat exchange efficiency and effective superheating degree, thus increasing the performance of the unit.

Compressor Operation Balance Technology

The unique compressor operation balance technology makes sure that each compressor operates in turn, which greatly prolongs the lifespan of compressor.



Free Master Module Design

Any single unit can operate as the master once connected with the wired controller. It overcomes the problem which would occur to the product of other manufacturer that the whole system would fail to work properly when there's malfunction for the fixed master unit.

Advanced Flow Dividing Technology

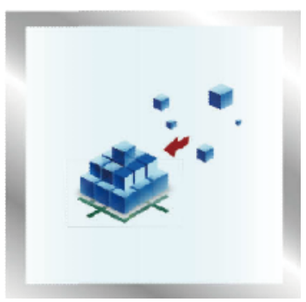
The pipeline and flow equalization plate are especially designed for D series modular air-cooled scroll chillers, which greatly improve flow dividing uniformity and heat exchange capacity.

Super Protection Functions

This series is equipped with advanced microcomputer control system, completed protection functions and powerful error diagnosis function.
Main protection functions: compressor high pressure protection, compressor low pressure protection, compressor overload protection, antifreezing protection, overheating protection, auto antifreezing protection in winter, waterflow switch protection, temperature sensor protection, phase sequence protection, high discharge temperature protection, etc.

Excellent Compatibility

The units of the same model or different models can be combined freely. For model 65 and model 80, each system can combine up to 16 modules. For model 130 and model 160, each system can combine up to 8 modules.



50Hz

R410A

Model	Heat pump		LSQWRF65M/NaD-M	LSQWRF80M/NaD-M	LSQWRF130M/NaD-M	LSQWRF160M/NaD-M	LSQWRF249M/NaD-M*	LSQWRF280M/NaD-M*
Capacity	Cooling/Heating	kW	60/65	71/79.5	120/130	145/170	249/275	280/325
		RT	17.06/18.48	20.19/22.61	34.12/36.97	41.23/48.34	70.80/78.20	79.62/92.42
Capacity steps		%	0-50%-100%		0-25%-50%-75%-100%			
EER/COP		W/W	2.84/3.09	2.76/2.94	2.84/2.93	2.74/3.04	2.95/3.25	2.85/3.10
Power supply		V-Ph-Hz	380-415V~3N~50Hz					
Power input	Cooling	kW	21.1	25.7	42.3	53	84.4	98.2
	Heating	kW	21	27	44.4	56	84.6	104.8
Compressor	Type	-	Constant speed scroll					
	Starting mode	-	Direct starting					
	Quantity	-	2	2	4	4	4	4
Water side heat exchanger	Type	-	Dry expansion evaporator					
	Water flow volume	l/s	2.87	3.39	5.73	6.93	11.89	13.39
		GPM	46	54	91	110	189	212
	Pressure drop	kPa	15	20	30	35	75	85
		ft.WG	4.92	6.56	9.84	11.48	24.60	27.88
	Connection pipe	-	DN65		DN80		DN100	
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Fan type and quantity	-	Axial-flow/2	Axial-flow/2	Axial-flow/4	Axial-flow/4	Axial-flow/8	Axial-flow/8
	Total fan air flow	l/s	2×0.375×10⁴	2×0.417×104	4×0.375×104	4×0.417×104	8×0.39×104	8×0.43×104
		CFM	2×0.795×10⁴	2×0.882×104	4×0.795×104	4×0.882×104	8×0.8239×104	8×0.918×104
	Total fan motor power	kW	2×0.65	2×0.95	4×0.65	4×0.95	8×0.65	8×0.75
Sound pressure level		dB(A)	70	71	72	74	67	69
Dimension	Outline(W×D×H)	mm	2040×1000×2230	2040×1000×2230	2226×1650×2230	2226×1650×2230	3980×2260×2450	3980×2260×2450
	Package(W×D×H)	mm	2120×1080×2230	2120×1080×2230	2306×1730×2230	2306×1730×2230	4040×2260×2450	4040×2260×2450
Net/Gross/Operating weight		kg	740/745/814	792/797/871	1315/1320/1447	1504/1509/1654	2985/2995/3284	3278/3288/3606
Loading quantity	40'GP/40'HQ	set	10/10	10/10	6/6	6/6	2/2	2/2

Notes: This product model is under development. Gree reserves the right to modify the specifications without prior notice.
Please confirm the final specifications with our sales representatives

60Hz

R410A

Model	Heat pump		LSQWRF65M/NaD-F	LSQWRF80M/NaD-F	LSQWRF130M/NaD-F	LSQWRF160M/NaD-F
Capacity	Cooling/Heating	kW	60/65	75/85	120/135	145/170
		RT	17.0/18.5	21.3/24.2	34.1/38.4	41.2/48.3
Capacity steps		%	0-50-100	0-50-100	0-25-50-75-100	0-25-50-75-100
EER/COP		W/W	2.79/2.89	2.72/3.04	2.79/3.00	2.71/3.04
Power supply		V-Ph-Hz	208-230V~3~60Hz			
Power input	Cooling/Heating	kW	21.5/22.5	27.6/28.0	43.0/45.0	53.5/56.0
Compressor	Type	—	Hermetic scroll	Hermetic scroll	Hermetic scroll	Hermetic scroll
	Starting mode	—	Direct starting	Direct starting	Direct starting	Direct starting
	Quantity	—	2	2	4	4
Water side heat exchanger	Type	—	High-effcient shell and tube heat exchanger			
	Water flow volume	l/s	2.87	3.58	5.73	6.93
		GPM	45.5	57.0	91.0	110.0
	Pressure drop	kPa	15	15	30	35
		ft.WG	4.9	4.9	9.8	11.5
	Connection pipe	—	DN65	DN65	DN80	DN80
Air side heat exchanger	Type	—	High-efficient fin tube type heat exchanger			
	Fan type and quantity	—	axial×2	axialx2	axial×4	axial×4
	Total fan airflow	l/s	2x0.375×10⁴	2x0.417x10⁴	4x0.375×10⁴	4x0.417×10⁴
		CFM	2x0.795×10⁴	2x0.882x10⁴	4x0.795×10⁴	4x0.882×10⁴
	Total fan motor power	kW	0.65×2	0.75x2	0.65×4	0.75x4
Sound pressure level		dB(A)	70	71	72	74
Dimension	Outline(W×D×H)	mm	2040×1000×2230	2024x1000x2230	2278x1830x2278	2278x1830x2278
	Package(W×D×H)	mm	2120×1080×2230	2120x1080x2230	2358x1910x2278	2358x1910x2230
Net/Gross/Operating weight		kg	720/775/792	770/775/847	1370/1375/1507	1580/1585/1738
Loading quantity	40'GP/40'HQ	set	10/10	10/10	6/6	6/6

50/60Hz

R410A

Model	Cooling only		LSQWF130MT3/NaD-M	LSQWF325M/NaD-H
Capacity	Cooling	kW	130	325
		TR	37	92
Capacity steps		%	0-25-50-75-100	0-25-50-75-100
EER		W/W	2.8	3.16
Power supply		V/Ph/Hz	380V-3-50Hz	380V-3-60Hz
Power input	Cooling	kW	46.4	103
Compressor	Type	—	Constant speed scroll	Hermetic scroll
	Starting mode	—	Direct start	Direct start
	Quantity	—	4	4
Water side heat exchanger	Type	—	Dry expansion evaporator	Dry expansion evaporator
	Water flow volume	l/s	6.19	15.53
		GPM	98	246
	Pressure drop	kPa	30	85
		ft.WG	9.84	27.88
	Connection pipe	—	DN80	DN100
Air side heat exchanger	Type	—	Aluminum fin-copper tube	Aluminum fin-copper tube
	Fan type and quantity	—	Axial-flow/4	Axial-flow/8
	Total fan air flow	l/s	4×0.417×104	8×0.4361×104
		CFM	4×0.882×104	8×0.9235×104
	Total fan motor power	kW	The input power depends on the actually-measured value of the whole unit.	
Sound pressure level		dB(A)	72	/
Dimension	Outline(W×D×H)	mm	2278×1830×2278	3980×2260×2450
	Package(W×D×H)	mm	2358×1910×2278	4040×2260×2450
Net/Gross/Operating weight		kg	1460/1465/1606	3245/3255/3570
Loading quantity	40'GP/40'HQ	set	5/5	2/2

Modular Air-cooled Scroll Chiller

E Series

65/80kW

130/160kW

Thanks to the compact and flexible modularized structure, E Series Modular Type Scroll Chillers can be widely used for newly-built and retrofitted large and small-sized industrial and civil air conditioning projects, like apartments, hotels, restaurants, office buildings, shopping malls, theaters, gyms, factories, hospitals, etc. It is also the ideal choice for where there is high requirement on noise and ambient environments and it is inconvenient to install the cooling tower.

Item	Water side (water temperature)				Air side (outdoor temperature)	
	Nominal operating condition		Operating range		Nominal operating condition	Operating range
	Inlet (℃)	Outlet (℃)	Outlet (℃)	I/O difference (℃)	DB (℃)	DB (℃)
Cooling	12	7	5~20	2.5~6	35	0~46

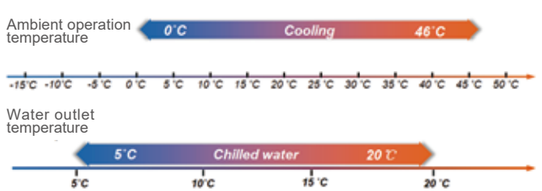
Features

New Appearance Design

- For E series units, it's with beautiful appearance, highlighted outlines, and powerful visual impact.
- The zinc-nickle alloy screws have been put into use for higher corrosion resistance and reliability for the whole unit.

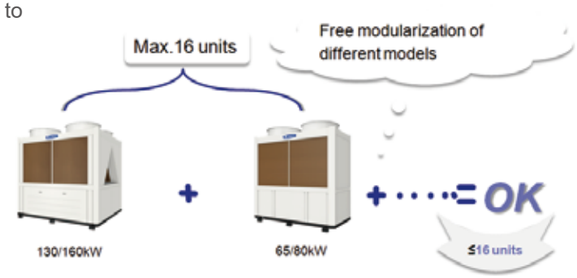
Wide Operation Range

Ambient operation temperature for E Series Modular unit is 0~46℃ and the temperature range of water outlet is 5~20℃;



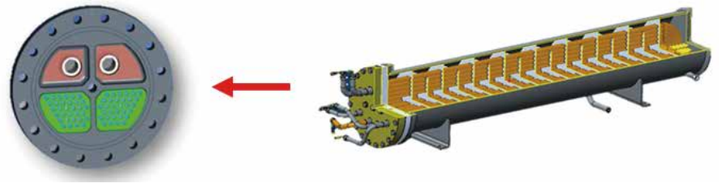
Powerful Compatibility

- Different models can be modularized freely and up to 16 units can be modularized in parallel.
- It can be modularized with any D series model.



High-efficiency Shell and Tube

- The dual-flow design can greatly improve the heat exchanging effect and the capacity of the unit.
- The specially-designed header box and flow distributor can largely improve the evenness of refrigerant vapor-liquid mixture after throttling and then improve the heat exchanging capacity of the shell and tube.



Flow distributor

Dry shell-and-tube heat exchanger

Low Noise Operation

Thanks to active and passive noise reduction technologies, noise of the model 130 can be lowered to 69dB(A), for creating quiet and comfortable environment for users.

Compressor Operation Balance Technology

The unique compressor operation balance technology makes sure that each compressor operates in turn, which greatly prolongs the lifespan of compressor.

Free Master Module Design

Any single unit can operate as the master once connected with the wired controller. It overcomes the problem which would occur to the product of other manufacturer that the whole system would fail to work properly when there's malfunction for the fixed master unit.

Super Protection Functions

This series is equipped with advanced microcomputer control system, completed protection functions and powerful error diagnosis function.
Main protection functions: compressor high pressure protection, compressor low pressure protection, compressor overload protection, antifreezing protection, waterflow switch protection, temperature sensor protection, phase sequence protection, high discharge temperature protection, etc.

50Hz

R410A

Model	Heat pump		LSQWF65M/NaE-M	LSQWF80M/NaE-M	LSQWF130M/NaE-M	LSQWF160M/NaE-M
Capacity	Cooling/Heating	kW	65	82	132	162
		RT	18.48	23.32	37.54	46.07
Capacity steps		%	0、50、100	0、50、100	0、50、100	0、25、50、75、100
EER		W/W	3.20	3.19	3.20	3.00
Power supply		V-Ph-Hz	400V~3N~50Hz	400V~3N~50Hz	400V~3N~50Hz	400V~3N~50Hz
Power input	Cooling	kW	20.3	25.7	41.2	54.0
Compressor	Type	—	Constant speed scroll			
	Starting mode	—	Direct startup			
	Quantity	—	2	2	2	4
Water side heat exchanger	Type	—	Dry expansion evaporator			
	Water flow volume	m^3/h	11.20	14.10	22.70	27.90
		GPM	49	62	100	123
	Pressure drop	kPa	45	60	60	60
		ft.WG	14.76	19.68	19.68	19.68
	Connection pipe	—	Flange connection			
Air side heat exchanger	Type	—	Aluminum fin-copper tube			
	Fan type and quantity	—	Axial-flow			
	Total fan airflow	m^3/h	$2\times1.2\times10^4$	$2\times1.4\times10^4$	$4\times1.2\times10^4$	$4\times1.4\times10^4$
		CFM	$2\times0.7056\times10^4$	$2\times0.8239\times10^4$	$4\times0.7056\times10^4$	$4\times0.8239\times10^4$
	Total fan motor power	kW	2×0.65	2×0.75	4×0.65	4×0.75
Sound pressure level		dB(A)	66	67	70	70
Dimension	Outline(W×D×H)	mm	2138×1025×2243	2138×1025×2243	2306×1980×2320	2306×1980×2320
	Package(W×D×H)	mm	2198×1085×2243	2198×1085×2243	2366×2040×2320	2366×2040×2320
Net/Gross/Operating weight		kg	730/735/799	770/775/843	1280/1285/1409	1540/1545/1697
Loading quantity	40'GP/40'HQ	set	11/11	11/11	5/5	5/5

Inverter Modular Air-cooled Chiller(Heat Pump)

A Series

35kW

60/65kW

A Series Inverter Modular Air-cooled Chiller adopts all DC inverter and has wide operational range, compact design and can be modularized.

Features

- High-efficiency and energy-saving, with all DC inverter compressor and fan;
- Quiet and wide operational range;
- Easy installation, modularized combination, intelligent control;
- With water pump switch function for prolonging service life of water pump;
- Long-distance one-key ON/OFF control.

CE

Item	Water side (water temperature)				Air side (outdoor temperature)	
	Nominal operating condition		Operating range		Nominal operating condition	Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	DB(℃)
Cooling	12	7	5~20	2.5~6	35	-15~52
Heating	40	45	35~50	2.5~6	7	-20~40

50Hz

R410A

Model	Heat pump		LSQWRF35VM/NaA-M	LSQWRF60VM/NaA-M	LSQWRF65VM/NaA-M
Capacity	Cooling/Heating	kW	32/36	60/65	65/70
		RT	9.10/10.24	17.06/18.48	18.48/19.91
Capacity steps		%	0~100	0~100	0~100
EER/COP		W/W	2.58/3.33	2.74/3.22	2.62/3.20
Power supply		Ph/V/Hz	380-415V~3N~50Hz	380-415V~3N~50Hz	380-415V~3N~50Hz
Power input	Cooling	kW	12.40	21.9	24.8
	Heating		10.8	20.2	21.9
Compressor	Type	—	Inverter rotary		
	Starting mode	—	Inverter starting		
	Quantity	—	1	2	2
Water side heat exchanger	Type	—	Dry expansion evaporator		
	Water flow volume	l/s	1.53	2.87	3.11
		GPM	24	46	49
	Pressure drop	kPa	75	55	60
		ft.WG	24.6	18.04	19.68
	Connection pipe	—	G1 1/2 External thread connection	G2 External thread connection	G2 External thread connection
Air side heat exchanger	Type	—	Aluminum fin-copper tube		
	Fan type and quantity	—	Axial-flow/2		
	Total fan airflow	l/s	$2\times0.347\times10^4$	$2\times0.333\times10^4$	$2\times0.333\times10^4$
		CFM	$2\times0.736\times10^4$	$2\times0.707\times10^4$	$2\times0.707\times10^4$
	Total fan motor power	kW	0.75	0.75	0.75
Sound pressure level		dB(A)	62	68	68
Dimension	Outline(W×D×H)	mm	1340×845×1605	2200×965×1675	2200×965×1675
	Package(W×D×H)	mm	1420×920×1775	2267×1030×1867	2267×1030×1867
Net/Gross/Operating weight		kg	379/391/862	689/725/758	689/725/758
Loading quantity	40'GP/40'HQ	set	16/16	11/11	11/11

50Hz

R32

Model	Heat pump		LSQWRF35VM/NhA-M	LSQWRF60VM/NhA-M
Capacity	Cooling/Heating	kW	32/35	60/65
		RT	9.10/9.95	17.06/18.48
Capacity steps		%	0~100	0~100
EER/COP		W/W	2.74/3.3	2.88/3.27
Power supply		V/Ph/Hz	380-415V 3N~ 50Hz	380-415V 3N~ 50Hz
Power input	Cooling	kW	11.7	20.8
	Heating	kW	10.6	19.9
Compressor	Type	-	Inverter rotary	Inverter rotary
	Starting mode	-	Inverter starting	Inverter starting
	Quantity	-	1	2
Water side heat exchanger	Type	-	Dry expansion evaporator	Dry expansion evaporator
	Water flow volume	l/s	1.53	2.87
		GPM	24	46
	Pressure drop	kPa	80	55
		ft.WG	26.24	18.04
	Connection pipe	-	G1 1/2 External thread connection	G2 External thread connection
Air side heat exchanger	Type	-	Aluminum fin-copper tube	Aluminum fin-copper tube
	Fan type and quantity	-	Axial-flow/2	Axial-flow/2
	Total fan air flow	l/s	$2\times0.175\times10^4$	$2\times0.333\times10^4$
		CFM	$2\times0.371\times10^4$	$2\times0.707\times10^4$
	Total fan motor power	kW	0.75	0.75
Sound pressure level		dB(A)	62	68
Dimension	Outline(W×D×H)	mm	1340×845×1605	2200×965×1675
	Package(W×D×H)	mm	1420×920×1775	2267×1030×1867
Net weight/Gross weight/Operating weight		kg	405/422/445	686/722/755
Loading quantity	40'GP/40'HQ	unit	16/16	11/11

INVERTER R410A

Inverter Modular Air-cooled Chiller

B Series

B series DC Inverter Modular Air-cooled Chillers adopt all DC inverter technology and integrate high-efficiency shell-and-tube heat exchanger and high-efficiency fin heat exchange technology, with ultra-high energy efficiency and wide operating range, which can be widely used in newly-constructed and re-constructed big or small air conditioning projects of industrial and civil buildings.

High efficiency | Energy-saving function | Quiet function | Modular structure | Long-distance monitoring

Features

- **High efficiency and energy saving**

①The all DC inverter technology realizes precise control and adjusts the best frequency according to load changes. Integrating high-efficiency shell-and-tube heat exchanger and high-efficiency fin heat exchange technology, the performance is superior.
②With energy-saving mode, the load is calculated automatically to formulate the best operating strategy according to customer needs.

- **Wide operating range**

① Cooling can be performed throughout the year, with reliable operation at ambient temperature from -15℃~48℃.
② Wide range heating is available, with stable operation at ambient temperature from -20℃~40℃.

- **High reliability**

① With compressor balanced operation technology, the operating status of each compressor is recorded in real time and the operating time of compressor is dispatched intelligently, to avoid “overwork” of some compressors.
② The master pump and standby pump switchover technology improves the adaptability of the unit. The failure of a single pump won’ t affect the stable operation of the whole unit.
③ With advanced microcomputer control technology, the unit is equipped with compressor high pressure protection, compressor low pressure protection, anti-freezing protection/water flow switch protection, various temperature sensor failure protection, high discharge temperature protection, etc. The complete functions and powerful failure self-diagnosis function ensure safe and efficient operation of the unit.

- **Quiet design**

① High-efficiency noise reduction fan blade and motor design optimizes the air duct and improves the noise performance of the unit.
② Special silent mode is available for low noise operation of the whole machine, quiet and comfortable.

- **Intelligent control**

① With special master module and slave module design, any module failure doesn’ t affect the normal operation of other units and any module can be the main module, with the units back up each other.
② It can be connected to the BMS building monitoring system to centrally manage and control up to 255 sets of units, with functions such as remote control of startup and stoppage, remote setting of unit parameters and failure alarms.
③ With modular combination design, up to 16 unit modules of the same or different cooling capacity can be combined, forming a series of products with cooling capacity in the range from 65kW to 1040kW.

Item	Water side (water temperature)				Air side (outdoor temperature)	
	Nominal operating condition		Operating range		Nominal operating condition	Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	DB(℃)
Cooling	7	30	5~20	2.5~6	35	-15~48
Heating	45	15	35~50	2.5~6	7/6	-20~40

Model	Heat pump		LSQWRF65VM/NaB-X	LSQWRF130VM/NaB-X
Capacity	Cooling/Heating	kW	65/70	130/140
		RT	18.84/19.91	36.97/39.81
Capacity steps		%	10%~100%	10%~100%
EER/COP		W/W	3.11/3.48	3.08/3.48
Power supply		V/Ph/Hz	380V 3N～50Hz	380V 3N～50Hz
Power input	Cooling	kW	20.9	42.2
	Heating	kW	20.1	40.2
Compressor	Type	-	All-hermetic	All-hermetic
	Starting mode	-	Inverter starting	Inverter starting
	Quantity	-	2	4
Water side heat exchanger	Type	-	Dry-type shell-and-tube evaporator	Dry-type shell-and-tube evaporator
	Water flow volume	l/s	3.106	6.212
		GPM	49.29	98.59
	Pressure drop	kPa	45	60
		ft.WG	14.76	19.68
	Connection pipe	-	DN65/flange connection	DN65/flange connection
Air side heat exchanger	Type	-	High-efficiency finned coils	High-efficiency finned coils
	Fan type and quantity	-	Axial fan blade/2	Axial fan blade/4
	Total fan air flow	l/s	2×0.43×104	2×0.86×104
		CFM	2×0.91×104	2×0.91×104
	Total fan motor power	kW	1.5	3
Sound pressure level		dB(A)	67	69
Dimension	Outline(W×D×H)	mm	2130×1030×2150	2305×1980×2190
	Package(W×D×H)	mm	2190×1090×2150	2365×2040×2190
Net weight/Gross weight		kg	720/756/792	1270/1334/1397
Loading quantity	40'GP/40'HQ	unit	1	1

Control System Lineup

Control system / Product Series			Scroll Chiller			
			D series	E series	A series	B series
Packaged accessory	CF158		○	○		
	XE75-25/G				○	○
Remote monitoring system	FG30-00/A(M)		●	●	●	
BMS	CF614		○	○	○	○

Note: ● means standard, ○ means optional.

Note: ● means standard, ○ means optional.

Water-cooled Chiller

Shell and Tube Water Source Heat Pump Scroll Chiller

MS Series

Z2602J

Gree Water Source Heat Pump Scroll Chiller is consisting of side heat transfer equipment, compressor, heat source side heat transfer equipment, throttling structure and electrical control system, and it has the functions of cooling only, cooling and heating. The unit is assembled in the factory, and the user can use it by connecting external pipeline and related wirings. The allowed cold and heat source of Gree Water Source Heat Pump Scroll Chiller is not limited to the ground water, river water, surface water, soil and domestic wastewater, industrial wastewater and all kinds of drainage of water heat are also suitable. When it is used as cooling only type, lower the temperature of cooling water with cooling tower.

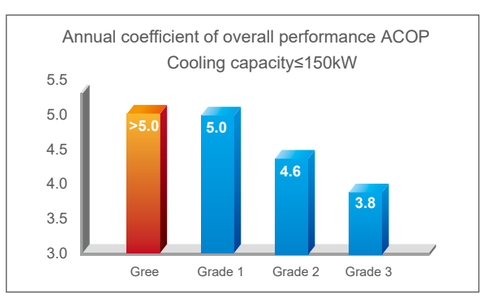
Cooling operation range							
Cooling water (heat source side)						Chilled water (usage side)	
Underground water type		Water loop type		Buried pipe type			
Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water outlet temperature (℃)	Difference in water inlet/outlet temperature (℃)
10~25	8~13	20~40	2.5~8	10~40	2.5~8	5~15	2.5~8

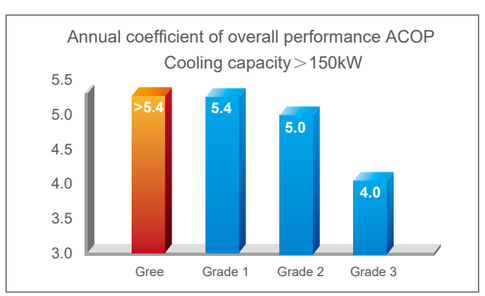
Heating operation range							
Cooling water (heat source side)						Chilled water (usage side)	
Underground water type		Water loop type		Buried pipe type			
Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water inlet temperature (℃)	Difference in water inlet/outlet temperature (℃)	Water outlet temperature (℃)	Difference in water inlet/outlet temperature (℃)
10~25	4~10	15~30	2.5~8	5~25	2.5~8	34~60	3.5~9

Features

Energy-efficient

Annual coefficient of overall performance (ACOP) of the full series of unit reaches national grade 1 standard.





Note: ACOP=0.56*full load energy efficiency of cooling EER +0.44*full load energy efficiency of heating COP

Green and Environmental Protection

The full series of unit adopts R410A eco-friendly refrigerant, which will not damage the ozonosphere; it utilizes the renewable energy sources as the energy source, green and eco-friendly.

Low Noise Design

The unit adopts low noise scroll compressor, and sound insulation is conducted for the compressor with box; thanks to multiple noise reduction treatment, the unit operates quietly.

World-famous Scroll Compressor

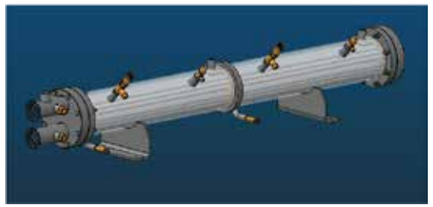
- Adopt the flexible scroll compressor, sealed vortex and small abrasion for good reliability and high energy efficiency ratio; stable operation and low noise;
- Multiple systems design: it will select the number of systems automatically according to the load, providing energy adjustment of several levels for energy-saving operation; in case malfunction happens to a specific system, the other systems will operate normally, which has greatly enhanced the reliability of unit operation;
- Balanced control of compressor: confirm the priority of compressor startup or shutdown according to the operation time of each compressor to prevent overuse of one single compressor, which would be effective to extend the service life of unit.

Efficient Shell and Tube Evaporator

- Adopt liquid separation sharing technology to ensure that heat transfer capacity can be brought out evenly to increase evaporation temperature, enhance overall unit capacity and energy efficiency fully;
- Adopt U-shaped internal thread efficient heat exchange tube to reduce secondary separating, thus intensifying heat exchange.
- The optimized design of water flow outside the pipe decreases the pressure loss of water in heat exchanger and reduces heat loss.

Efficient Shell and Tube Condenser

- Adopt efficient heat exchange tube to improve fluid state of refrigerant side, enhance heat exchange area and increase heat exchange efficiency.
- Adopt intermediate expanded connection technology to maximize the area of condenser pipe and enhance heat exchange efficiency.

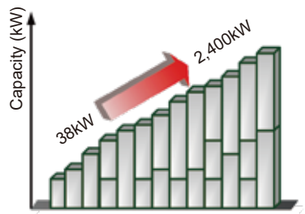


Ultra-strong Applicability

Adopting the throttling adjustment structure of electronic control, it has the characteristic of overall adjustment and quick response, which can effectively adapt to the working condition of wide range; meanwhile, the system has taken several optimized measures to make the operation working condition close to the application limit gradually, which has expanded the applicable range of the unit to the greatest extent. Applicable temperature range for water source is 5~40℃.

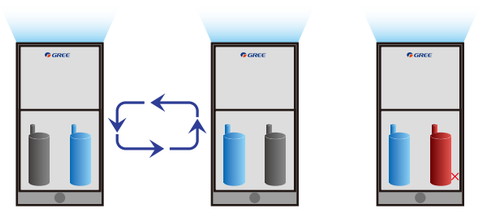
Mater and Subsidiary Module Design

- Each unit can be used separately or with any units of different cooling capacity, 16 units at the most can be operated; the cooling capacity range is 38~2,400kW, which can be applied to all kinds of occasions.
- Any one of the connected units with wired controller can be the master module, and communicate with other units to coordinate the whole system to work according to demand, avoiding the trouble of suspending operation of the whole system due to the damage of the fixed master module.
- Installation space of the unit is small; modular installation can be carried out by taking advantage of the narrow space.



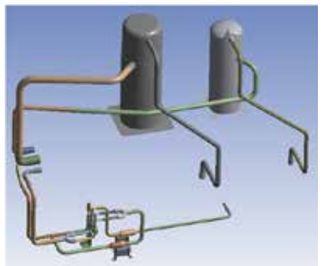
Reliable Operation of Dual Compressor Systems

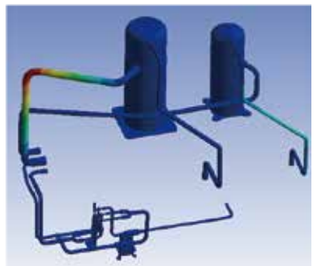
- Adopt modular design structure, and the compressor will be started by levels to decrease the impact of startup current to the power grid.
- Balance operation time of compressor intelligently according to compressor operation condition, enhancing the overall service life of the unit.
- The dual compressor systems can operate individually without affecting each other. If the compressor of either unit is faulted, it will not affect unit normal operation; likewise, if either unit is in overhaul and maintenance, the other unit will not be affected.



Optimal Pipeline Design

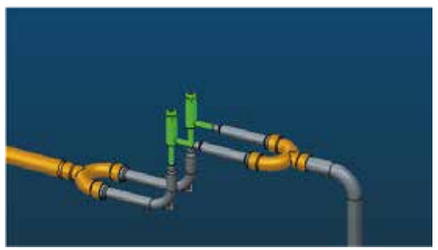
Based on the finite element algorithm and combined several simulation method with experiment test, it optimizes the structure of the key components and related sub-assy, ensuring a reliable structure for unit operation and transportation process.





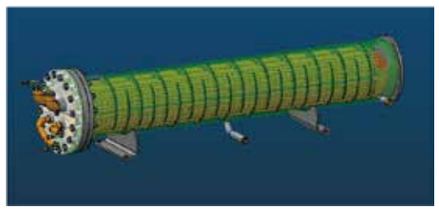
Dual Electronic Expansion Valves Control Technology

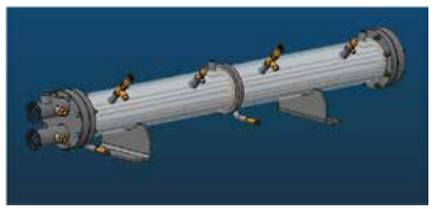
Unit throttling of large cooling capacity adopts dual electronic expansion valves for parallel connection control, which is adaptive to the operation range of the formation of cold and heat source (buried pipe, water source and ground water); the exclusive throttling technology has enhanced the operation control precision of the whole system.



Convenient Maintenance for Heat Exchanger

The evaporator and condenser adopt shell and tube heat exchanger, which is convenient for cleaning.





Portable Body Design

- The outer casing can meet the outdoor installation requirement, no need the mechanical rooms, which can lower the investment;
- Rubber washer is set on the base; unit size is small for convenient transportation;
- Lifting hole is set in the base for lifting.

Self-protection and Diagnosis Function

The unit adopts microcomputer to control the system, and has nearly ten protective measures, such as high pressure protection, low pressure protection, lacking fluorine protection, compressor overload protection, high temperature protection for compressor discharge, anti-freezing protection, high temperature protection for drive module, water flow switch protection, communication error, temperature sensor error protection, and so on, thus solving the hidden danger of operation error effectively and ensuring safe operation.

Water flow protection | Overload protection | Insufficient refrigerant protection | High pressure protection for compressor | Error protection for temperature sensor

Intelligent Human-machine Interaction

- Liquid crystal touch screen with backlight display;
- Flat interface design for simple and convenient operation; parameters and operation status are displayed at real time; monitor the unit comprehensively;
- Timer control: the user can conduct intelligent timer setting to the air conditioning system according to the usage time and requirement;
- Adopt password protection function to prevent misoperation;
- It can be shifted to the location which is easy for operation freely.

Long-distance Intelligent Service

Provide long-distance intelligent service to realize early warning for error, operation diagnosis, data statistics and analysis and so on, enabling the air conditioner to function under optimal status and reducing the maintenance charges.

Gree long-distance intelligent service center

50Hz

R410A

Model			SSD390W/NaA-M	SSD550W/NaA-M	SSD750W/NaA-M	SSD1100W/NaA-M	SSD1500W/NaA-M
Capacity	Cooling	kW	38.00	53.00	80.00	118.00	158.00
		RT	10.81	15.07	22.75	33.56	44.93
	Heating	kW	41.00	58.00	86.00	126.00	170.00
		RT	11.94	16.50	24.46	35.83	48.35
Capacity steps		%	100%	25/75%, 100%	50%, 100%	30/70%, 100%	50%, 100%
EER		W/W	5.67	5.76	6.15	5.90	5.85
ACOP		W/W	5.14	5.12	5.55	5.44	5.41
Power supply		Ph/V/Hz	380V 3N~ 50Hz				
Power input(cooling)		kW	6.70	9.20	13.00	20.00	27.00
Power input(heating)		kW	9.40	13.50	18.00	26.00	35.00
Max run Amps		A	29.70	34.50	44.00	62.00	83.00
Compressor	Type	-	Constant speed scroll				
	Starting mode	-	Direct startup				
	Quantity	-	1	2	2	2	2
Refrigerant charge volume		kg	8.2	4.5+1.9	4.5+4.5	3.8+8.2	7.8+7.8
Refrigeration oil	Type	-	POE oil				
	Charge volume	L	2.75×2	2.75×2	2.75×2	2.75+4.44	4.44×2
Evaporator	Type	-	Dry expansion evaporator				
	Fouling factor	$m^2℃/W$	0.086	0.086	0.086	0.086	0.086
	Water flow volume	m^3/h	6.50	9.10	13.80	20.30	27.20
		GPM	28.66	40.12	60.85	89.51	119.93
	Pressure drop	kPa	45.00	45.00	50.00	50.00	50.00
		ft.WG	14.76	14.76	16.40	16.40	16.40
	Connection pipe	-	Female threaded				
Condenser	Type		Horizontal shell and tube condenser				
	Fouling factor	$m^2℃/W$	0.086	0.086	0.086	0.086	0.086
	Water flow volume	m^3/h	8.20	11.40	17.20	25.40	34.00
		GPM	36.16	50.26	75.84	111.99	149.91
	Pressure drop	kPa	50.00	50.00	50.00	50.00	50.00
		ft.WG	16.40	16.40	16.40	16.40	16.40
	Connection pipe	-	Female threaded				
Outline dimension(WxDxH)		mm	1580×650×1450	1580×650×1450	1800×650×1600	1800×650×1600	1800×650×1600
Net/Gross/Operating weight		kg	420	500	550	740	865

50Hz

R410A

Model			SSD1850W/NaA-M	SSD2200W/NaA-M	SSD2600W/NaA-M	SSD3000W/NaA-M
Capacity	Cooling	kW	198.00	236.00	276.00	316.00
		RT	56.31	67.12	78.49	89.87
	Heating	kW	212.00	252.00	296.00	340.00
		RT	60.29	71.67	84.18	96.69
Capacity steps		%	20%, 40%, 60%, 80%, 100%	16%, 34%, 50%, 65%, 85%, 100%	15%, 30%, 45%, 60%, 75%, 90%, 100%	25%, 50%, 75%, 100%
EER		W/W	6.00	5.90	5.87	5.85
ACOP		W/W	5.48	5.44	5.42	5.41
Power supply		Ph/V/Hz	380V 3N~ 50Hz			
Power input(cooling)		kW	33.00	40.00	47.00	54.00
Power input(heating)		kW	44.00	52.00	61.00	70.00
Max run Amps		A	106.00	124.00	145.00	166.00
Compressor	Type	-	Constant speed scroll			
	Starting mode	-	Direct startup			
	Quantity	-	4.00	4.00	4.00	4.00
Refrigerant charge volume		kg	3.8+8.2+4.5+4.5	3.8+8.2+3.8+8.2	3.8+8.2+7.8+7.8	7.8+7.8+7.8+7.8
Refrigeration oil	Type	-	POE oil			
	Charge volume	L	2.75×3+4.44	2.75×2+4.44×2	2.75+4.44×3	4.44×4
Evaporator	Type	-	Dry expansion evaporator			
	Fouling factor	$m^2℃/W$	0.086	0.086	0.086	0.086
	Water flow volume	m^3/h	34.10	40.60	47.50	54.40
		GPM	150.35	179.01	209.44	239.86
	Pressure drop	kPa	50.00	50.00	50.00	50.00
		ft.WG	16.40	16.40	16.40	16.40
	Connection pipe	-	Female threaded			
Condenser	Type		Horizontal shell and tube condenser			
	Fouling factor	$m^2℃/W$	0.086	0.086	0.086	0.086
	Water flow volume	m^3/h	42.60	50.80	59.40	68.00
		GPM	187.83	223.99	261.90	299.82
	Pressure drop	kPa	50.00	50.00	50.00	50.00
		ft.WG	16.40	16.40	16.40	16.40
	Connection pipe	-	Female threaded			
Outline dimension(WxDxH)		mm	1800×1500×1600	1800×1500×1600	1800×1500×1600	1800×1500×1600
Net/Gross/Operating weight		kg	1370	1510	1615	1740

Note: 1. Nominal working condition of cooling: leaving water temperature of chilled water is 7℃ and the flow is 0.172m³/(h*kw); entering water temperature of cooling water is 25℃ and the flow is 0.215 m³/(h*kw). Nominal working condition of heating: entering water temperature of chilled water is 10℃ and the flow is the same as that of the cooling water under nominal working condition of cooling; leaving water temperature of chilled water is 45℃ and the flow is the same as that of the chilled water under nominal working condition of cooling.
2. Startup current of the compressor which can be started up directly is below 8 times the rated current.
3. Due to product improvement, the performance parameter of the unit is subject to change without notice; please refer to the parameter on the product nameplate.

Screw Chiller

LME Series Air-Cooled Screw Chiller

It is a kind of air-cooled screw chillers that can be connected to all sorts of fan coil units to realize cooling/heating for civil or industrial buildings.

Golden fin condenser | Inner groove copper | Comprehensive protection | Self-diagnosis | Memory function | 24 hour timer | Long-distance monitoring | Modular structure

- Thanks to V-shape fin structure, unit features small refrigerant pressure loss.
- With flooded type shell-and-tube design, evaporating temperature is increased, hence improving the heat exchanging efficiency and energy efficiency.
- Unit adopts low noise fan blades and specialized compressor noise reduction device, therefore sound level falls to 5dB(A) lower than the 2nd generation.
- Due to the totally-enclosed design, its appearance is harmonious and nice-looking.

Item	Water side (water temperature)				Air side (outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	5~15	2.5~8	35	—	18~52

Features

Special Flooded Screw Compressor

- Special flooded screw compressor

A. Apply special motor that can be up to Grade F with thermostability of 155°C.

B. No speed-up gear mechanism design: twin screw compressor adopts direct-connected driving motor for reducing driving efficiency loss and for a more compact structure.

C. Motor of compressor is cooled down through diluent cooling of gas-absorbing cavity to lower the temperature of motor, and ensure diluent cooling of refrigeration oil. It can prevent decrease of insulativity due to high temperature of motor; otherwise the motor will be burnt.

D. Built-in air exhaust check valve: it can prevent back flow of refrigerant when the unit closes down; built-in oil separator and oil heater for ensureing oil return.

E. Slide valve stepless adjustment for exact match of cooling output and load of compressor.

F. High accuracy SKF shaft bearing: This twin screw compressor adopts high accuracy SKF shaft bearing so that the clearance of compressor can be smaller, transmission efficiency will be higher, energy efficiency ratio of compressor will be higher, and service life of compressor will be longer.

- Reliable compressor operating range control technology (first-created in the industry)

The built-in pressure transducer and current transformer can conduct comprehensive control of high pressure, low pressure, current of compressor, and air exhaust temperature, so as to ensure reliable operation of compressor within the operating range.

- Compressor motor cool-down technology (first-created in the industry)

Adopt electronic expansion valve control with wide adjustment range, which can precisely control gas absorbing and liquid spray volume; apply PD control method to feed back liquid spray information in advance to achieve fast adjustment and cool down motor directly, which can control temperature of motor and ensure reliability and performance of compressor.

Gree Self-developed Vertical Oil Separator

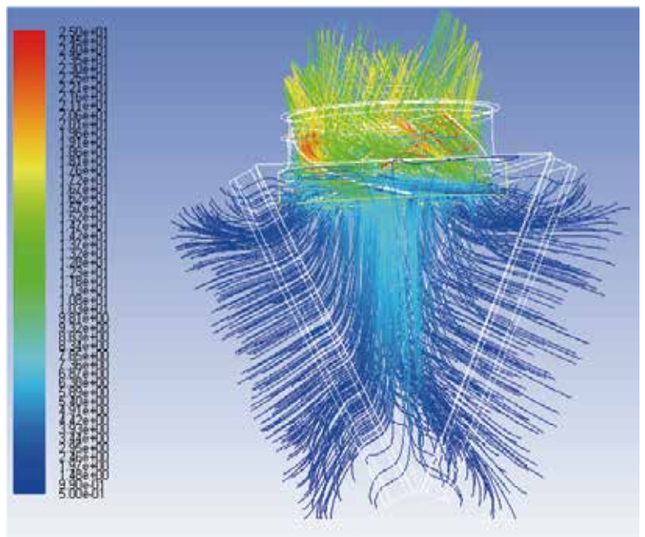
Adopt external oil separator design, apply four-stage (rotate separation, collision, natural sedimentation, filter separation) separating technology to ensure adequate filtration of refrigeration oil discharged from compressor, and prevent the refrigeration oil from leakage. The actual measurement efficiency of oil separation is up to 99.97%.

Energy-saving

- Flooded shell and tube design: adopt TURBO-BII evaporator that the evaporating pipe is soaking in liquid refrigerant for improving heat transfer capacity and cooling efficiency; the evaporating temperature is higher than 5.5℃; chilled water passes through the tube for reducing flowage pressure loss of water side and reduce energy consumption of water pump. This evaporator works with the high-performance and reliable special screw compressor, which can greatly improve cooling capaity and energy efficiency ratio of unit.

● Independent design of multiple compressors and multiple systems: it has four independent systems at most, with high energy efficiency of partial loading; the compressor adopts Y-Δ start-up with low start-up current.

● V shape condenser design: adopt V-shape layout with the best angle and the best air volume for more even distribution of air flow; adopt ripple fenestration aluminous condensing fin for higher heat exchange efficiency.



● Circulating design of economizer *(optional): auxiliary refrigerant of economizer conducts heat exchange with main refrigerant, to improve condenser depression of refrigerant when the main refrigerant returns to the expanding valve inlet, and improve liquid seal effect. It ensures that the refrigerant is in liquid state when it enters into the main throttle valve (electronic expansion valve); at the same time, the auxiliary refrigerant directly gets into compressor after it is gasified, which will increase inspiratory capacity of compressor. Such design can help to increase cooling capacity by 10%.

● High-accuracy electronic expansion valve control: stepping motor can have 3810 steps at most, which combines coarse tuning and sharp tuning for precisely adjusting flow of refrigerant. It can dynamically control degree of superheat for outlet of evaporator, to achieve higher utilization ratio of heat exchange area and improve operational efficiency under deviate work condition and low-load work condition.

● Advanced Self-adaption Control:
A. Automatically adjust yielding water temperature according to variation of load to ensure comfortable experience and energy saving during transition seasons;
B. Start-up quantity of fan units can be controlled according to pressure, whicn can save more energy in transition seasons.

Safe and Reliable

● Ejecting oil return design: when the unit operates under bad oil return work condition, the ejector will be automatically started up to ensure reliable oil return of unit, which can solve the oil return problem of flooded unit.

● Multiple anti-freezing design of shell and tube:
A. Water flowing through the heat exchange tube can prevent partial frost cracking.
B. Adopt multi-slot tube plate design to improve hermetically-sealed construction for preventing the risk of leakage.
C. Add water flow switch water-break protection.
D. Adopt evaporating temperature control technology to conduct triple control for evaporating temperature, water yielding temperature of shell and tube, anti-freezing water temperature. It can ensure that the evaporating temperature inside the shell and tube is over 0℃ for preventing frost cracking of shell and tube.

● Rotproof design:
A. Hermetically sealed structure is adopted for preventing exposure of parts and components.
B. Adopt rotproof gold aluminum foil and anticorrosive materials to make the fins, which can go through the neutral salt spray test for 2000 hours.
C. Adopt three-layer protection design for the chassis: epoxy zinc rich primer, high build epoxy antirust paint, four fluorine fluorine carbon paint *(optional).
D. Parts and components of pipelines adopt zinc rich primer and four fluorine carbon paint *(optional).
E. Self-made sheet metal adopts rotproof whether resistant polyester powder sprays coating *(optional).

High Comfort Level

● Ultralow temperature cooling design *(optional): Apply control technology of inverter fan unit to conduct reliable cooling under the ambient temperature of -20℃.

● Stepless capacity adjustment: 50%-100% for single system and 25%-100% for dual systems; when compressor starts up under the minimum load, the cooling capacity of unit can be stepless adjusted according to the requirement of users. Adjust refrigerant volume by stepless slide valve for matching with actual load perfectly.

● Noise reduction and vibration damping design
A. Low noise axial fan design: adopt the plastic fan blade made of low noise fiber glass with improvement of 20% and streamline ail foil design that the fan can be driven directly, which has lower noise than general fan units.
B. Sound insulation and noise reduction design for fan *(optional): sound insulation cover is specially designed for the fan that can further reduce the noise.

C. Advanced technology of sound insulation and noise reduction for compressor *(optional): according to the test and analysis of frequency spectrum for compressor, the sound insulation cover is specially designed for compressor to absorb the noise in different frequency spectrum by adopting multiple sound insulation material and sound insulation board.
D. Vibration isolator *(optional): the vibration isolator is made of natural rubber and supported by stainless steel. Natural rubber has good abrasive resistance, good acid and alkali resistance, high elasticity, strong tensile force and extensibility. The actual measured upper acceleration of vibration isolator is 125dB, lower acceleration of oscillating damper is 105dB; the vibration drop is 20dB and the damping rate is 90%.

Easy Installation

- On-site seamless splice technology: conduct on-site splicing for over 2 modules according to requirement of users, which can satisfy different requirement of cooling capacity.
- Built-in water conservation module *(optional): the unit can set a built-in water conservation module according to requirement of users. The water conservation module has passed the installation test that its mating parts are highly matched with the unit; therefore there is no need to conduct separate design, model selection and purchase for the water pump.
- Automatically invoke matching parameter: display board can automatically identify unit model and automatically invoke matching parameter, which can save debugging time and avoid misoperation.

Advanced Control System

- Brand new controller, intelligent experience

A. Manipulable and clear display interface for easy operation. The operational parameter, such as intake/yielding water temperature, ambient temperature, air exhaust temperature, suction temperature, high pressure, low pressure and current of compressor, etc., can be acquired immediately by pressing via the control menu.
B. Advanced control function can provide three kinds of on/off mode: manual control, timer, long distance on/off. The control system can work out load deviation according to difference and variation of water temperature, so as to ensure the best energy utilization efficiency of unit.
C. Complete safety protection that provides password protection function to prevent misoperation.

- Long distance control center*

A. Internet interface is reserved for the unit for transmitting operation status of unit in real time, so as to remotely monitor the unit and solve the malfunction of unit effectively.
B. Long-distance control of multiple units. Maximum 8 sets of water-cooled screw chiller can be controlled simultaneously.

Note:
*: This function has been applied and used at domestic market at present, and is in development stage for overseas market.
*(optional): This function is not included in standard unit. It can be added according customer's requirement.

50Hz

Model	Cooling only		LMEA30JD3E/Nb-M	LMEA30JD3E/Nb-M	LMEA40LE5E/Nb-M	LMEB40LE4E/Nb-M	LMEA50LE3E/Nb-M	LMEB50LE2E/Nb-M
Capacity	Cooling	kW	320	350	420	470	520	580
		TR	91.0	99.5	119.4	133.6	147.9	164.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.20	3.24	3.23	3.22	3.21	3.22
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	100	108	130	146	162	180
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1	1
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	55.0	60.2	72.2	80.8	89.4	99.8
		GPM	243	265	319	356	394	440
	Pressure drop	kPa	≤35	≤35	≤45	≤45	≤45	≤45
		ft.WG	≤11.7	≤11.7	≤15.1	≤15.1	≤15.1	≤15.1
	Connection pipe	-	DN100	DN100	DN125	DN125	DN125	DN125
Air side heat exchanger	Type	-	Aluminum fin-cooper tube					
	Total fan air flow	m³/h	20000×6	21500×6	20000×8	21500×8	20000×10	21500×10
		CFM	11772×6	12654×6	11772×8	12654×8	11772×10	12654×10
	Total fan motor power	kW	1.5×6	1.8×6	1.5×8	1.8×8	1.5×10	1.8×10
Dimension	Outline(W×D×H)	mm	3670×2330×2550	3670×2330×2550	4890×2330×2550	4890×2330×2550	6110×2250×2550	6110×2250×2550
	Package(W×D×H)	mm	3820×2330×2550	3820×2330×2550	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550
Net/Gross/Operating weight		kg	4130/4170/4213	4310/4350/4396	5210/5250/5314	5515/5555/5625	5980/6020/6100	6240/6280/6365
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/1	0/1

Note: * The parameters are estimated, please refer to the value on the nameplate.

50Hz

Model	Cooling		LMEA33LF8E/Nb-M	LMEB33LF6E/Nb-M	LMEB43LF7E/Nb-M	LMEB43LF5E/Nb-M	LMEA44NF4E/Nb-M
Capacity	Cooling	kW	650	700	750	820	860
		TR	184.8	199.1	213.3	233.2	244.5
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.25	3.24	3.19	3.22	3.25
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	200	216	235	255	265
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	111.8	120.4	129.0	141.0	147.9
		GPM	493	531	569	622	652
	Pressure drop	kPa	≤55	≤55	≤55	≤55	≤65
		ft.WG	≤18.4	≤18.4	≤18.4	≤18.4	≤21.7
	Connection pipe	-	DN150	DN150	DN150	DN150	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	20000×12	21500×12	20000×14	21500×14	20000×16
		CFM	11772×12	12654×12	11772×14	12654×14	11772×16
	Total fan motor power	kW	1.5×12	1.8×12	1.5×14	1.8×14	1.5×16
Dimension	Outline(W×D×H)	mm	7340×2250×2550	7340×2250×2550	8560×2250×2550	8560×2250×2550	9780×2250×2550
	Package(W×D×H)	mm	7490×2330×2550	7490×2330×2550	8710×2330×2550	8710×2330×2550	9930×2330×2550
Net/Gross/Operating Weight		kg	7920/7960/8078	8120/8160/8282	8350/8390/8517	9110/9150/9292	9860/9900/10057
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: * The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Cooling		LMEB44NF2E/Nb-M	LMEB54NG3E/Nb-M	LMEB54NG2E/Nb-M	LMEB33LF850LE3E/Nb-M	LMEB33LF650LE2E/Nb-M
Capacity	Cooling	kW	940	950	1050	1160	1280
		TR	267.3	270.1	298.6	329.9	364.0
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	8.3%,16.7%~100%	8.3%,16.7%~100%
EER		W/W	3.24	3.22	3.23	3.22	3.20
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	290	295	325	360	400
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	3	3
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	161.7	163.4	180.6	199.5	220.2
		GPM	713	720	796	880	971
	Pressure drop	kPa	≤60	≤60	≤70	≤55	≤55
		ft.WG	≤20.1	≤20.1	≤23.4	≤18.4	≤18.4
	Connection pipe	-	DN150	DN150	DN150	DN150+DN125	DN150+DN125
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	21500×16	21500×18	21500×18	21500×22	21500×22
		CFM	12654×16	12654×18	12654×18	12654×22	12654×22
	Total fan motor power	kW	1.8×16	1.8×18	1.8×18	1.8×22	1.8×22
Dimension	Outline(W×D×H)	mm	9780×2250×2550	11000×2250×2550	11000×2250×2550	13450×2250×2550	13450×2250×2550
	Package(W×D×H)	mm	9930×2330×2550	11150×2330×2550	11150×2330×2550	13600×2330×2550	13600×2330×2550
Net/Gross/Operating Weight		kg	9970/10010/10169	10280/10360/10486	11150/11230/11373	13900/13980/14178	14470/14550/14759
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.
LMEB33LF850LE3E/Nb-M~LMEB33LF633LF6E/Nb-M are combined units, each part should be transported separately.

50Hz

R134A

Model	Cooling		LMEB33LF833LF8E/Nb-M	LMEB33LF633LF6E/Nb-M	LMEB33LF643LF5E/Nb-M	LMEB43LF743LF7E/Nb-M	LMEB43LF543LF5E/Nb-M
Capacity	Cooling	kW	1320	1400	1500	1520	1650
		TR	375.4	398.1	426.5	432.2	469.2
Capacity steps		%	6.25%,12.5%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%
EER		W/W	3.22	3.22	3.23	3.23	3.20
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	410	435	465	470	515
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	4	4	4	4	4
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	227.0	240.8	258.0	261.4	283.8
		GPM	1001	1062	1138	1153	1251
	Pressure drop	kPa	≤60	≤60	≤60	≤60	≤60
		ft.WG	≤20.1	≤20.1	≤20.1	≤20.1	≤20.1
	Connection pipe	-	2×DN150	2×DN150	2×DN150	2×DN150	2×DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	21500×24	21500×24	21500×26	21500×28	21500×28
		CFM	12654×24	12654×24	12654×26	12654×28	12654×28
	Total fan motor power	kW	1.8×24	1.8×24	1.8×26	1.8×28	1.8×28
Dimension	Outline(W×D×H)	mm	14670×2250×2550	14670×2250×2550	15890×2250×2550	17120×2250×2550	17120×2250×2550
	Package(W×D×H)	mm	14820×2330×2550	14820×2330×2550	16040×2330×2550	17270×2330×2550	17270×2330×2550
Net/Gross/Operating Weight		kg	14880/14960/15178	15840/15920/16157	17140/17220/17483	16950/17030/17289	18470/18550/18839
Loading quantity	40'GP/40'HQ	set	0/0	0/0	0/0	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.
LMEB33LF643LF5E/Nb-M~LMEB43LF543LF5E/Nb-M are combined units, each part should be transported separately.

50Hz

R134A

Model	Cooling		LMEB30JD33/Nb-M	LMED30JD24/Nb-M	LMED30JD24E/Nb-M	LMED40LE56/Nb-M	LMED40LE46E/Nb-M
Capacity	Cooling	kW	358	408	448	518	573
		TR	101.8	116.0	127.4	147.3	162.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.17	3.11	3.11	3.18	3.18
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	113	131	144	163	180
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	61.6	70.2	77.1	89.1	98.6
		GPM	271	309	340	393	435
	Pressure drop	kPa	≤35	≤45	≤45	≤45	≤50
		ft.WG	≤11.7	≤15.1	≤15.1	≤15.1	≤16.7
	Connection pipe	-	DN125	DN125	DN125	DN125	DN125
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	24000×6	26000×6	26000×6	24000×8	26000×8
		CFM	14126×6	15304×6	15304×6	14126×8	15304×8
	Total fan motor power	kW	2.2×6	2.8×6	2.8×6	2.2×8	2.8×8
Dimension	Outline(W×D×H)	mm	3670×2250×2550	3670×2250×2550	3670×2250×2550	4890×2250×2550	4890×2250×2550
	Package(W×D×H)	mm	3820×2330×2550	3820×2330×2550	3820×2330×2550	5040×2330×2550	5040×2330×2550
Net/Gross/Operating Weight		kg	4390/4430/4478	4410/4450/4498	4460/4500/44549	5515/5555/5625	5565/5605/5676
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/2

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Cooling		LMED50LE37/Nb-M	LMED50LE27E/Nb-M	LMED50LE18E/Nb-M	LMED33LF644E/Nb-M	LMED43LF564E/Nb-M
Capacity	Cooling	kW	678	743	808	898	1023
		TR	192.8	211.3	229.8	255.4	290.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.18	3.11	3.00	3.10	3.10
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	213	239	269	290	330
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	116.6	127.8	139.0	154.5	176.0
		GPM	514	563	613	681	776
	Pressure drop	kPa	≤55	≤55	≤55	≤65	≤70
		ft.WG	≤18.4	≤18.4	≤18.4	≤21.7	≤23.4
	Connection pipe	-	DN150	DN150	DN150	DN150	DN200
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	24000×10	26000×10	26000×10	26000×12	26000×14
		CFM	14126×10	15304×10	15304×10	15304×12	15304×14
	Total fan motor power	kW	2.2×10	2.8×10	2.8×10	2.8×12	2.8×14
Dimension	Outline(W×D×H)	mm	6110×2250×2550	6110×2250×2550	6110×2250×2550	7340×2250×2550	8560×2250×2550
	Package(W×D×H)	mm	6260×2330×2550	6260×2330×2550	6260×2330×2550	7490×2330×2550	8710×2330×2550
Net/Gross/Operating Weight		kg	6570/6610/6701	6620/6660/6752	6660/6700/6793	8715/8755/8889	9630/9670/9823
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

R134A

Model	Cooling		LMED44NF266E/Nb-M	LMED54NG276E/Nb-M	LME50LE2750LE27E/Nb-M	LME50LE1850LE18E/Nb-M
Capacity	Cooling	kW	1148	1318	1488	1617
		TR	326.4	374.8	423.1	459.8
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	12.5%,25%~100%
EER		W/W	3.19	3.10	3.10	3.10
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	360	425	480	522
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	197.5	226.7	255.9	278.1
		GPM	871	1000	1128	1226
	Pressure drop	kPa	≤75	≤85	≤95	≤110
		ft.WG	≤25.0	≤28.4	≤31.8	≤36.8
	Connection pipe	-	DN200	DN200	2×DN150	2×DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube			
	Total fan air flow	m³/h	26000×16	26000×18	26000×20	26000×20
		CFM	15304×16	15304×18	15304×20	15304×20
	Total fan motor power	kW	2.8×16	2.8×18	2.8×20	2.8×20
Dimension	Outline(W×D×H)	mm	9780×2250×2550	11000×2250×2550	12230×2250×2550	12230×2250×2550
	Package(W×D×H)	mm	9930×2330×2550	11150×2330×2550	12380×2330×2550	12380×2330×2550
Net/Gross/Operating Weight		kg	10310/10350/10516	11485/11525/11715	13240/13320/13505	13320/13400/13586
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.
LME50LE2750LE27E/Nb-M and LME50LE1850LE18E/Nb-M are combined units, each part should be transported separately.

LMP Series Air-Cooled Screw Chiller (Heat Pump)

Gree LMP series air-cooled screw chiller (heat pump) adopts Gree brand air-cooled heat pump specialized compressor, flooded type shell-and-tube design and a totally enclosed structure. Featuring high efficiency, high reliability and low noise, this air conditioning equipment can provide cool water in summer and hot water in winter. It can be combined with fan coil unit, floor ceiling unit, packaged unit or other kinds of terminals.

Display panel
Z2F20F

Golden fin condenser | Inner groove copper | Modular structure | Comprehensive protection | Self-diagnosis | Long-distance monitoring | Memory function | 24 hour timer | Intelligent defrosting

- Energy saving;
- Gree's efficient air-cooled heat pump specialized compressor;
- Heat pump flooded type shell-and-tube design;
- V-shaped structure for fins, efficient heat exchange design;
- Seamless connectivity on site, cooling capacity can be enlarged infinitely;
- Totally enclosed structure, low noise and low vibration design, safe and comfortable.

Item	Water side(water temperature)				Air side(outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	5~15	2.5~8	35	-	18~52
Heatling	40	45	40~50	2.5~8	7	6	-15~24

50Hz

Model	Heat pump		LMPA30JD4E/Nb-M	LMPB30JD3E/Nb-M	LMPA40JE2E/Nb-M	LMPB40JE1E/Nb-M	LMPA50LE8E/Nb-M	LMPB50LE7E/Nb-M
Capacity	Cooling	kW	315	340	400	445	505	550
		TR	89.6	96.7	113.7	126.5	143.6	156.4
	Heating	kW	320	335	410	430	520	545
		TR	91.0	95.3	116.6	122.3	147.9	155.0
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.21	3.21	3.23	3.22	3.22	3.25
COP		W/W	3.23	3.22	3.25	3.21	3.25	3.22
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	98	106	124	138	157	169
	Heating	kW	99	104	126	134	160	169
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1	1
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	54.2	58.5	68.8	76.5	86.9	94.6
		GPM	239	258	303	337	383	417
	Pressure drop	kPa	≤35	≤35	≤45	≤45	≤45	≤45
		ft.WG	≤11.7	≤11.7	≤15.1	≤15.1	≤15.1	≤15.1
	Connection pipe	-	DN100	DN100	DN125	DN125	DN125	DN125
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	20000×6	21500×6	20000×8	21500×8	20000×10	21500×10
		CFM	11772×6	12654×6	11772×8	12654×8	11772×10	12654×10
	Total fan motor power	kW	1.5×6	1.8×6	1.5×8	1.8×8	1.5×10	1.8×10
Dimension	Outline(W×D×H)	mm	3670×2250×2550	3670×2250×2550	4890×2250×2550	4890×2250×2550	6110×2250×2550	6110×2250×2550
	Package(W×D×H)	mm	3820×2330×2550	3820×2330×2550	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550
Net/Gross/Operating weight		kg	4570/4610/4661	4600/4640/4692	5435/5475/5544	5500/5540/5610	6455/6495/6584	6590/6630/6722
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

Model	Heat pump		LMPA33LF6E/Nb-M	LMPB33LF5E/Nb-M	LMPB43LG4E/Nb-M	LMPB43LG3E/Nb-M	LMPA44LF2E/Nb-M	LMPB44LF1E/Nb
Capacity	Cooling	kW	640	690	730	790	825	900
		TR	182.0	196.2	207.6	224.6	234.6	255.9
	Heating	kW	645	685	755	785	815	890
		TR	183.4	194.8	214.7	223.2	231.8	253.1
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.20	3.21	3.24	3.22	3.24	3.23
COP		W/W	3.26	3.25	3.25	3.23	3.26	3.22
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	200	215	225	245	255	279
	Heating	kW	198	211	232	243	250	276
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	110.1	118.7	125.6	135.9	141.9	154.8
		GPM	485	523	554	599	626	683
	Pressure drop	kPa	≤55	≤55	≤55	≤55	≤65	≤60
		ft.WG	≤18.4	≤18.4	≤18.4	≤18.4	≤21.7	≤20.1
	Connection pipe	-	DN150	DN150	DN150	DN150	DN150	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	20000×12	21500×14	20000×14	21500×14	20000×16	21500×16
		CFM	11772×12	12654×14	20000×14	12654×14	11772×16	12654×16
	Total fan motor power	kW	1.5×12	1.8×14	1.5×14	1.8×14	1.5×16	1.8×16
Dimension	Outline(W×D×H)	mm	7340×2250×2550	7340×2250×2550	8560×2250×2550	8560×2250×2550	9780×2250×2550	11000×2250×2550
	Package(W×D×H)	mm	7490×2330×2550	7490×2330×2550	8710×2330×2550	8710×2330×2550	9930×2330×2550	11150×2330×2550
Net/Gross/Operating weight		kg	8550/8590/8721	8410/8450/8578	9900/9940/10098	10075/10115/10277	10910/10950/11128	11110/11150/11332
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

Model	Heat pump		LMPB54NG2E/Nb-M	LMPB50LE750LE7E/Nb-M	LMPB33LF550LE7E/Nb-M	LMPB33LF533LF5E/Nb-M	LMPB33LF543LG3E/Nb-M	LMPB43LG343LG3E/Nb-M
Capacity	Cooling	kW	1000	1120	1240	1380	1480	1580
		TR	284.4	318.5	352.6	392.4	420.8	449.3
	Heating	kW	980	1075	1230	1370	1470	1570
		TR	278.7	305.7	349.8	389.6	418.0	446.4
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	8.3%,16.7%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%
EER		W/W	3.25	3.24	3.23	3.21	3.22	3.22
COP		W/W	3.23	3.22	3.24	3.25	3.24	3.23
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	308	346	384	430	460	490
	Heating	kW	303	334	380	422	454	486
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	3	4	4	4
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	172.0	192.6	213.3	237.4	254.6	271.8
		GPM	758	849	940	1047	1122	1198
	Pressure drop	kPa	≤70	≤55	≤55	≤60	≤60	≤60
		ft.WG	≤23.4	≤18.4	≤18.4	≤20.1	≤20.1	≤20.1
	Connection pipe	-	DN150	DN150+DN125	DN150+DN125	2×DN150	2×DN150	2×DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	21500×18	21500×20	21500×22	21500×24	21500×26	21500×28
		CFM	12654×18	12654×20	12654×22	12654×24	12654×26	12654×28
	Total fan motor power	kW	1.8×18	1.8×20	1.8×22	1.8×24	1.8×26	1.8×28
Dimension	Outline(W×D×H)	mm	11000×2250×2550	12230×2250×2550	13450×2250×2550	14670×2250×2550	15890×2250×2550	17120×2250×2550
	Package(W×D×H)	mm	11150×2330×2550	12380×2330×2550	13600×2330×2550	14820×2330×2550	16040×2330×2550	17270×2330×2550
Net/Gross/Operating weight		kg	12380/12420/12628	13160/13200/13423	15000/15040/15300	16820/16860/17156	18485/18525/18855	20150/20190/20553
Loading quantity	40'GP/40'HQ	set	0/1	0/0	0/0	0/0	0/0	0/0

"Note: The parameters are estimated, please refer to the value on the nameplate.

LMPB33LF550LE7E/Nb-M~LMPB43LG343LG3E/Nb -Mare combined units, each part should be transported separately.

50Hz

Model	Heat pump		LMPB30JD43E/Nb-M	LMPD30JD34E/Nb-M	LMPB40JE25E/Nb-M	LMPD40JE16E/Nb-M	LMPD50LE87/Nb-M	LMPD50LE77E/Nb-M
Capacity	Cooling	kW	392	438	493	548	638	708
		TR	111.5	124.5	140.2	155.8	181.4	201.3
	Heating	kW	373	396	468	513	603	673
		TR	106.1	112.6	133.1	145.9	171.5	191.4
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.11	3.00	3.10	3.10	3.01	3.00
COP		W/W	3.19	3.17	3.18	3.19	3.17	3.10
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	126	146	159	177	212	236
	Heating	kW	117	125	147	161	190	217
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1	1
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	67.4	75.3	84.8	94.3	109.7	121.8
		GPM	297	332	374	416	484	537
	Pressure drop	kPa	≤35	≤40	≤50	≤50	≤55	≤55
		ft.WG	≤11.7	≤13.4	≤16.7	≤16.7	≤18.4	≤18.4
	Connection pipe	-	DN125	DN125	DN125	DN125	DN150	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	24000×6	26000×6	24000×8	26000×8	24000×10	26000×10
		CFM	14126×6	15304×6	14126×8	15304×8	14126×10	15304×10
	Total fan motor power	kW	2.2×6	2.8×6	2.2×8	2.8×8	2.2×10	2.8×10
Dimension	Outline(W×D×H)	mm	3670×2250×2550	3670×2250×2550	4890×2250×2550	4890×2250×2550	6110×2250×2550	6110×2250×2550
	Package(W×D×H)	mm	3820×2330×2550	3820×2330×2550	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550
Net/Gross/Operating weight		kg	4790/4830/4886	4860/4900/4957	5870/5910/5987	5975/6015/6095	7000/7040/7140	7080/7120/7222
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Heat pump		LMPD50LE68E/Nb-M	LMPD33LF544E/Nb-M	LMPD43LG364E/Nb-M	LMPD44LF166E/Nb-M	LMPD54NG286E/Nb-M	LMPD50LE6850LE68E/NbA-M
Capacity	Cooling	kW	768	878	988	1096	1316	1500
		TR	218.4	249.7	280.9	311.7	374.2	426.5
	Heating	kW	690	792	909	1026	1203	1380
		TR	196.2	225.2	258.5	291.8	342.1	392.4
Capacity steps		%	25%,50%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.00	3.01	3.10	3.10	3.10	2.91
COP		W/W	3.07	3.17	3.18	3.19	3.12	3.07
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	256	292	319	354	425	515
	Heating	kW	225	250	286	322	386	450
Compressor	Type	-	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw	Semi-hermetic screw
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m³/h	132.1	151.0	169.9	188.5	226.4	258.0
		GPM	582	666	749	831	998	1138
	Pressure drop	kPa	≤65	≤65	≤65	≤70	≤90	≤100
		ft.WG	≤21.7	≤21.7	≤21.7	≤23.4	≤30.1	≤33.5
	Connection pipe	-	DN150	DN150	DN200	DN200	DN200	2×DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	26000×10	26000×12	26000×14	26000×16	26000×18	26000×20
		CFM	15304×10	15304×12	15304×14	15304×16	15304×18	15304×20
	Total fan motor power	kW	2.8×10	2.8×12	2.8×14	2.8×16	2.8×18	2.8×20
Dimension	Outline(W×D×H)	mm	6110×2250×2550	7340×2250×2550	8560×2250×2550	9780×2250×2550	11000×2250×2550	12230×2250×2550
	Package(W×D×H)	mm	6260×2330×2550	7490×2330×2550	8710×2330×2550	9930×2330×2550	11150×2330×2550	12380×2330×2550
Net/Gross/Operating weight		kg	7150/7190/7293	9450/9490/9639	10815/10855/11031	11730/11770/11965	12910/12950/13168	14300/14380/14586
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/1	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.
LMPD50LE6850LE68E/NbA-M is a combined unit, each part should be transported separately.

LME Series Air-Cooled Screw Chiller (60Hz)

LME series air-cooled screw chiller (60Hz) adopts the dedicated air-cooled screw compressor of Gree self-owned brand, flooded shell and tube design and full-closed structure design. It has the characteristic of high reliability and low noise, providing cold water for the user in summer. It can be used in all kinds of large centralized air conditioning system consisting of end terminal air handling unit such as fan coil unit, horizontal and vertical mounted unit and combined type air conditioner.

Golden fin condenser | Inner groove copper | Modular structure | Comprehensive protection | Self-diagnosis | Long-distance monitoring | Memory function | 24 hour timer | Intelligent defrosting

- Gree's efficient air-cooled heat pump specialized compressor;
- Heat pump flooded type shell-and-tube design;
- V-shaped structure for fins, efficient heat exchange design;
- Seamless connectivity on site, cooling capacity can be enlarged infinitely;
- Totally enclosed structure, low noise and low vibration design, safe and comfortable.

Item	Water side(water temperature)				Air side(outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	5~15	2.5~8	35	-	18~52

60Hz

Model	Cooling only		LMEA30JD3/Nb-H	LMEA30JD3E/Nb-H	LMEB30JD2/Nb-H	LMEB30LE5/Nb-H	LMEB30LE5E/Nb-H
Capacity	Cooling	kW	270	310	330	360	390
		TR	76.8	88.2	93.9	102.4	110.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.10	3.10	3.06	3.05	3.00
Power supply		V/Ph/Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz
Power input	Cooling	kW	87	100	108	118	130
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m^3/h	46.4	53.3	56.8	61.9	67.1
		GPM	205	235	250	273	296
	Pressure drop	kPa	≤35	≤35	≤35	≤40	≤45
		ft.WG	≤11.7	≤11.7	≤11.7	≤13.4	≤15.1
	Connection pipe	-	DN100	DN100	DN100	DN100	DN125
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m^3/h	20000×6	20000×6	20000×6	20000×6	20000×6
		CFM	11772×6	11772×6	11772×6	11772×6	11772×6
	Total fan motor power	kW	1.5×6	1.5×6	1.5×6	1.5×6	1.5×6
Dimension	Outline(WxDxH)	mm	3670×2250×2550	3670×2250×2550	3670×2250×2550	3670×2250×2550	3670×2250×2550
	Package(WxDxH)	mm	3820×2330×2550	3820×2330×2550	3820×2330×2550	3820×2330×2550	3820×2330×2550
Net/Gross/Operating weight		kg	3830/3870/3907	4230/4270/4315	4370/4410/4457	4850/4890/4947	4990/5030/5090
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/2

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB40LE4/Nb-H	LMEB40LE3E/Nb-H	LMEB50LE2/Nb-H	LMEB50LE1E/Nb-H	LMEA33LF8E/Nb-H
Capacity	Cooling	kW	450	480	550	600	620
		TR	128.0	136.5	156.4	170.6	176.3
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	12.5%,25%~100%
EER		W/W	3.13	3.04	3.06	3.00	3.10
Power supply		V/Ph/Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz
Power input	Cooling	kW	144	158	180	200	200
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m^3/h	77.4	82.6	94.6	103.2	106.6
		GPM	341	364	417	455	470
	Pressure drop	kPa	≤45	≤45	≤45	≤50	≤55
		ft.WG	≤15.1	≤15.1	≤15.1	≤16.7	≤18.4
	Connection pipe	-	DN125	DN125	DN125	DN125	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m^3/h	20000×8	20000×8	20000×10	20000×10	20000×12
		CFM	11772×8	11772×8	11772×10	11772×10	11772×12
	Total fan motor power	kW	1.5×8	1.5×8	1.5×10	1.5×10	1.5×12
Dimension	Outline(WxDxH)	mm	4890×2250×2550	4890×2250×2550	6110×2250×2550	6110×2250×2550	7340×2250×2550
	Package(WxDxH)	mm	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550	7490×2330×2550
Net/Gross/Operating weight		kg	5410/5450/5518	5610/5650/5722	6100/6140/6222	6180/6220/6304	7440/7480/7589
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB33LF6/Nb-H	LMEB33LF7/Nb-H	LMEB33LF5E/Nb-H	LMEB43NF4/Nb-H	LMEB43NF2E/Nb-H
Capacity	Cooling	kW	670	720	780	820	870
		TR	190.6	204.8	221.8	233.2	247.4
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.10	3.06	3.00	3.04	3.04
Power supply		V/Ph/Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz
Power input	Cooling	kW	216	235	260	270	286
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m^3/h	115.2	123.8	134.2	141.0	149.6
		GPM	508	546	592	622	660
	Pressure drop	kPa	≤55	≤55	≤60	≤65	≤65
		ft.WG	≤18.4	≤18.4	≤20.1	≤21.7	≤21.7
	Connection pipe	-	DN150	DN150	DN150	DN150	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m^3/h	20000×12	20000×12	20000×12	20000×14	20000×14
		CFM	11772×12	11772×12	11772×12	11772×14	11772×14
	Total fan motor power	kW	1.5×12	1.5×12	1.5×12	1.5×14	1.5×14
Dimension	Outline(WxDxH)	mm	7340×2250×2550	7340×2250×2550	7340×2250×2550	8560×2250×2550	8560×2250×2550
	Package(WxDxH)	mm	7490×2330×2550	7490×2330×2550	7490×2330×2550	8710×2330×2550	8710×2330×2550
Net/Gross/Operating weight		kg	8120/8160/8282	8350/8390/8517	9110/9150/9292	9130/9170/9313	9180/9220/9364
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB44NG3/Nb-H	LMEB44NG2E/Nb-H	LMEB54NG2/Nb-H	LMEB54NH2/Nb-H	LMEB54NH2E/Nb-H
Capacity	Cooling	kW	900	950	1000	1100	1230
		TR	256.0	270.2	284.4	312.9	349.8
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.05	3.01	3.09	3.01	3.03
Power supply		V/Ph/Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz
Power input	Cooling	kW	295	316	324	366	406
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m^3/h	154.8	163.4	172.0	189.2	211.6
		GPM	683	720	758	834	933
	Pressure drop	kPa	≤60	≤60	≤70	≤55	≤70
		ft.WG	≤20.1	≤20.1	≤23.4	≤18.4	≤23.4
	Connection pipe	-	DN150	DN200	DN200	DN200	DN200
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m^3/h	20000×16	20000×16	20000×18	20000×18	20000×18
		CFM	11772×16	11772×16	11772×18	11772×18	11772×18
	Total fan motor power	kW	1.5×16	1.5×16	1.5×18	1.5×18	1.5×18
Dimension	Outline(WxDxH)	mm	9780×2250×2550	9780×2250×2550	11000×2250×2550	11000×2250×2550	11000×2250×2550
	Package(WxDxH)	mm	9930×2330×2550	9930×2330×2550	11150×2330×2550	11150×2330×2550	11150×2330×2550
Net/Gross/Operating weight		kg	9970/10010/10169	10280/10360/10486	11060/11140/11281	12200/12280/12444	13260/13340/13525
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB50LE150LE1E/Nb-H	LMEB33LF750LE2/Nb-H	LMEB33LF550LE1E/Nb-H	LMEB33LF733LF7/Nb-H	LMEB33LF533LF5E/Nb-H	LMEB43NF233LF5E/Nb-H
Capacity	Cooling	kW	1270	1300	1380	1450	1580	1650
		TR	361.2	369.7	392.5	412.4	449.4	469.3
Capacity steps		%	12.5%,25%~100%	8.3%,16.7%~100%	8.3%,16.7%~100%	6.3%,12.5%~100%	6.3%,12.5%~100%	6.3%,12.5%~100%
EER		W/W	3.10	3.06	3.03	3.10	3.06	3.08
Power supply		V/Ph/Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz	380V 3N~60Hz
Power input	Cooling	kW	410	425	455	468	516	536
Compressor	Type	-	Semi-hermetic screw compressor					
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	3	3	4	4	4
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	218.4	223.6	237.4	249.4	271.8	283.8
		GPM	963	986	1047	1100	1198	1251
	Pressure drop	kPa	≤70	≤60	≤60	≤60	≤60	≤70
		ft.WG	≤23.4	≤20.1	≤20.1	≤20.1	≤20.1	≤23.4
	Connection pipe	-	DN200	DN150+DN125	DN150+DN125	2×DN150	2×DN150	2×DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m³/h	20000×20	20000×22	20000×22	20000×24	20000×24	20000×24
		CFM	11772×20	11772×22	11772×22	11772×24	11772×24	11772×24
	Total fan motor power	kW	1.5×20	1.5×22	1.5×22	1.5×24	1.5×24	1.5×24
Dimension	Outline(WxDxH)	mm	12230×2250×2550	13450×2250×2550	13450×2250×2550	14670×2250×2550	14670×2250×2550	14670×2250×2550
	Package(WxDxH)	mm	12380×2330×2550	13600×2330×2550	13600×2330×2550	14820×2330×2550	14820×2330×2550	14820×2330×2550
Net/Gross/Operating weight		kg	12410/12490/12658	14450/14530/14739	15290/15370/15596	16700/16780/17034	18220/18300/18584	18290/18370/18656
Loading quantity	40'GP/40'HQ	set	0/0	0/0	0/0	0/0	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEA30JD3/Nb-U	LMEA30JD3E/Nb-U	LMEB30JD2/Nb-U	LMEB30LE5/Nb-U	LMEB30LE5E/Nb-U
Capacity	Cooling	kW	270	310	330	360	390
		TR	76.8	88.2	93.9	102.4	110.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.10	3.10	3.06	3.05	3.00
Power supply		V/Ph/Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz
Power input	Cooling	kW	87	100	108	118	130
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	46.4	53.3	56.8	61.9	67.1
		GPM	205	235	250	273	296
	Pressure drop	kPa	≤35	≤35	≤35	≤40	≤45
		ft.WG	≤11.7	≤11.7	≤11.7	≤13.4	≤15.1
	Connection pipe	-	DN100	DN100	DN100	DN100	DN125
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	20000×6	20000×6	20000×6	20000×6	20000×6
		CFM	11772×6	11772×6	11772×6	11772×6	11772×6
	Total fan motor power	kW	1.5×6	1.5×6	1.5×6	1.5×6	1.5×6
Dimension	Outline(WxDxH)	mm	3670×2250×2550	3670×2250×2550	3670×2250×2550	3670×2250×2550	3670×2250×2550
	Package(WxDxH)	mm	3820×2330×2550	3820×2330×2550	3820×2330×2550	3820×2330×2550	3820×2330×2550
Net/Gross/Operating weight		kg	3830/3870/3907	4230/4270/4315	4370/4410/4457	4850/4890/4947	4990/5030/5090
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/2

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB40LE4/Nb-U	LMEB40LE3E/Nb-U	LMEB50LE2/Nb-U	LMEB50LE1E/Nb-U	LMEA33LF8E/Nb-U
Capacity	Cooling	kW	450	480	550	600	620
		TR	128.0	136.5	156.4	170.6	176.3
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	12.5%,25%~100%
EER		W/W	3.13	3.04	3.06	3.00	3.10
Power supply		V/Ph/Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz
Power input	Cooling	kW	144	158	180	200	200
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	77.4	82.6	94.6	103.2	106.6
		GPM	341	364	417	455	470
	Pressure drop	kPa	≤45	≤45	≤45	≤50	≤55
		ft.WG	≤15.1	≤15.1	≤15.1	≤16.7	≤18.4
	Connection pipe	-	DN125	DN125	DN125	DN125	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	20000×8	20000×8	20000×10	20000×10	20000×12
		CFM	11772×8	11772×8	11772×10	11772×10	11772×12
	Total fan motor power	kW	1.5×8	1.5×8	1.5×10	1.5×10	1.5×12
Dimension	Outline(WxDxH)	mm	4890×2250×2550	4890×2250×2550	6110×2250×2550	6110×2250×2550	7340×2250×2550
	Package(WxDxH)	mm	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550	7490×2330×2550
Net/Gross/Operating weight		kg	5410/5450/5518	5610/5650/5722	6100/6140/6222	6180/6220/6304	7440/7480/7589
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB33LF6/Nb-U	LMEB33LF7/Nb-U	LMEB33LF5E/Nb-U	LMEB43NF4/Nb-U	LMEB43NF2E/Nb-U
Capacity	Cooling	kW	670	720	780	820	870
		TR	190.6	204.8	221.8	233.2	247.4
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.10	3.06	3.00	3.04	3.04
Power supply		V/Ph/Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz
Power input	Cooling	kW	216	235	260	270	286
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	115.2	123.8	134.2	141.0	149.6
		GPM	508	546	592	622	660
	Pressure drop	kPa	≤55	≤55	≤60	≤65	≤65
		ft.WG	≤18.4	≤18.4	≤20.1	≤21.7	≤21.7
	Connection pipe	-	DN150	DN150	DN150	DN150	DN150
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	20000×12	20000×12	20000×12	20000×14	20000×14
		CFM	11772×12	11772×12	11772×12	11772×14	11772×14
	Total fan motor power	kW	1.5×12	1.5×12	1.5×12	1.5×14	1.5×14
Dimension	Outline(WxDxH)	mm	7340×2250×2550	7340×2250×2550	7340×2250×2550	8560×2250×2550	8560×2250×2550
	Package(WxDxH)	mm	7490×2330×2550	7490×2330×2550	7490×2330×2550	8710×2330×2550	8710×2330×2550
Net/Gross/Operating weight		kg	8120/8160/8282	8350/8390/8517	9110/9150/9292	9130/9170/9313	9180/9220/9364
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB44NG3/Nb-U	LMEB44NG2E/Nb-U	LMEB54NG2/Nb-U	LMEB54NH2/Nb-U	LMEB54NH2E/Nb-U
Capacity	Cooling	kW	900	950	1000	1100	1230
		TR	256.0	270.2	284.4	312.9	349.8
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.05	3.01	3.09	3.01	3.03
Power supply		V/Ph/Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz
Power input	Cooling	kW	295	316	324	366	406
Compressor	Type	-	Semi-hermetic screw compressor				
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	154.8	163.4	172.0	189.2	211.6
		GPM	683	720	758	834	933
	Pressure drop	kPa	≤60	≤60	≤70	≤55	≤70
		ft.WG	≤20.1	≤20.1	≤23.4	≤18.4	≤23.4
	Connection pipe	-	DN150	DN200	DN200	DN200	DN200
Air side heat exchanger	Type	-	Aluminum fin-copper tube				
	Total fan air flow	m³/h	20000×16	20000×16	20000×18	20000×18	20000×18
		CFM	11772×16	11772×16	11772×18	11772×18	11772×18
	Total fan motor power	kW	1.5×16	1.5×16	1.5×18	1.5×18	1.5×18
Dimension	Outline(WxDxH)	mm	9780×2250×2550	9780×2250×2550	11000×2250×2550	11000×2250×2550	11000×2250×2550
	Package(WxDxH)	mm	9930×2330×2550	9930×2330×2550	11150×2330×2550	11150×2330×2550	11150×2330×2550
Net/Gross/Operating weight		kg	9970/10010/10169	10280/10360/10486	11060/11140/11281	12200/12280/12444	13260/13340/13525
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

Model	Cooling only		LMEB50LE150LE1E/Nb-U	LMEB33LF750LE2/Nb-U	LMEB33LF550LE1E/Nb-U	LMEB33LF733LF7/Nb-U	LMEB33LF533LF5E/Nb-U	LMEB43NF233LF5E/Nb-U
Capacity	Cooling	kW	1270	1300	1380	1450	1580	1650
		TR	361.2	369.7	392.5	412.4	449.4	469.3
Capacity steps		%	12.5%,25%~100%	8.3%,16.7%~100%	8.3%,16.7%~100%	6.3%,12.5%~100%	6.3%,12.5%~100%	6.3%,12.5%~100%
EER		W/W	3.10	3.06	3.03	3.10	3.06	3.08
Power supply		V/Ph/Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz	460V 3N~60Hz
Power input	Cooling	kW	410	425	455	468	516	536
Compressor	Type	-	Semi-hermetic screw compressor					
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	3	3	4	4	4
Water side heat exchanger	Type	-	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection	Flanged connection
	Water flow volume	m³/h	218.4	223.6	237.4	249.4	271.8	283.8
		GPM	963	986	1047	1100	1198	1251
	Pressure drop	kPa	≤70	≤60	≤60	≤60	≤60	≤70
		ft.WG	≤23.4	≤20.1	≤20.1	≤20.1	≤20.1	≤23.4
	Connection pipe	-	DN200	DN150+DN125	DN150+DN125	2×DN150	2×DN150	2×DN150
Air side heat exchanger	Type	-			Aluminum fin-copper tube			
	Total fan air flow	m³/h	20000×20	20000×22	20000×22	20000×24	20000×24	20000×24
		CFM	11772×20	11772×22	11772×22	11772×24	11772×24	11772×24
	Total fan motor power	kW	1.5×20	1.5×22	1.5×22	1.5×24	1.5×24	1.5×24
Dimension	Outline(WxDxH)	mm	12230×2250×2550	13450×2250×2550	13450×2250×2550	14670×2250×2550	14670×2250×2550	14670×2250×2550
	Package(WxDxH)	mm	12380×2330×2550	13600×2330×2550	13600×2330×2550	14820×2330×2550	14820×2330×2550	14820×2330×2550
Net/Gross/Operating weight		kg	12410/12490/12658	14450/14530/14739	15290/15370/15596	16700/16780/17034	18220/18300/18584	18290/18370/18656
Loading quantity	40'GP/40'HQ	set	0/0	0/0	0/0	0/0	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.

LMR Series Partial Heat Recovery Air-cooled Screw Chiller

Gree LMR series partial heat recovery air-cooled screw chiller adopts the dedicated air-cooled screw compressor of Gree self-owned brand, flooded shell and tube design and full-closed structure design. It has the characteristic of high reliability and low noise, providing cold water for the user in summer, air conditioning unit which provides domestic hot water is provided for free. It can be used in all kinds of large centralized air conditioning system consisting of end terminal air handling unit such as fan coil unit, horizontal and vertical mounted unit and combined type air conditioner.

Item	Water side(water temperature)				Air side(outdoor temperature)	
	Nominal operating condition		Operating range		Nominal operating condition	Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	DB(℃)
Cooling	12	7	5~15	2.5~8	35	18~52

Features

High Efficiency and Energy Saving

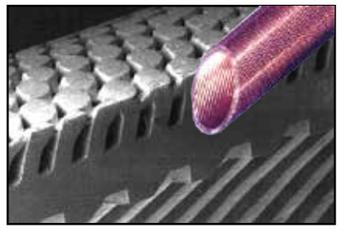
- Outstanding cooling performance
- R134a environment-friendly refrigerant, quite low noise
- Easy and fast installation
- Self-contained remote monitoring function

High Efficiency Semi-hermetical Dual-screw Compressor

- Specialized design for HFC-134a refrigerant
- Direct drive between the motor and the compressor
- Pressure ratio specially designed for the flooded unit
- High-precision assembly
- High cooling efficiency at full load
- Stepless control by the sliding valve to make the cooling output match with the load.
- High-precision SKF bearing

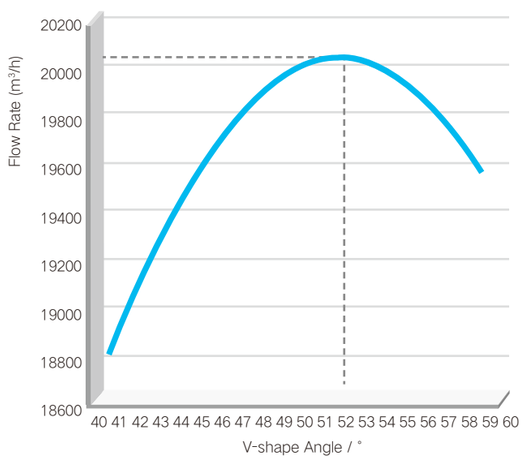
Flooded Shell and Tube Design

- TURBO-BII ultra-high-efficiency evaporating tubes
- Immersed inside refrigerant, the heat exchanging tubes are of excellent heat exchanging effect
- Refrigerant flows in the tubes, which can facilitate service and maintenance
- Pressure loss at the water side is low, which can reduce energy consumption for the water pump

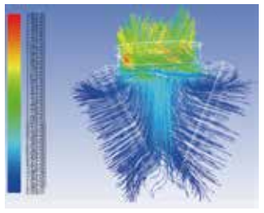


Optimized V-shape Condenser & High Heat Exchanging Efficiency

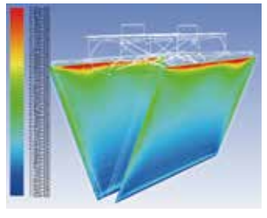
- V-shape arrangement, even flow distribution, high heat exchanging efficiency
- Rippled slotted aluminum fins, high heat exchanging efficiency
- Optimized V angle, optimized flow rate



Curve of Total Flow Rate Versus V Angle



Flow Pattern

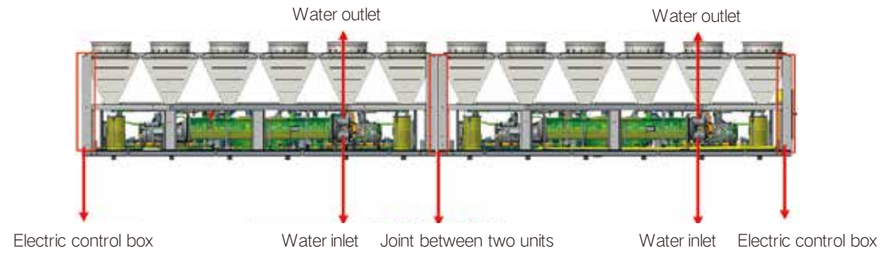


Nephogram of Face Velocity Distribution

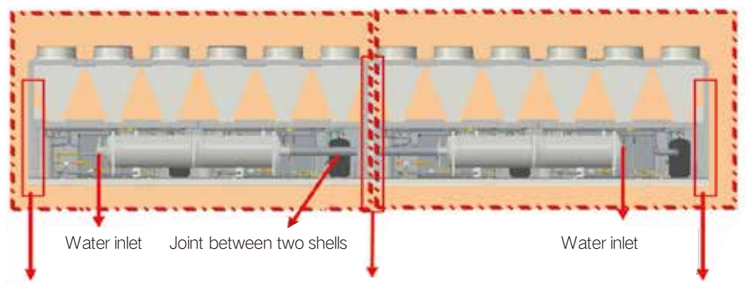
Seamless Connection on Site, the Cooling Capacity Can Be Expanded Unlimitedly

Two units can be seamlessly integrated together on site for enlarging cooling capacity only by connecting their shells. It can save the installation space and facilitate lifting and transport.

Program 1 (Standard):



Program 2(Non-standard):



Full-Closed Structure, Low Noise and Low Vibration Design, Safe and Comfortable

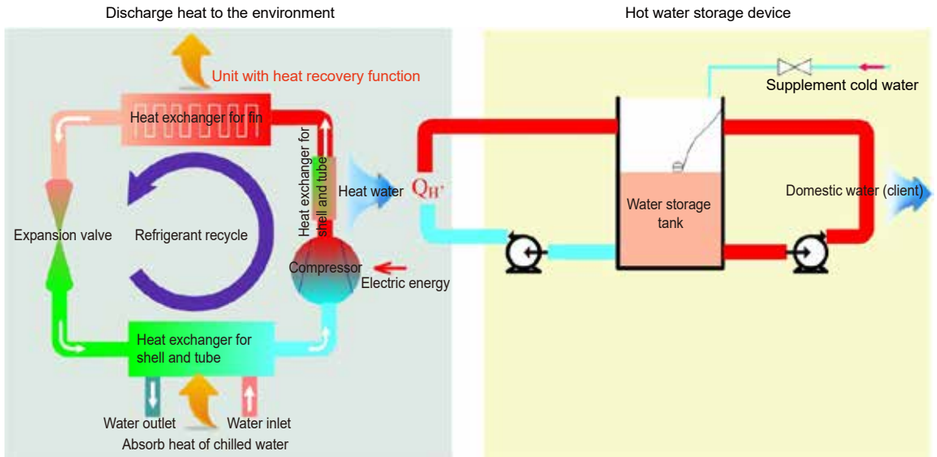
- Class 1 noise and vibration reduction.
  Silencing hood, lowered by 8-10dB(A);
  Vibration isolator, more than 90% efficiency.
- Class 2 noise and vibration reduction.
  Insulating wall, for further reduction;
  I-iron base, for class 2 vibration isolation.

Corrosion Prevention Design to Meet the Requirement for Marine Climate

- Full-sealed structure design to avoid direct exposure of component;
- The fin adopts high corrosion-resistant material; neutral salt spray test reaches 2,000 hours;
- The base adopts the 3-layer corrosion-resistant coating for protection;
- Component of the pipeline shall have corrosion-resistant coating treatment;
- The self-made sheet metal parts adopt high corrosion-resistant and weather-proof powder for spray painting treatment.

Cooling While Water Heating

- Recover the waste heat by adopting the shell and tube of heat recovery, and the heat recovery quantity reaches 20%;
- Water temperature of heat recovery is as high as 55℃, which is free;
- Working condition of heat recovery and non-heat recovery can be switched freely during operation to avoid energy waste caused by switching;
- Control the startup quantity of fan according to high pressure, water temperature of heat recovery and ambient temperature to ensure the heat recover efficiency is optimal;
- Provide air conditioner and hot water at the same time, which is the best solution for large hotel, and air conditioner and hot water of apartment.



50Hz

R134A

Model	Cooling only		LMEA30JD3ER/Nb-M	LMEB30JD2ER/Nb-M	LMEA40LE5ER/Nb-M	LMEB40LE4ER/Nb-M	LMEA50LE3ER/Nb-M	LMEB50LE2ER/Nb-M
Capacity	Cooling	kW	320	350	420	470	520	580
		TR	91.0	99.5	119.4	133.6	147.9	164.9
Capacity steps		%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%	25%,50%~100%
EER		W/W	3.20	3.24	3.23	3.22	3.21	3.22
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	100	108	130	146	162	180
Heat recovery			64	70	84	94	104	116
Compressor	Type	-	Semi-hermetic screw compressor					
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	1	1	1	1	1	1
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m^3/h	55.0	60.2	72.2	80.8	89.4	99.8
		GPM	243	265	319	356	394	440
	Pressure drop	kPa	≤35	≤35	≤45	≤45	≤45	≤45
		ft.WG	≤11.7	≤11.7	≤15.1	≤15.1	≤15.1	≤15.1
	Connection pipe	-	DN100	DN100	DN125	DN125	DN125	DN125
Heat recovery exchanger	Type	-	Shell and tube heat exchanger					
	Water flow volume	m^3/h	11.0	12.0	14.4	16.2	17.9	20.0
		GPM	49	53	64	71	79	88
	Pressure drop	kPa	≤10	≤10	≤10	≤10	≤10	≤10
		ft.WG	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4
	Connection pipe	-	DN65	DN65	DN80	DN80	DN80	DN80
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m^3/h	20000×6	20000×6	20000×8	20000×8	20000×10	20000×10
		CFM	11772×6	11772×6	11772×8	11772×8	11772×10	11772×10
	Total fan motor power	kW	1.5×6	1.5×6	1.5×8	1.5×8	1.5×10	1.5×10
Dimension	Outline(WxDxH)	mm	3670×2250×2550	3670×2250×2550	4890×2250×2550	4890X2250X2550	6110×2250×2550	6110×2250×2550
	Package(WxDxH)	mm	3820×2330×2550	3820×2330×2550	5040×2330×2550	5040×2330×2550	6260×2330×2550	6260×2330×2550
Net/Gross/Operating weight		kg	4220/4260/4304	4400/4440/4488	5300/5340/5406	5605/5645/5717	6070/6110/6191	6330/6370/6457
Loading quantity	40'GP/40'HQ	set	0/2	0/2	0/2	0/2	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Cooling only		LMEA33LF8ER/Nb-M	LMEB33LF6ER/Nb-M	LMEB43LF7ER/Nb-M	LMEB43LF5ER/Nb-M	LMEA44NF4ER/Nb-M	LMEB44NF2ER/Nb-M
Capacity	Cooling	kW	650	700	750	820	860	940
		TR	184.8	199.1	213.3	233.2	244.5	267.3
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%	12.5%,25%~100%
EER		W/W	3.25	3.24	3.19	3.22	3.25	3.24
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	200	216	235	255	265	290
Heat recovery			130	140	150	164	172	188
Compressor	Type	-	Semi-hermetic screw compressor					
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	2	2	2	2
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m^3/h	111.8	120.4	129.0	141.0	147.9	161.7
		GPM	493	531	569	622	652	713
	Pressure drop	kPa	≤55	≤55	≤55	≤55	≤65	≤60
		ft.WG	≤18.4	≤18.4	≤18.4	≤18.4	≤21.7	≤20.1
	Connection pipe	-	DN150	DN150	DN150	DN150	DN150	DN150
Heat recovery exchanger	Type	-	Shell and tube heat exchanger					
	Water flow volume	m^3/h	22.4	24.1	25.8	28.2	29.6	32.3
		GPM	99	106	114	124	130	143
	Pressure drop	kPa	≤10	≤10	≤10	≤10	≤10	≤10
		ft.WG	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4
	Connection pipe	-	2×DN65	2×DN65	DN65+DN80	DN65+DN80	2×DN80	2×DN80
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m^3/h	20000×12	20000×12	20000×14	20000×14	20000×16	20000×16
		CFM	11772×12	11772×12	11772×14	11772×14	11772×16	11772×16
	Total fan motor power	kW	1.5×12	1.5×12	1.5×14	1.5×14	1.5×16	1.5×16
Dimension	Outline(WxDxH)	mm	7340×2250×2550	7340×2250×2550	8560×2250×2550	8560×2250×2550	9780×2250×2550	9780×2250×2550
	Package(WxDxH)	mm	7490×2330×2550	7490×2330×2550	8710×2330×2550	8710×2330×2550	9930×2330×2550	9930×2330×2550
Net/Gross/Operating weight		kg	8100/8140/8262	8300/8340/8466	8530/8570/8701	9290/9330/9476	10040/10080/10241	10150/10190/10353
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/1	0/1	0/1	0/1

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Cooling only		LMEB54NG3ER/Nb-M	LMEB54NG2ER/Nb-M	LMEB33LF850LE3ER/Nb-M	LMEB33LF650LE2ER/Nb-M	LMEB33LF833LF8ER/Nb-M	LMEB33LF633LF6ER/Nb-M
Capacity	Cooling	kW	950	1050	1160	1280	1320	1400
		TR	270.1	298.6	329.9	364.0	375.4	398.1
Capacity steps		%	12.5%,25%~100%	12.5%,25%~100%	8.3%,16.7%~100%	8.3%,16.7%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%
EER		W/W	3.22	3.23	3.22	3.20	3.22	3.22
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	295	325	360	400	410	435
Heat recovery			190	210	232	256	264	280
Compressor	Type	-	Semi-hermetic screw compressor					
	Starting mode	-	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start	Star delta start
	Quantity	-	2	2	3	3	4	4
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m^3/h	163.4	180.6	199.5	220.2	227.0	240.8
		GPM	720	796	880	971	1001	1062
	Pressure drop	kPa	≤60	≤70	≤55	≤55	≤60	≤60
		ft.WG	≤20.1	≤23.4	≤18.4	≤18.4	≤20.1	≤20.1
	Connection pipe	-	DN150	DN150	DN150+DN125	DN150+DN125	2×DN150	2×DN150
Heat recovery exchanger	Type	-	Shell and tube heat exchanger					
	Water flow volume	m^3/h	32.7	36.1	39.9	44.0	45.4	48.2
		GPM	144	159	176	194	200	212
	Pressure drop	kPa	≤10	≤10	≤10	≤10	≤10	≤10
		ft.WG	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4	≤3.4
	Connection pipe	-	2×DN80	2×DN80	2×DN65+DN80	2×DN65+DN80	4×DN65	4×DN65
Air side heat exchanger	Type	-	Aluminum fin-copper tube					
	Total fan air flow	m^3/h	20000×18	20000×18	20000×22	20000×22	20000×24	20000×24
		CFM	11772×18	11772×18	11772×22	11772×22	11772×24	11772×24
	Total fan motor power	kW	1.5×18	1.8×18	1.5×22	1.5×22	1.5×24	1.5×24
Dimension	Outline(WxDxH)	mm	11000×2250×2550	11000×2250×2550	13450×2250×2550	13450×2250×2550	14670×2250×2550	14670×2250×2550
	Package(WxDxH)	mm	11150×2330×2550	11150×2330×2550	13600×2330×2550	13600×2330×2550	14820×2330×2550	14820×2330×2550
Net/Gross/Operating weight		kg	10460/10540/10669	11330/11410/11557	14170/14250/14453	14740/14820/15035	15240/15320/15545	16200/16280/16524
Loading quantity	40'GP/40'HQ	set	0/1	0/1	0/0	0/0	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.

50Hz

R134A

Model	Cooling only		LMEB33LF643LF5ER/Nb-M	LMEB43LF743LF7ER/Nb-M	LMEB43LF543LF5ER/Nb-M
Capacity	Cooling	kW	1500	1520	1650
		TR	426.5	432.2	469.2
Capacity steps		%	6.25%,12.5%~100%	6.25%,12.5%~100%	6.25%,12.5%~100%
EER		W/W	3.23	3.23	3.20
Power supply		V/Ph/Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Power input	Cooling	kW	465	470	515
Heat recovery			300	304	330
Compressor	Type	-	Semi-hermetic screw compressor		
	Starting mode	-	Star delta start	Star delta start	Star delta start
	Quantity	-	4	4	4
Water side heat exchanger	Type	-	Flooded evaporator	Flooded evaporator	Flooded evaporator
	Water flow volume	m^3/h	258.0	261.4	283.8
		GPM	1138	1153	1251
	Pressure drop	kPa	≤60	≤60	≤60
		ft.WG	≤20.1	≤20.1	≤20.1
	Connection pipe	-	2×DN150	2×DN150	2×DN150
Heat recovery exchanger	Type	-	Shell and tube heat exchanger		
	Water flow volume	m^3/h	51.6	52.3	56.8
		GPM	228	231	250
	Pressure drop	kPa	≤10	≤10	≤10
		ft.WG	≤3.4	≤3.4	≤3.4
	Connection pipe	-	3×DN65+DN80	2×DN65+2×DN80	2×DN65+2×DN80
Air side heat exchanger	Type	-	Aluminum fin-copper tube		
	Total fan air flow	m^3/h	20000×26	20000×28	20000×28
		CFM	11772×26	11772×28	11772×28
	Total fan motor power	kW	1.5×26	1.5×28	1.5×28
Dimension	Outline(WxDxH)	mm	15890×2250×2550	17120×2250×2550	17120×2250×2550
	Package(WxDxH)	mm	16040×2330×2550	17270×2330×2550	17270×2330×2550
Net/Gross/Operating weight		kg	17500/17580/17850	17310/17390/17656	18830/18910/19207
Loading quantity	40'GP/40'HQ	set	0/0	0/0	0/0

Note: The parameters are estimated, please refer to the value on the nameplate.

60Hz

R134A

Model			LSBLGF_MHR/NbA-H						
			180	235	280	350	470	580	700
Cooling capacity		kW	180	235	280	350	470	580	700
Cooling power input		kW	56	77	87	114	146	180	228
COP		W/W	3.21	3.05	3.22	3.07	3.22	3.22	3.07
Heat recovery		kW	36	47	56	70	94	116	140
Rated power input		kW	73	100	113	148	190	234	296
Power			380V 3N~ 60Hz						
Operating control			Automatic microcomputer control, operating status display, error alarms						
Safety protection			High pressure protection, low pressure protection, compressor over-load protection, compressor internal protection, compressor over-current protection, phase loss/reversal protection, low oil level protection, water flow switch protection, low flow alarm, differential pressure protection, high oil pressure difference protection, fan over-current protection, freeze protection, sensor protection, low discharge superheating degree protection.						
Compressor type			Semi-hermetic screw compressor						
Refrigerant			R134a						
Water system	Water flow	m^3/h	31.0	40.4	48.2	60.2	80.8	99.8	120.4
	Pressure loss	kPa	≤35	≤35	≤35	≤35	≤45	≤50	≤55
	Heat exchanger type		Flooded evaporator						
	Max. bearing pressure	Mpa	1						
	Inlet/outlet tube diameter	mm	DN80	DN80	DN100	DN100	DN125	DN125	DN150
	Connection mode		Flanged connection						
Heat recovery exchanger	Water flow	m^3/h	6.2	8.1	9.6	12.0	16.2	20.0	24.1
	Pressure loss	kPa	≤10	≤10	≤10	≤10	≤10	≤10	≤10
	Heat exchanger type		Shell and tube heat exchanger						
	Max.bearing pressure	Mpa	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Connection pipe	mm	DN65	DN65	DN65	DN65	DN80	DN80	2×DN65
	Connection mode		Flanged connection						
Air system	Heat exchanger type		Aluminum fin-copper tube						
	Fan rated power	kW	4×1.5	4×1.5	6×1.5	6×1.5	8×1.5	10×1.5	12×1.5
Outline dimension	Width	mm	2450	2450	3670	3670	4890	6110	7340
	Depth	mm	2250	2250	2250	2250	2250	2250	2250
	Height	mm	2550	2550	2550	2550	2550	2550	2550
Package dimension	Width	mm	2490	2490	3750	3750	4970	6190	7420
	Depth	mm	2330	2330	2330	2330	2330	2330	2330
	Height	mm	2550	2550	2550	2550	2550	2550	2550
Net weight		kg	2980	3510	4310	4320	5470	6780	8595
Gross weight		kg	3020	3550	4350	4360	5510	6820	8635
Operating weight		kg	3040	3580	4396	4406	5579	6916	8767
Layer of stacking		/	3	3	2	2	2	1	1

60Hz

R134A

Model			LSBLGF_MHR/NbA-Q						
			180	235	280	350	470	580	700
Cooling capacity		kW	180	235	280	350	470	580	700
Cooling power input		kW	56	77	87	114	146	180	228
COP		W/W	3.21	3.05	3.22	3.07	3.22	3.22	3.07
Heat recovery		kW	36	47	56	70	94	116	140
Rated power input		kW	73	100	113	148	190	234	296
Power			460V 3N~ 60Hz						
Operating control			Automatic microcomputer control, operating status display, error alarms						
Safety protection			High pressure protection, low pressure protection, compressor over-load protection, compressor internal protection, compressor over-current protection, phase loss/reversal protection, low oil level protection, water flow switch protection, low flow alarm, differential pressure protection, high oil pressure difference protection, fan over-current protection, freeze protection, sensor protection, low discharge superheating degree protection.						
Compressor type			Semi-hermetic screw compressor						
Refrigerant			R134a						
Water system	Water flow	m^3/h	31.0	40.4	48.2	60.2	80.8	99.8	120.4
	Pressure loss	kPa	≤35	≤35	≤35	≤35	≤45	≤50	≤55
	Heat exchanger type		Flooded evaporator						
	Max. bearing pressure	Mpa	1						
	Inlet/outlet tube diameter	mm	DN80	DN80	DN100	DN100	DN125	DN125	DN150
	Connection mode		Flanged connection						
Heat recovery exchanger	Water flow	m^3/h	6.2	8.1	9.6	12.0	16.2	20.0	24.1
	Pressure loss	kPa	≤10	≤10	≤10	≤10	≤10	≤10	≤10
	Heat exchanger type		Shell and tube heat exchanger						
	Max.bearing pressure	Mpa	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Connection pipe	mm	DN65	DN65	DN65	DN65	DN80	DN80	2×DN65
	Connection mode		Flanged connection						
Air system	Heat exchanger type		Aluminum fin-copper tube						
	Fan rated power	kW	4×1.5	4×1.5	6×1.5	6×1.5	8×1.5	10×1.5	12×1.5
Outline dimension	Width	mm	2450	2450	3670	3670	4890	6110	7340
	Depth	mm	2250	2250	2250	2250	2250	2250	2250
	Height	mm	2550	2550	2550	2550	2550	2550	2550
Package dimension	Width	mm	2490	2490	3750	3750	4970	6190	7420
	Depth	mm	2330	2330	2330	2330	2330	2330	2330
	Height	mm	2550	2550	2550	2550	2550	2550	2550
Net weight		kg	2980	3510	4310	4320	5470	5980	6100
Gross weight		kg	3020	3550	4350	4360	5510	6020	6140
Operating weight		kg	3040	3580	4396	4406	5579	6100	6222
Layer of stacking		/	3	3	2	2	2	1	1

LMVE Series VFD Air-cooled Screw Chiller

LMVE series VFD air-cooled screw chiller doesn’ t require cooling towers and cooling water pumps, and is particularly suitable for areas that are lack of water. The unit doesn’ t need a special close control room, and can be installed on the roof, outdoor ground, etc. It adopts a new generation of high-performance permanent magnet synchronous inverter twin-screw compressor. Through the cooperative control of speed and capacity, the unit features more precise control and higher efficiency. Its operating range is wider, with stepless adjustment from 20% to 100%, and faster adjustment speed. Thanks to the optimized refrigeration system and the reliable control technology, the unit can operate efficiently at full load or partial load. The unit uses a DC inverter with small starting current and a wide voltage range. It is suitable for most countries and regions.

Inner groove copper

Quality motor

Compact design

Self-diagnosis

Modular operating

Comprehensive protection

Wide voltage range

Wide operation range

- High efficiency and energy saving; full load energy efficiency＞3.2; partial load energy efficiency＞5.0 (AHRI standard);
- Wide range of load adjustment; 20%~100% adjustment range for a single unit;
- Small starting current, less impact on the power grid and less installation cost;
- Wide range of operating temperature; reliable cooling at -15℃~52℃;
- Wide range of water temperature adjustment; the leaving water temperature could be decreased below 0℃ if using ethylene glycol antifreeze(suitable for industrial low water temperature occasions).

Item	Water side(water temperature)				Air side(outdoor temperature)		
	Nominal operating condition		Operating range		Nominal operating condition		Operating range
	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	DB(℃)	WB(℃)	DB(℃)
Cooling	12	7	5~15	2.5~8	35	-	15~52

Note: Please contact Gree sales representative if there are the working condition and cooling requirement as below: ambient temperature ＜-15℃ and leaving water temperature ＜-4℃.

50Hz

INVERTER R134A

Model			LMVEB30JD3/Nb-M	LMVED30JD2/Nb-M	LMVED30JD2E/Nb-M	LMVED30JD1E/Nb-M	LMVED40LE3E/Nb-M
Cooling capacity		kW	320	350	385	410	470
Cooling power input		kW	100	109	121	131	146
COP		kW/kW	3.20	3.21	3.18	3.13	3.22
Rated power input		kW	130	131	145	157	175
Power		V/Ph/Hz	380V 3~50Hz				
Cooling adjustment range		kW	20%~100%				
Operating control			Automatic microcomputer control, operating status display, error alarms				
Safety protection			High pressure protection, low pressure protection, compressor over-load protection, phase loss/reversal protection, low oil level protection, water flow switch protection, low flow alarm, differential pressure protection, high oil pressure difference protection, fan over-current protection, freeze protection, sensor protection, low discharge superheating degree protection.				
Compressor	Type		High efficiency variable frequency variable volume screw compressor				
	Quantity		1	1	1	1	1
Refrigerant type			R134a	R134a	R134a	R134a	R134a
Air side heat exchanger	Heat exchanger type		Aluminum fin-copper tube				
	Fan rated power		6×1.5	6×1.5	6×1.8	6×2.2	8×1.5
Water side heat exchanger	Water flow	m^3/h	55.0	60.2	66.2	70.5	80.8
	Pressure drop	kPa	≤35	≤35	≤40	≤40	≤45
	Type				Flooded evaporator		
	Inlet/outlet tube diameter		DN100	DN100	DN100	DN100	DN125
Outline dimension	Width	mm	3820	3820	3820	3820	5040
	Depth	mm	2250	2250	2250	2250	2250
	Height	mm	2550	2550	2550	2550	2550
Package dimension	Width	mm	3870	3870	3870	3870	5090
	Depth	mm	2330	2330	2330	2330	2330
	Height	mm	2550	2550	2550	2550	2550
Net weight		kg	3840	3940	4280	4520	5370
Gross weight		kg	3880	3980	4320	4560	5410
Operating weight		kg	3958	4060	4406	4651	5518

50Hz

INVERTER R134A

Model			LMVED40LE2E/Nb-M	LMVED50LE1/Nb-M	LMVED50LE1E/Nb-M	LMVED33LF6/Nb-M	LMVED33LF3E/Nb-M
Cooling capacity		kW	520	580	630	700	770
Cooling power input		kW	167.0	181.0	197.0	218.0	242.0
COP		kW/kW	3.11	3.20	3.20	3.21	3.18
Rated power input		kW	200	217	236	262	290
Power		V/Ph/Hz	380V 3~50Hz				
Cooling adjustment range		kW	20%~100%				
Operating control			Automatic microcomputer control, operating status display, error alarms				
Safety protection			High pressure protection, low pressure protection, compressor over-load protection, phase loss/reversal protection, low oil level protection, water flow switch protection, low flow alarm, differential pressure protection, high oil pressure difference protection, fan over-current protection, freeze protection, sensor protection, low discharge superheating degree protection.				
Compressor	Type		High efficiency variable frequency variable volume screw compressor				
	Quantity		1	1	1	2	2
Refrigerant type			R134a	R134a	R134a	R134a	R134a
Air side heat exchanger	Heat exchanger type		Aluminum fin-copper tube				
	Fan rated power		8×1.8	10×1.5	10×1.8	12×1.5	12×1.8
Water side heat exchanger	Water flow	m^3/h	89.4	99.8	108.4	120.4	132.4
	Pressure drop	kPa	≤45	≤45	≤45	≤55	≤60
	Type				Flooded evaporator		
	Inlet/outlet tube diameter		DN125	DN125	DN125	DN150	DN150
Outline dimension	Width	mm	5040	6260	6260	7490	7490
	Depth	mm	2250	2250	2250	2250	2250
	Height	mm	2550	2550	2550	2550	2550
Package dimension	Width	mm	5090	6310	6310	7540	7540
	Depth	mm	2330	2330	2330	2330	2330
	Height	mm	2550	2550	2550	2550	2550
Net weight		kg	5520	5890	6410	7920	8600
Gross weight		kg	5560	5930	6450	7960	8640
Operating weight		kg	5630	6008	6538	8078	8772

50Hz

Model			LMVED33LF7E/Nb-M	LMVED43LF5E/Nb-M	LMVED44NF4E/Nb-M	LMVED44NF2E/Nb-M	LMVED54NG2E/Nb-M
Cooling capacity		kW	820	905	940	1040	1150
Cooling power input		kW	262	288	292	334	364
COP		kW/kW	3.13	3.14	3.22	3.11	3.16
Rated power input		kW	314	346	350	401	437
Power		V/Ph/Hz	380V 3~50Hz				
Cooling adjustment range		kW	20%~100%				
Operating control			Automatic microcomputer control, operating status display, error alarms				
Safety protection			High pressure protection, low pressure protection, compressor over-load protection, phase loss/reversal protection, low oil level protection, water flow switch protection, low flow alarm, differential pressure protection, high oil pressure difference protection, fan over-current protection, freeze protection, sensor protection, low discharge superheating degree protection.				
Compressor	Type		High efficiency variable frequency variable volume screw compressor				
	Quantity		2	2	2	2	2
Refrigerant type			R134a	R134a	R134a	R134a	R134a
Air side heat exchanger	Heat exchanger type		Aluminum fin-copper tube				
	Fan rated power		12×2.2	14×1.8	16×1.5	16×1.8	18×1.8
Water side heat exchanger	Water flow	m^3/h	141.0	155.7	161.7	178.9	197.8
	Pressure drop	kPa	≤60	≤65	≤70	≤70	≤70
	Type				Flooded evaporator		
	Inlet/outlet tube diameter		DN150	DN150	DN150	DN200	DN200
Outline dimension	Width	mm	7490	8710	9930	9930	11150
	Depth	mm	2250	2250	2250	2250	2250
	Height	mm	2550	2550	2550	2550	2550
Package dimension	Width	mm	7540	8760	9980	9980	11200
	Depth	mm	2330	2330	2330	2330	2330
	Height	mm	2550	2550	2550	2550	2550
Net weight		kg	9350	9500	10780	11150	11930
Gross weight		kg	9390	9540	10820	11230	12010
Operating weight		kg	9537	9690	10996	11373	12169

LHE Series High-efficiency Water-cooled Screw Chiller

LHE series high-efficiency water-cooled screw chiller is specially desinged for improving efficiency and reducing operation cost. This chiller adopts Gree self-developed semi-hermetic twin screw compressor, high-efficiency flooded heat exchanger and eco-friendly R134a. Its EER can be up to 6.3. The cooling capacity under nominal working condition is 260~2100kW. LHE series high-efficiency water-cooled screw chiller can be applicable for offices, hospitals, schools, shopping malls, as well as factories.

Operating condition of nominal cooling (water temperature)				Operating range (water temperature)			
Chilled water		Cooling water		Chilled water		Cooling water	
Inlet(℃)	Outlet(℃)	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	Inlet(℃)	I/O difference(℃)
-	7	30	-	4~15	2.5~8	18~35	3.5~8

Features

Semi-closed Dual Screw Compressor for High-efficiency Unit

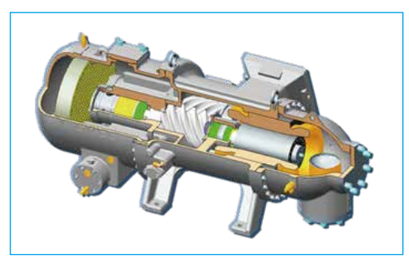
- Design for Gree water-cooled screw chiller especially according to actual pressure ratio, high matching degree with the unit, reducing the overcompression and insufficient compression during the operation of compressor effectively, thus enhancing system energy efficiency.

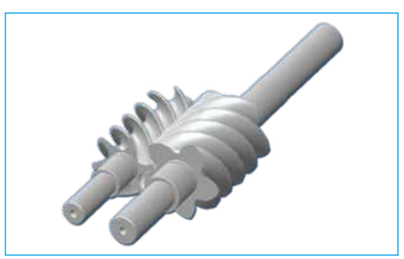
- Self-developed efficient rotor type line (Chinese patent for utility model No.ZL201120008270.9), interdigitation gap is optimized, connection cable is short and the efficiency is even higher.

- Thanks to three-level combined built-in oil separator, the efficiency is over 99.7%, making the system more stable with lower noise.

- Adopt self-made closed motor to avoid refrigerant leakage and built-in PTC temperature protector for the motor, motor winding temperature can be effectively detected.

- Thanks to optimized cooling channel of the motor, cooling effect is better, which can enhance operation range of the compressor effectively.



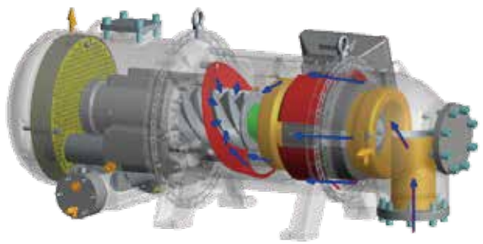


Low Pressure Loss Design

- Thanks to brand new design of “evaporation direct connection” air inlet structure, suction resistance is only 1kPa and cooling capacity of compressor will enhance by 2%.

- Thanks to spiral air inlet structure of low pressure loss, streamline air suction mouth design reduces the loss of suction resistance, increasing suction density of compressor and improving cooling capacity of compressor.

- Thanks to brand new air discharge low pressure loss pipeline design, resistance of the air discharge side is only 5kPa.

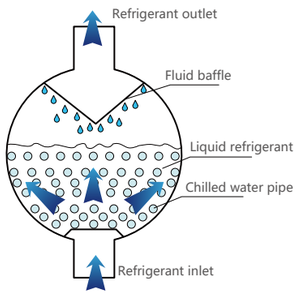


Heat Exchanger

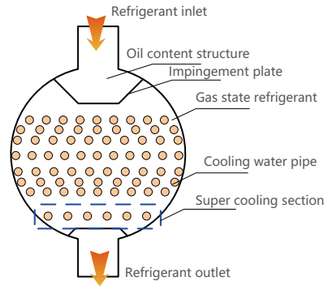
- Flooded evaporator, built-in refrigerant uniform device and gas liquid separator device to make the refrigerant evenly distributed. During suction process, the liquid refrigerant quantity is less, enhancing heat efficiency of evaporation and improving unit energy efficiency.

- A device to prevent the high-speed and high-pressure gas from impacting the heat exchanger tube is set at the upper condenser, containing the vibration of heat exchanger tube and improving the operation reliability of condenser; the built-in subcooling device at the bottom can enhance subcooling degree and improve refrigeration circulation efficiency of water chiller.

- Efficient heat exchanger, intensifying the heat transfer efficiency of water side and refrigerant side at the same time, further enhances energy efficiency of water chiller. Adopting mechanical expanded tube joint as the sealing method for heat exchange tube and tube plate, 3 sealed grooves are designed in the expanded tube joint, improving the sealing reliability.



Flooded evaporator



Shell and tube condenser

Vertical Oil Separator

Adopt efficient vertical oil separator, the structure is tight, through cyclone separation, inertial impaction, natural setting and adsorption separation, oil and gas is separated thoroughly, oil separation efficiency is up to 99.98%.

New Throttling Structure

The high precision electronic expansion valve can adjust the flow of refrigerant accurately, keep track of the variation of evaporator liquid level timely; further optimizes the control logic, calculate the control liquid level automatically, and quickly adjust the actual value, realizing “output according to actual demand”, ensuring high energy efficiency of some loads of the unit, making the unit operation range wider.

Strict Tests

Components are strictly tested before entering the factory. Impellers are made of high-strength aluminum alloy, which is highly anti-corrosive. They must pass strict tests after manufacturing. Heat exchangers are designed in strict accordance with relevant codes of pressure vessels and tested in 1.5 times of working pressure. The unit will take complete performance tests and reliability tests before leaving the factory.

Multiple Protections

The unit has multiple protections function, such as high temperature protection for air discharge, overheat protection for frequency converter, safety valve protection, overheating protection for motor winding, low pressure protection, high pressure protection, anti-freezing protection, switch protection for water flow, phase loss and phase failure protection and electronic component protection, ensuring stable operation under all kinds of conditions and avoiding the damage incurred.

Phase loss and phase failure protection | Frequency converter overheat protection | Safety valve protection | Compressor high and low pressure protection | Motor winding over-heat protection | Air discharge high temperature protection | Anti-freezing protection | Electric component over-temperature protection

Convenient Installation and Maintenance

- Dual units and dual circuits design for unit maintenance.

- Tight structure design with small floor space.

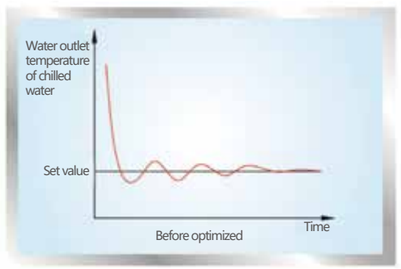
- Parallel arrangement of evaporator and condenser to lower unit gravity center, ensuring transportation safety.

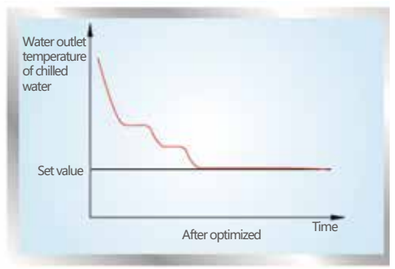
- Before leaving the factory, sufficient refrigerant and refrigerant oil has been charged, on-site charging is needless.

- Before leaving the factory, tests have been conducted according to national standard and the designated working conditions of the user; just connect the water pipe and power on site for operation.

Auto-adjusting Technology, Stable Output

The control system can not only adjust load according to cold water leaving temperature but also predict and compensate the change of air conditioning load based on the change rate of cold water entering temperature. The unit can achieve faster load adjustment and stable water leaving temperature.
When the unit is under bad working condition, it will adjust the running parameters to keep itself running rather than frequently stop. The unit can operate stably and reliably to satisfy customers' refrigerating demand.





Color Touch Screen Display Control Center

Control: It's with intelligent control system and friendly human-machine interaction interface; If the display screen is damaged accidentally, the unit can be operated manually through the equipped switch.

- Color touch screen of 12 inches
- Visual and dynamic information
- Intelligent image data
- Auto backup of parameter and synchronization
- Dual system control logic
- Auto detection protection

High-performance Digital Single Processing Platform

The control system adopts high-performance 32-bit CPU and DSP digital signal processor. The excellent data collection accuracy and data processing capability ensure timely and precise system control. The unit also adopts the intelligent Fuzzy-PID compound control algorithm, which is a control method comprising the intelligent technology, fuzzy technology and PID control algorithm, ensuring fast response and stable performance.

Authority Classification with Passwords

Control center has access passwords for operators so that set values won't be changed without authorization. Access authority is classified to user access and manufacturer access. User password is used to start up unit and enter the interface of user parameter setting. It is managed and can be changed by the user. Manufacturer password is used to enter the interface of manufacture parameter setting. Any change of the manufacture parameters may affect unit's reliability; therefore it must be kept by professional engineering and debugging personnel.

50Hz

R134A

Model LHE_/Nb			353CE5AE2	353CE4AE1E	533CE3CE3	553CE2CE2	553CE1CE1E	643EE7EE7
Cooling capacity		kW	261.6	294.7	341.3	367.9	425.8	455.3
		RT	74.4	83.8	97.0	104.6	121.1	129.4
Capacity adjustment range		%	25%-100%					
EER		W/W	5.89	5.94	6.01	6.05	6.06	6.02
IPLV		W/W	6.94	7.04	7.11	7.16	7.11	7.04
Power supply		V/Ph/Hz	380V 3~ 50Hz					
Power input		kW	44.4	49.6	56.8	60.8	70.3	75.6
RLA		A	78.4	87.6	100.4	107.4	124.2	133.6
Compressor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor					
	Starting mode	-	Y— △ /Soft start					
	Quantity	-	1	1	1	1	1	1
Refrigerant charge volume		kg	85	100	105	110	115	130
Refrigeration oil	Type	-	CPI-Solest-170					
	Charge volume	L	20	20	20	23	23	23
Evaporator	Type	-	Flooded shell and tube evaporator					
	Fouling factor	m²·℃/kW	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	41	46	53	58	125	71
		GPM	180	203	235	253	549	313
	Pressure drop	kPa	36.6	37.8	32.5	35.6	32.1	33.7
		$ft.H_2O$	12.0	12.4	10.7	11.7	10.5	11.1
	Connection pipe	mm	DN100	DN100	DN100	DN100	DN100	DN125
Condenser	Type	-	Horizontal shell and tube condenser					
	Fouling factor	m²·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m^3/h	51	57	66	71	83	88
		GPM	224	252	292	314	363	389
	Pressure drop	kPa	41.9	44.7	42.2	42.3	46.1	40.9
		$ft.H_2O$	13.7	14.7	13.8	13.9	15.1	13.4
	Connection pipe	mm	DN100	DN100	DN125	DN125	DN125	DN125
Sound pressure level(Max.)		dB(A)	81	81.2	82	82.5	82.8	83
Dimension	Outline(W×D×H)	mm	3170×1188×1850	3170×1188×1850	3175×1365×1959	3175×1365×1959	3175×1365×1959	3240×1465×2040
	Package(W×D×H)	mm	3400×1350×1900	3400×1350×1900	3400×1550×2050	3400×1550×2050	3400×1550×2050	3400×1600×2200
Net/Gross/Operating weight		kg	2300/2400/2450	2330/2430/2450	2730/2850/2900	2780/2880/2950	2800/2900/2950	3350/3450/3550
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1

50Hz

R134A

Model LHE_/Nb			653EE6EE6	653EE5EE5E	822EE4EE4	832EE3EE3	832EE2EE2E	862EE1EE1E
Cooling capacity		kW	484.6	544.7	593.7	663	698.0	744.9
		RT	137.8	154.8	168.8	188.5	198.5	211.8
Capacity adjustment range		%	25%-100%					
EER		W/W	6.05	6.03	6.02	6.02	6.02	6.03
IPLV		W/W	7.17	7.02	7.06	7.05	7.10	7.11
Power supply		V/Ph/Hz	380V 3~ 50Hz					
Power input		kW	80.1	90.3	98.6	110.1	116.0	123.6
RLA		A	141.5	159.5	174.2	194.5	204.8	218.4
Compressor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor					
	Starting mode	-	Y— △ /Soft start					
	Quantity	-	1	1	1	1	1	1
Refrigerant charge volume		kg	140	150	180	190	180	180
Refrigeration oil	Type	-	CPI-Solest-170					
	Charge volume	L	23	23	28	28	28	28
Evaporator	Type	-	Flooded shell and tube evaporator					
	Fouling factor	m²·℃/kW	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	76	85	93	104	109	116
		GPM	334	375	409	456	481	513
	Pressure drop	kPa	36.5	40.7	36.2	39.6	36.4	35.6
		$ft.H_2O$	12.0	13.3	11.9	13.0	11.9	11.7
	Connection pipe	mm	DN125	DN125	DN150	DN150	DN150	DN150
Condenser	Type	-	Horizontal shell and tube condenser					
	Fouling factor	m²·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m^3/h	94	106	115	129	135	144
		GPM	414	465	507	566	596	636
	Pressure drop	kPa	43.1	45.3	41.8	44.2	43.1	36.3
		$ft.H_2O$	14.1	14.9	13.7	14.5	14.1	11.9
	Connection pipe	mm	DN125	DN125	DN150	DN150	DN150	DN150
Sound pressure level(Max.)		dB(A)	83.5	83.8	85	86	86.8	87
Dimension	Outline(W×D×H)	mm	3240×1465×2040	3240×1465×2040	3240×1508×2100	3240×1508×2100	3240×1508×2100	3240×1508×2100
	Package(W×D×H)	mm	3400×1600×2200	3400×1600×2200	3400×1650×2250	3400×1650×2250	3400×1650×2250	3400×1650×2250
Net/Gross/Operating weight		kg	3370/3470/3550	3400/3500/3600	3830/3930/4050	3880/3980/4100	3930/4030/4150	3980/4080/4200
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1

Note: These models are not for EU.

50Hz

R134A

Model LHE_/Nb			932EE9EE9E	942HE3GE3	952HE2GE2	952HE1GE1E	533GF2EF2-2	553GF2EF2-2
Cooling capacity		kW	842.0	911.8	971.7	1052.0	697.5	744.1
		RT	239.4	259.2	276.5	299.1	198.3	211.5
Capacity adjustment range		%	25%-100%				12.5%-100%	
EER		W/W	5.78	5.79	5.83	5.90	6.02	6.03
IPLV		W/W	7.72	7.65	7.50	7.56	7.10	7.14
Power supply		V/Ph/Hz	380V 3~ 50Hz					
Power input		kW	145.8	157.4	166.8	178.4	115.9	123.5
RLA		A	257.6	278.1	294.2	315.2	204.8	218.2
Compressor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor					
	Starting mode	-	Y— △ /Soft start					
	Quantity	-	1	1	1	1	2	2
Refrigerant charge volume		kg	240	260	260	280	200	220
Refrigeration oil	Type	-	CPI-Solest-170					
	Charge volume	L	35	35	35	35	40	46
Evaporator	Type	-	Flooded shell and tube evaporator					
	Fouling factor	m·℃/kW	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	132	143	152	164	109	116
		GPM	580	628	670	724	480	512
	Pressure drop	kPa	36.7	29.5	29.2	29.5	36.1	40.5
		ft.H_2O	12.0	9.7	9.6	9.7	11.8	13.3
	Connection pipe	mm	DN150	DN150	DN150	DN150	DN150	DN150
Condenser	Type	-	Horizontal shell and tube condenser					
	Fouling factor	m·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m^3/h	164	178	189	205	135	144
		GPM	723	783	834	901	596	635
	Pressure drop	kPa	41.0	32.9	32.5	32.6	41.1	46.0
		ft.H_2O	13.4	10.8	10.7	10.7	13.5	15.1
	Connection pipe	mm	DN150	DN200	DN200	DN200	DN150	DN150
Sound pressure level(Max.)		dB(A)	88	88.5	88.8	89	82.3	82.8
Dimension	Outline(W×D×H)	mm	3260×1740×2370	3390×1830×2370	3390×1830×2370	3390×1830×2370	3485×1530×2185	3485×1530×2185
	Package(W×D×H)	mm	3450×1850×2550	3450×1850×2550	3450×1850×2550	3450×1850×2550	3600×1700×2300	3600×1700×2300
Net/Gross/Operating weight		kg	4800/4950/5100	5400/5550/5700	5500/5650/5750	5600/5750/5950	5250/5450/5500	5330/5530/5600
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1

50Hz

R134A

Model LHE_/Nb			553GF1EF1E-2	643GH3GH6-2	653GH2GH5-2	653GH1GH4E-2	822HJ6GJ6-2	832HJ5GJ5-2
Cooling capacity		kW	842.0	911.1	969.6	1090.0	1188.0	1287.0
		RT	239.4	259.0	275.7	309.9	337.8	365.9
Capacity adjustment range		%	12.5%-100%					
EER		W/W	6.10	6.03	6.05	6.16	6.11	6.11
IPLV		W/W	7.20	7.04	7.16	7.19	7.19	7.20
Power supply		V/Ph/Hz	380V 3~ 50Hz					
Power input		kW	138.1	151.2	160.2	176.9	194.3	210.8
RLA		A	244.0	267.1	282.9	312.5	343.3	372.4
Compressor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor					
	Starting mode	-	Y— △ /Soft start					
	Quantity	-	2	2	2	2	2	2
Refrigerant charge volume		kg	240	270	280	310	360	380
Refrigeration oil	Type	-	CPI-Solest-170					
	Charge volume	L	46	46	46	46	56	56
Evaporator	Type	-	Flooded shell and tube evaporator					
	Fouling factor	m·℃/kW	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	132	142	152	170	186	201
		GPM	580	627	668	750	818	886
	Pressure drop	kPa	45.3	50.1	49.1	53.6	74.8	74.2
		ft.H_2O	14.9	16.4	16.1	17.6	24.5	24.3
	Connection pipe	mm	DN150	DN150	DN150	DN150	DN200	DN200
Condenser	Type	-	Horizontal shell and tube condenser					
	Fouling factor	m·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m^3/h	163	177	188	211	229	248
		GPM	718	778	827	928	1009	1093
	Pressure drop	kPa	48.1	60	59.3	63	85	85.7
		ft.H_2O	15.8	19.7	19.5	20.7	27.9	28.1
	Connection pipe	mm	DN150	DN200	DN200	DN200	DN200	DN200
Sound pressure level(Max.)		dB(A)	83	83.3	83.8	84	85.3	86.3
Dimension	Outline(W×D×H)	mm	3485×1530×2185	4020×1600×2200	4020×1600×2200	4020×1600×2200	4550×1800×2200	4550×1800×2200
	Package(W×D×H)	mm	3600×1700×2300	4150×1750×2300	4150×1750×2300	4150×1750×2300	4650×1850×2400	4650×1850×2400
Net/Gross/Operating weight		kg	5380/5580/5700	6350/6550/6700	6380/6580/6750	6420/6620/6800	7790/8040/8250	7850/8100/8300
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1

Note: These models are not for EU.

50Hz

R134A

Model LHE_/Nb			832HJ4GJ4E-2	842HJ4GJ4E-2	932KK3JK3-2	932KK4JK4-2	942KK2JK2-2	952KK1JK1E-2	952LK1JK5E-2
Cooling capacity		kW	1386.0	1467.0	1583.0	1682.0	1832.0	1982.0	2102
		RT	394.1	416.8	450.1	478.2	520.9	563.5	597.4
Capacity adjustment range		%	12.5%-100%						
EER		W/W	6.12	6.15	5.78	5.80	5.82	5.85	5.91
IPLV		W/W	7.15	7.14	7.72	7.68	7.69	7.63	7.54
Power supply		V/Ph/Hz	380V 3~ 50Hz						
Power input		kW	226.5	238.5	273.7	289.9	314.6	338.9	355.6
RLA		A	400.2	421.4	483.0	511.8	556.0	559.1	629.0
Compressor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor						
	Starting mode	-	Y— △ /Soft start						
	Quantity	-	2	2	2	2	2	2	2
Refrigerant charge volume		kg	420	420	550	550	580	600	600
Refrigeration oil	Type	-	CPI-Solest-170						
	Charge volume	L	56	56	70	70	70	70	70
Evaporator	Type	-	Flooded shell and tube evaporator						
	Fouling factor	m·℃/kW	0.018	0.018	0.018	0.018	0.018	0.018	0.018
	Water flow rate	m^3/h	217	229	248	263	286	310	329
		GPM	954	1010	1090	1158	1261	1365	1447
	Pressure drop	kPa	72.8	80.5	54.2	53.7	56.8	54.1	52.2
		ft.H_2O	23.9	26.4	17.8	17.6	18.6	17.7	17.1
	Connection pipe	mm	DN200	DN200	DN250	DN250	DN250	DN250	DN250
Condenser	Type	-	Horizontal shell and tube condenser						
	Fouling factor	m·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m^3/h	267	283	309	328	357	386	409
		GPM	1177	1245	1360	1444	1572	1699	1799
	Pressure drop	kPa	84.4	93	35.3	35.4	37.5	36.2	37.2
		ft.H_2O	27.7	30.5	11.6	11.6	12.3	11.9	12.2
	Connection pipe	mm	DN200	DN200	DN250	DN250	DN250	DN250	DN250
Sound pressure level(Max.)		dB(A)	87	87.3	88.3	88.8	89	89.3	89.5
Dimension	Outline(W×D×H)	mm	4550×1800×2200	4550×1800×2200	4600×1770×2490	4600×1770×2490	4720×1900×2530	4720×1900×2530	4720×1900×2530
	Package(W×D×H)	mm	4550×1800×2200	4550×1800×2200	4650×1900×2650	4650×1900×2650	4750×2000×2700	4750×2000×2700	4750×2000×2700
Net/Gross/Operating weight		kg	7900/8150/8400	7950/8200/8450	9450/9760/10050	9600/9910/10200	9700/10010/10250	9750/10060/10400	9800/10110/10500
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1	1

LHVE Series Permanent Magnetic Synchronous VFD Screw Chiller

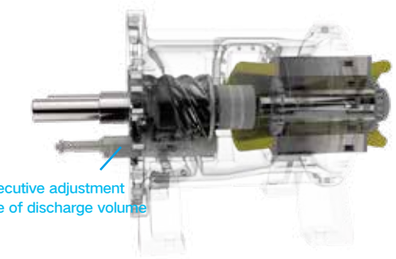
Gree LHVE series permanent magnetic synchronous VFD screw chiller (R134a) is specially designed to improve efficiency and reduce operation cost. Adopting the advanced semi-closed permanent magnetic synchronous inverter screw compressor, the latest efficient falling film heat exchanger and the eco-friendly refrigerant R134a, the product is energy-saving with high reliability, ensuring long-term stable operation, which is energy-efficient. Cooling capacity range under nominal condition is 120 ～ 600RT. It is widely applied to all kinds of office buildings, hospitals, schools and malls. Besides, it can be adopted in cooling occasions of technological process.

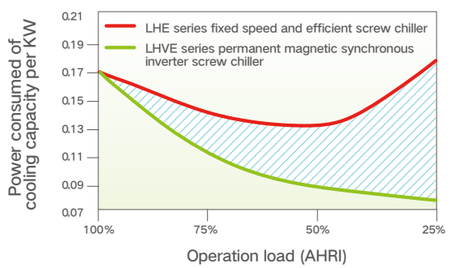
Operating condition of nominal cooling (water temperature)				Operating range (water temperature)			
Chilled water		Cooling water		Chilled water		Cooling water	
Inlet(℃)	Outlet(℃)	Inlet(℃)	Outlet(℃)	Outlet(℃)	I/O difference(℃)	Inlet(℃)	I/O difference(℃)
-	7	30	-	4~15	2.5~8	18~35	3.5~8

Features

Synergy Control Method of Speed and Volume

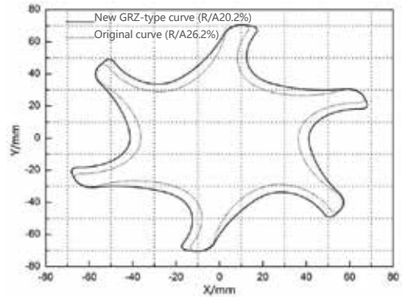
- Adjust the load with rotation speed to realize consecutive adjustment of 20%-100% of one single compressor load;
- The consecutive adjustment structure of discharge volume can adjust the discharge volume according to actual operation condition, realizing consistent internal and external pressure ratio, heat insulation of compressor has enhanced about 8.4%;
- Under some load conditions, lower the operation power of compressor, which can be up to 60%.

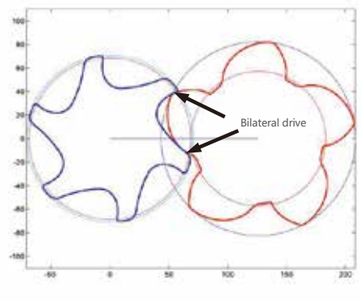




Bilateral Drive and Efficient GRZ-type Curve

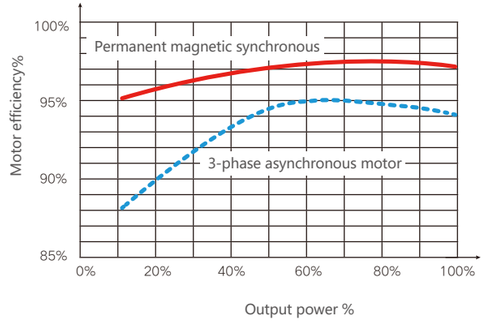
- The GRZ-type curve has decreased the leaked triangle area of 50%, reduced the leakage capacity of refrigerant and improved compressor performance;
- The GRZ-type curve improves the stiffness of female rotor and decreases the deformation by about 28.3%;
- Drive point is set in both high and low pressure side, the male and female rotor will increase/decrease speed at the same time, ensuring a stable mesh.

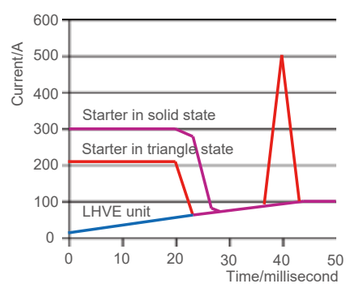




Efficient Permanent Magnetic Synchronous Inverter Motor

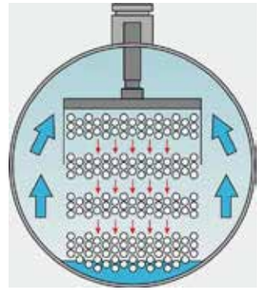
- The permanent magnetic synchronous motor adopts the built-in method of V-shape magnetic steel, by taking advantage of the saliency effect of magnetic circuit, which enhances the motor torque;
- Inverter startup, the starting current is below 10A, the impact to the overall power grid is small;
- Under full load working condition, motor efficiency is above 95%; under rated power, compared with traditional 3-phase asynchronous motor, it has enhanced by 3%; for some other loads, it has enhanced by 5% ~ 7%.





Efficient Heat Exchanger

- Mixed and falling film evaporator, injection is set in multiple layers, refrigerant is evenly distributed, which has enhanced heat transfer efficiency effectively, the refrigerant volume has decreased 35%;
- Multifunctional condenser, built-in oil content, integrate space settlement with screening technology, thus ensuring effective separation of oil and gas; the S-shape supercooling structure has enhanced the degree of supercooling.



Full DC Electronic Control System

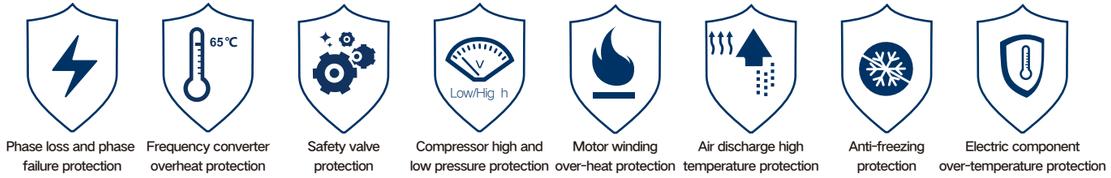
- The control circuit adopts 24V full DC electronic control component, which effectively reduces electromagnetic interference, safe and reliable;
- Meet the wide voltage input between 328-528V; 50/60Hz is compatible.

Strict Tests

Components are strictly tested before entering the factory. Impellers are made of high-strength aluminum alloy, which is highly anti-corrosive. They must pass strict tests after manufacturing. Heat exchangers are designed in strict accordance with relevant codes of pressure vessels and tested in 1.5 times of working pressure. The unit will take complete performance tests and reliability tests before leaving the factory.

Multiple Protections

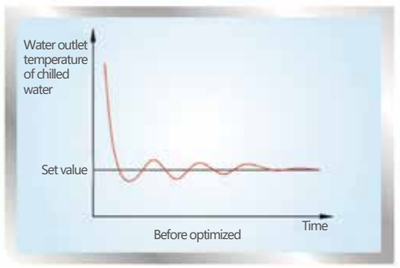
The unit has multiple protections function, such as high temperature protection for air discharge, overheat protection for frequency converter, safety valve protection, overheating protection for motor winding, low pressure protection, high pressure protection, anti-freezing protection, switch protection for water flow, phase loss and phase failure protection and electronic component protection, ensuring stable operation under all kinds of conditions and avoiding the damage incurred.

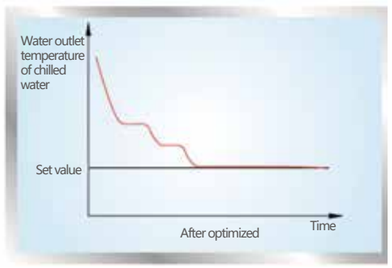


Phase loss and phase failure protection | Frequency converter overheat protection | Safety valve protection | Compressor high and low pressure protection | Motor winding over-heat protection | Air discharge high temperature protection | Anti-freezing protection | Electric component over-temperature protection

Auto-adjusting Technology, Stable Output

The control system can not only adjust load according to cold water leaving temperature but also predict and compensate the change of air conditioning load based on the change rate of cold water entering temperature. The unit can achieve faster load adjustment and stable water leaving temperature.
When the unit is under bad working condition, it will adjust the running parameters to keep itself running rather than frequently stop. The unit can operate stably and reliably to satisfy customers' refrigerating demand.





Color Touch Screen Display Control Center

Control: It's with intelligent control system and friendly human-machine interaction interface. If the display screen is damaged accidentally, the unit can be operated manually through the equipped switch.

- Color touch screen of 12 inches
- Visual and dynamic information
- Intelligent image data
- Auto backup of parameter and synchronization
- Dual system control logic
- Auto detection protection

High-performance Digital Single Processing Platform

The control system adopts high-performance 32-bit CPU and DSP digital signal processor. The excellent data collection accuracy and data processing capability ensure timely and precise system control. The unit also adopts the intelligent Fuzzy-PID compound control algorithm, which is a control method comprising the intelligent technology, fuzzy technology and PID control algorithm, ensuring fast response and stable performance.

Authority Classification with Passwords

Control center has access passwords for operators so that set values won' t be changed without authorization. Access authority is classified to user access and manufacturer access. User password is used to start up unit and enter the interface of user parameter setting. It is managed and can be changed by the user. Manufacturer password is used to enter the interface of manufacture parameter setting. Any change of the manufacture parameters may affect unit' s reliability; therefore it must be kept by professional engineering and debugging personnel.

50/60Hz

R134A

Model			LHVE432GE8GE8/Nb-M	LHVE432GE7GE7/Nb-M	LHVE432GE6GE6/Nb-M	LHVE532GE5GE5/Nb-M	LHVE532GE4GE4/Nb-M
Cooling capacity		kW	348.3	421.4	470.7	522.5	574.7
		RT	99.1	119.9	133.9	148.6	163.5
Capacity adjustment range		%	10%-100%				
EER		W/W	5.94	5.93	5.88	5.88	5.88
IPLV		W/W	9.93	10.08	10.10	9.96	10.04
Power supply		V/Ph/Hz	380V 3~ 50Hz/60Hz；400-415V 3~ 50Hz/60Hz				
Power input		kW	58.6	71.0	80.0	88.9	97.7
Comperssor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor				
	Starting mode	-	Inverter startup				
	Quantity	-	1	1	1	1	1
Refrigerant charge volume		kg	140	140	140	180	180
Refrigeration oil	Type	-	CPI-Solest-170				
	Charge volume	L	20	20	20	23	23
Evaporator	Type	-	Mixed falling film evaporator				
	Fouling factor	m²·℃/kW	0.0176	0.0176	0.0176	0.0176	0.0176
	Water flow rate	m³/h	54	65	73	81	89
		GPM	238	286	321	357	392
	Pressure drop	kPa	38.3	38.4	39.2	40.0	40.8
		ft.H₂O	12.6	12.6	12.9	13.1	13.4
	Connection pipe	mm	DN125	DN125	DN125	DN125	DN125
Condenser	Type	-	Horizontal shell and tube condenser				
	Fouling factor	m²·℃/kW	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m³/h	68	82	92	102	122
		GPM	299	361	405	449	493
	Pressure drop	kPa	45.6	45.6	45.7	44.8	45.7
		ft.H₂O	15.0	15.0	15.0	14.7	15.0
	Connection pipe	mm	DN150	DN150	DN150	DN150	DN150
Sound pressure level(Max.)		dB(A)	80.0	82.0	84.0	82.0	83.0
Dimension	Outline(W×D×H)	mm	3320×1560×1980	3320×1560×1980	3320×1560×1980	3320×1570×1980	3320×1570×1980
	Package(W×D×H)	mm	3400×1600×2100	3400×1600×2100	3400×1600×2100	3400×1650×2100	3400×1650×2100
Net/Gross/Operating weight		kg	3500/3650/3710	3550/3700/3770	3600/3750/3820	3680/3830/3900	3700/3850/3930
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1

50/60Hz

R134A

Model			LHVE532GE3GE3/Nb-M	LHVE732HE7JE7/Nb-M	LHVE732HE6JE6/Nb-M	LHVE732HE5JE5/Nb-M	LHVE832HE4JE4/Nb-M
Cooling capacity		kW	644.4	696.6	757.6	817.7	870.9
		RT	183.3	198.1	215.5	232.6	247.7
Capacity adjustment range		%	10%-100%				
EER		W/W	5.86	5.86	5.84	5.82	5.65
IPLV		W/W	10.08	10.00	10.03	10.04	9.68
Power supply		V/Ph/Hz	380V 3~ 50Hz/60Hz；400-415V 3~ 50Hz/60Hz				
Power input		kW	110.1	118.9	129.8	140.6	154.2
Comperssor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor				
	Starting mode	-	Inverter startup				
	Quantity	-	1	1	1	1	1
Refrigerant charge volume		kg	200	220	220	250	250
Refrigeration oil	Type	-	CPI-Solest-170				
	Charge volume	L	23	23	23	23	28
Evaporator	Type	-	Mixed falling film evaporator				
	Fouling factor	m²·℃/kW	0.0176	0.0176	0.0176	0.0176	0.0176
	Water flow rate	m³/h	100	108	117	127	135
		GPM	440	476	515	559	594
	Pressure drop	kPa	40.9	40.8	40.8	35.1	37.5
		ft.H₂O	13.4	13.4	13.4	11.5	12.3
	Connection pipe	mm	DN125	DN150	DN150	DN150	DN150
Condenser	Type	-	Horizontal shell and tube condenser				
	Fouling factor	m²·℃/kW	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m³/h	126	136	148	159	171
		GPM	555	599	652	700	753
	Pressure drop	kPa	44.9	44.0	41.6	43.3	43.6
		ft.H₂O	14.7	14.4	13.6	14.2	14.3
	Connection pipe	mm	DN150	DN200	DN200	DN200	DN200
Sound pressure level(Max.)		dB(A)	84.0	82.0	83.0	84.0	82.0
Dimension	Outline(W×D×H)	mm	3320×1570×1980	3400×1700×2010	3400×1700×2010	3400×1700×2010	3400×1860×2040
	Package(W×D×H)	mm	3400×1650×2100	3400×1700×2100	3400×1700×2100	3400×1700×2100	3450×1900×2150
Net/Gross/Operating weight		kg	3750/3900/3980	4350/4500/4610	4400/4550/4660	4450/4600/4720	5050/5250/5350
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1

50/60Hz

R134A

Model			LHVE 732MJ8MJ8-2/Nb-M	LHVE 732MJ6MJ6-2/Nb-M	LHVE 732MJ5MJ5-2/Nb-M	LHVE 832MJ7MJ7-2/Nb-M	LHVE 832MJ3MJ3-2/Nb-M	LHVE 832MJ2MJ2-2/Nb-M
Cooling capacity		kW	1393.0	1498.0	1602.0	1742.0	1846.0	1951.0
		RT	396.2	426.1	455.6	495.4	525.0	554.9
Capacity adjustment range		%	5%-100%					
EER		W/W	6.19	6.15	6.12	5.97	5.97	5.95
IPLV		W/W	10.63	10.64	10.64	10.28	10.32	10.32
Power supply		V/Ph/Hz	380V 3~ 50Hz/60Hz；400-415V 3~ 50Hz/60Hz					
Power input		kW	224.9	243.4	261.6	292.0	309.0	328.1
Comperssor	Type	-	Semi-closed permanent magnetic synchronous inverter screw compressor					
	Starting mode	-	Inverter startup					
	Quantity	-	2	2	2	2	2	2
Refrigerant charge volume		kg	440	440	500	500	500	560
Refrigeration oil	Type	-	CPI-Solest-170					
	Charge volume	L	46	46	46	56	56	56
Evaporator	Type	-	Mixed falling film evaporator					
	Fouling factor	m²·℃/kW	0.0176	0.0176	0.0176	0.0176	0.0176	0.0176
	Water flow rate	m³/h	216	232	248	270	286	302
		GPM	951	1021	1092	1189	1259	1330
	Pressure drop	kPa	44.5	45.3	45.3	45.3	46.1	47.8
		ft.H₂O	14.6	14.9	14.9	14.9	15.1	15.7
	Connection pipe	mm	DN200	DN200	DN200	DN250	DN250	DN250
Condenser	Type	-	Horizontal shell and tube condenser					
	Fouling factor	m²·℃/kW	0.044	0.044	0.044	0.044	0.044	0.044
	Water flow volume	m³/h	269	290	310	338	358	379
		GPM	1184	1277	1365	1488	1576	1669
	Pressure drop	kPa	47.1	47.2	47.3	48.4	48.3	49.3
		ft.H₂O	15.4	15.5	15.5	15.9	15.8	16.2
	Connection pipe	mm	DN250	DN250	DN250	DN250	DN250	DN250
Sound pressure level(Max.)		dB(A)	84.0	85.0	86.0	84.0	85.0	86.0
Dimension	Outline(W×D×H)	mm	4620×1960×2130	4620×1960×2130	4620×1960×2130	4620×1960×2130	4620×1960×2130	4620×1960×2130
	Package(W×D×H)	mm	4650×2100×2350	4650×2100×2350	4650×2100×2350	4650×2100×2350	4650×2100×2350	4650×2100×2350
Net/Gross/Operating weight		kg	8850/9100/9380	8900/9150/9430	8950/9200/9490	10000/10250/10600	10100/10350/10700	10200/10450/10810
Loading quantity	40'GP/40'HQ	set	1	1	1	1	1	1

Control System Lineup

Control system / Product Series			Screw Chiller						
			LME Series Air-Cooled Screw Chiller	LMP Series Air-Cooled Screw Chiller (Heat Pump)	LME Series Air-Cooled Screw Chiller(60Hz)	LMR Series Partial Heat Recovery Air-cooled Screw Chiller	LMVE Series VFD Air-cooled Screw Chiller	LHE Series High-efficiency Water-cooled Screw Chiller	LHVE Series Permanent Magnetic Synchronous VFD Screw Chiller
Wired controller	Z2F3Q		•	•	•	•	•		
Display panel	Z2F20		•	•	•		•		
	CM18-GZ12/A(M)							•	
	G18TM120A								•
Remote monitoring system	FG30-00/A(M)							•	•
BMS	Modbus Rtu		•	•	•	•	•	•	•

Note: • means standard

Integrated Water Chilling Package

YLZ Series

Gree YLZ Series Integrated Water Chilling Package is a new and efficient air conditioning product which integrates the cold source equipment of the whole central air conditioning system. The water chilling package adopts Gree efficient water-cooled screw chiller or inverter centrifugal chiller, integrates water system equipment such as high-efficient fixed speed/inverter water pump, water disposer, constant pressure water makeup equipment, cooling tower and so on and configues energy management system of Gree refrigeration plant, thus realizing the integral, efficient and intelligent operation of water chilling package.

Operating range	Operating range (water temperature)			
	Evaporator		Condenser	
	Inlet(℃)	I/O difference(℃)	Inlet(℃)	I/O difference(℃)
Cooling	5~15	2.5~8	12~35	3.5~8

Features

High Flexibility

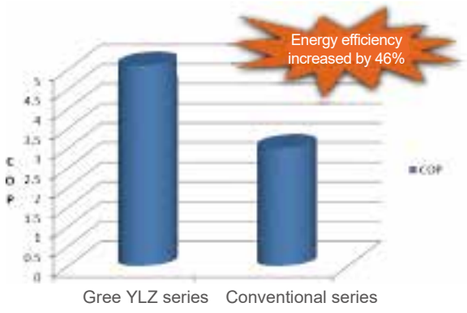
Through the optimized design of pipeline structure and reasonable layout, Gree integrated water chilling package has decreased the floor space of 50% compared with conventional water chilling package. With the highly integrated structure, the mobility of Gree integrated water chilling package is quite convenient.

Simple Construction

Traditional water chilling package is preliminarily designed by the design institute, and the electromechanical contractor is responsible for the on-site construction; the construction volume is quite large; while Gree integrated water chilling package has completed the entire construction in the factory. Therefore, it is available only with simple pipe connection on site. For traditional water chilling package, it's difficult to control the construction quality. However, for the integrated water chilling package, strict cutting and welding standards are followed for operation and assembly inside the factory. Rust-proof treatment is conducted for pipeline components. Gree integrated water chilling package has truly transformed water chilling package project to water chilling package product.

High Energy Efficiency

Through reasonable and optimized model selection, Gree YLZ Series integrated water chilling package conducts efficient and energy-saving control, overall COP of cold station is up to over 4.5. According to energy efficiency standard for the water chilling package put forward by American ASHRAE, energy efficiency of Gree YLZ Series integrated water chilling package has reached a high level.



High Reliability

The structure of custom box ensures the requirements of rain-proof, water-proof, heat preservation and maintenance of the overall water chilling package.
After equipment installation, for traditional water chilling package, the equipment manufacturer and related technicians of the manufacturer need to go to the site for individual debugging and coordination. Therefore, workload and time consumed in the whole debugging process are quite large and long. Besides, it's difficult to coordinate problems among the personnel. However, test and commissioning in the factory are able to optimize the equipment performance, with reasonable operation of each equipment, overall operation performance of the water chilling package is enhanced.

50Hz

R134A

YLZLHVE_P2P2G			100	120	135	150	165	185	200	215
Cooling capacity		kW	351.6	425.4	475.2	527.8	580.1	650.5	704.7	764.8
		RT	100.0	121.0	135.1	150.1	164.9	185.0	200.4	217.5
Cooling main unit COP		-	6.20	5.80	5.78	5.80	6.08	6.02	5.82	5.99
Cooling main unit IPLV[1]		-	9.32	9.15	9.23	9.26	9.38	9.44	9.19	6.08
Cooling main unit power input		kW	56.7	73.4	82.2	91	95.4	108.1	121	127.7
Integrated cooling station power input		kW	75.2	95.4	106.2	117	128.9	141.6	158	168.2
Noise		dB	68	68	68	68	69	69	69	69
Power supply		V/Ph/Hz	380V 3N~50Hz							
Rated current		A	180	229	255	281	309	340	379	404
Compressor	Compressor type	-	Semi-open screw compressor							
	Quantity	set	1	1	1	1	1	1	1	1
	Starting way	-	Inverter starting							
Chilled water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	7.5	11	11	11	15	15	15	18.5
	Water pump flow	m³/h	60	73	82	91	100	112	121	132
	Water pump head	m	35	35	35	35	35	35	35	35
	Loss inside unit	kPa	110	115	122	129	136	112	117	122
	Pipe connection size	-	DN125	DN125	DN125	DN125	DN125	DN150	DN150	DN150
	Pipe connection method	-	Flange type							
Cooling water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	5.5	5.5	7.5	7.5	11	11	11	11
	Water pump flow	m³/h	76	91	102	113	125	140	152	164
	Water pump head	m	15	15.5	16	15	15.5	16.2	16.5	17.5
	Pipe connection size	-	DN125	DN125	DN125	DN150	DN150	DN150	DN150	DN150
	Pipe connection method	-	Flange type							
	Fan type	-	Fixed speed/Inverter							
	Fan power	kW	5.5	5.5	5.5	7.5	7.5	7.5	11	11
	Tower head	m	3.7	3.7	3.7	3.7	4	4	4	4
Safety protection		-	Low waterflow protection, high pressure protection, low pressure protection, overcurrent protection, electrical leakage protection							
Optional configuration		-	Group control kit, water pump inverter control, constant-pressure water makeup device, shell and tube online cleaning device, water processing device, energy consumption calculation, cooling (heating) capacity calculation							
Outline dimension	Width	mm	8000	8000	8000	8500	8500	8500	9000	9000
	Depth	mm	3000	3000	3000	3000	3000	3000	3000	3000
	Height	mm	3000	3000	3000	3000	3000	3000	3000	3000
Unit weight		kg	13370	13500	13800	14790	15150	15650	16600	16850
Operating weight		kg	15000	15500	15950	16980	17330	17790	18850	19350

50Hz

R134A

YLZLHVE_P2P2G			235	250	265	285	300	330	365	400
Cooling capacity		kW	825.4	879.1	940	1001	1060	1160	1283	1407
		RT	234.7	250.0	267.3	284.6	301.4	329.8	364.8	400.1
Cooling main unit COP		-	6.08	5.81	6.07	6.04	5.82	6.32	6.32	5.87
Cooling main unit IPLV[1]		-	9.23	8.90	9.02	9.10	8.84	9.38	9.56	9.31
Cooling main unit power input		kW	135.7	151.4	154.9	165.7	182.1	183.5	203	239.5
Integrated cooling station power input		kW	180.2	199.4	202.9	213.7	237.6	250.5	270	306.5
Noise		dB	69	69	70	70	70	70	70	70
Power supply		V/Ph/Hz	380V 3N~50Hz							
Rated current		A	432	479	487	513	570	601	648	736
Compressor	Compressor type	-	Semi-open screw compressor							
	Quantity	set	1	1	1	1	2	2	2	2
	Starting way	-	Inverter starting							
Chilled water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	18.5	22	22	22	22	30	30	30
	Water pump flow	m³/h	142	151	162	172	182	200	221	242
	Water pump head	m	35	35	35	35	35	35	35	35
	Loss inside unit	kPa	128	134	139	146	105	109	114	120
	Pipe connection size	-	DN150	DN150	DN150	DN150	DN200	DN200	DN200	DN200
	Pipe connection method	-	Flange type							
Cooling water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	15	15	15	15	18.5	22	22	22
	Water pump flow	m³/h	177	189	202	215	228	249	276	303
	Water pump head	m	19	21	16.5	17	17.5	18	19	20
	Pipe connection size	-	DN150	DN150	DN200	DN200	DN200	DN200	DN200	DN200
	Pipe connection method	-	Flange type							
	Fan type	-	Fixed speed/Inverter							
	Fan power	kW	11	11	11	11	15	15	15	15
	Tower head	m	4	4	4.5	4.5	4.5	4.5	4.5	4.5
Safety protection		-	Low waterflow protection, high pressure protection, low pressure protection, overcurrent protection, electrical leakage protection							
Optional configuration		-	Group control kit, water pump inverter control, constant-pressure water makeup device, shell and tube online cleaning device, water processing device, energy consumption calculation, cooling (heating) capacity calculation							
Outline dimension	Width	mm	9500	9500	10000	10000	11000	11000	11000	11000
	Depth	mm	3000	3000	3000	3000	3000	3000	3000	3000
	Height	mm	3000	3000	3000	3000	3000	3000	3000	3000
Unit weight		kg	17350	17840	18600	19000	20120	20900	21560	22830
Operating weight		kg	19850	20390	21220	21720	22950	23940	24760	26440

50Hz

R134A

YLZCVE_P2P2G			250	300	350	400	450	500	550	600
Cooling capacity		kW	879	1055	1231	1406	1582	1758	1934	2110
		RT	250	300	350	400	450	500	550	600
Cooling main unit COP		-	6.22	6.52	6.43	6.52	6.66	6.55	6.74	6.65
Cooling main unit IPLV[1]		-	8.55	8.80	9.21	9.38	9.10	9.38	9.27	9.52
Cooling main unit power input		kW	141.3	161.8	191.4	215.1	237.6	268.4	286.9	317.2
Integrated cooling station power input		kW	189.3	213.8	254.9	282.1	311.6	350.4	383.9	414.2
Noise		dB	68	69	69	70	71	71	71	71
Power supply		V/Ph/Hz	380V 3N~50Hz							
Rated current		A	465	543	618	687	746	835	907	976
Compressor	Compressor type	-	DC inverter centrifugal compressor							
	Quantity	set	1	1	1	1	1	1	1	1
	Starting way	-	Inverter starting							
Chilled water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	22	22	30	30	37	37	45	45
	Water pump flow	m³/h	151	181	212	242	272	302	333	363
	Water pump head	m	35	35	35	35	35	35	35	35
	Loss inside unit	kPa	130	112	114	117	124	114	119	127
	Pipe connection size	-	DN150	DN200	DN200	DN200	DN200	DN200	DN250	DN250
	Pipe connection method	-	Flange type							
Cooling water side	Water pump quantity	set	2	2	2	2	2	2	2	2
	Water pump power	kW	15	15	18.5	22	22	30	30	30
	Water pump flow	m³/h	189	227	265	302	340	378	416	454
	Water pump head	m	20	16.5	17	17.5	18	17	18	18.5
	Pipe connection size	-	DN150	DN200	DN200	DN200	DN200	DN250	DN250	DN250
	Pipe connection method	-	Flange type							
	Fan type	-	Fixed speed/Inverter							
	Fan power	kW	11	15	15	15	15	15	22	22
	Tower head	m	4.5	4.5	4.5	4.5	4.5	5	5	5
Safety protection		-	Low waterflow protection, high pressure protection, low pressure protection, overcurrent protection, electrical leakage protection							
Optional configuration		-	Group control kit, water pump inverter control, constant-pressure water makeup device, shell and tube online cleaning device, water processing device, energy consumption calculation, cooling (heating) capacity calculation							
Outline dimension	Width	mm	10500	10500	11000	11000	11000	12000	12000	12000
	Depth	mm	3000	3000	3000	3000	3000	3000	3200	3200
	Height	mm	3000	3000	3000	3000	3000	3200	3200	3200
Unit weight		kg	18750	19300	21700	25300	26840	27300	28900	29100
Operating weight		kg	20650	21540	24100	28700	30340	30900	32600	34100

Note

Note

Note

Award and Certification





ISO 9001 Quality System Certificate

ISO 14001 Environment Management System Certificate

ISO 18001 Occupation Healthy Safety System Certificate

Canadian CSA Certificate

German TÜV Certificate

3C Certificate

European Communities CE Certificate

American UL Certificate

Russian Safety Certificate

EQM

SASO Certificate

Mexico NOM Safety Certificate

German GS Certificate

European EMC Certificate

Argentina Safe Certificate

China EMC Certificate

Hongkong Energy-saving Certificate

Hongkong Safety Certificate

Australian SAA Safe Certificate

Australia SAA Certificate

CQC Certificate

America ETL Certificate

Canadian ETL Certificate

Thailand TIS Certificate