

2022 LG INVERTER DIRECT DRIVE PACKAGE



LG Electronics

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شركة الحسن غازي ابراهيم شاكِر
شركة مساهمة
AL-HASSAN GHAZI IBRAHIM SHAKER CO.



WHY LG INVERTER DIRECT DRIVE PACKAGE?

NEW

WORLD TOP LEVEL EFFICIENCY 7.5 ~25RT COOLING & HEATING

LG launches the world top level efficiency
Inverter Single package

NEW

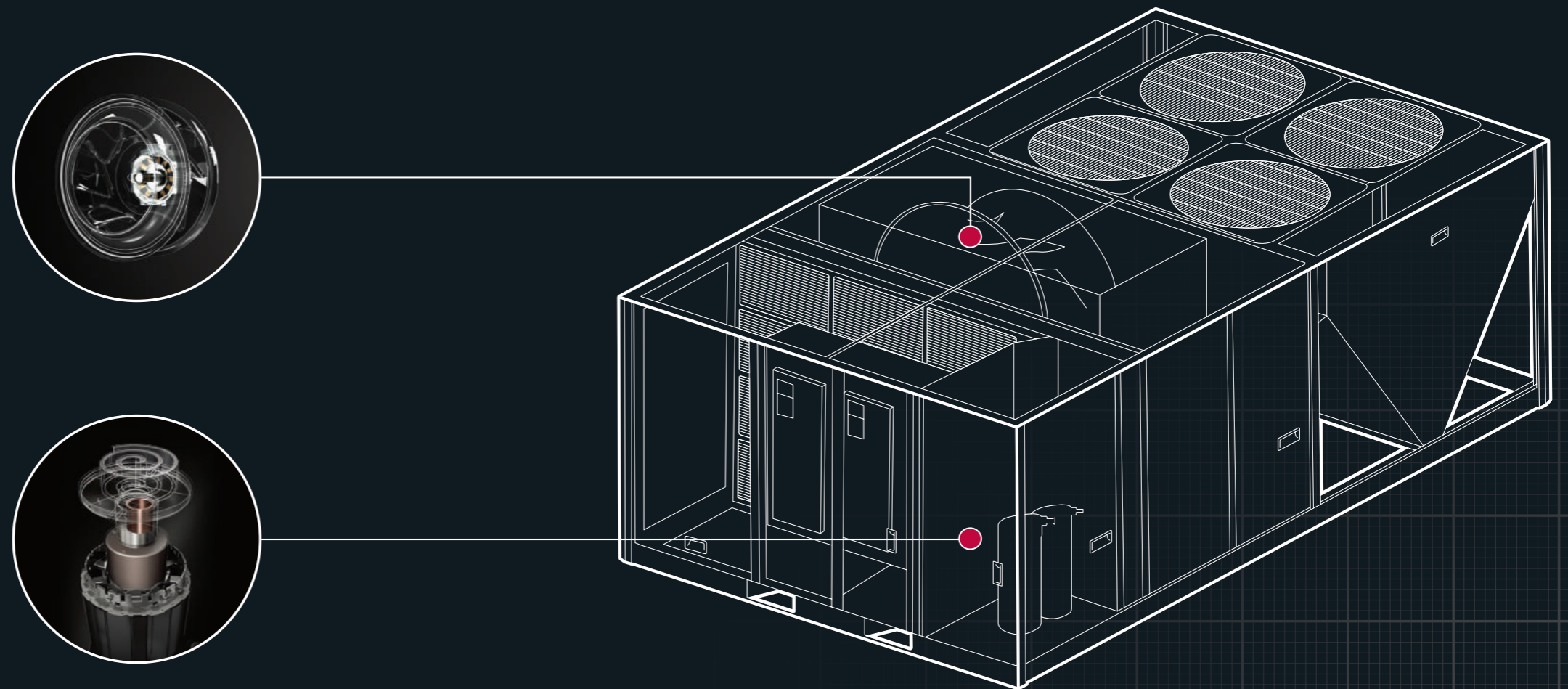
CONVENIENCE

Direct drive fan motor
Easy set-up method (by ESP function)

NEW

ULTIMATE PERFORMANCE

Superior efficient ultimate inverter compressor
Applied BLDC motors for all fans
Superior level IEER 18.3 (25RT) & 19.0 (20RT)

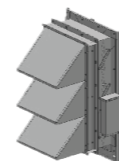


LINE UP

DIRECT DRIVE INVERTER PACKAGE

Category	COOLING / HEATING 380 ~ 415, 3, 50/60	
Cooling & Heating 7.5 / 10		AK-W110LH00 AK-W130LH00
Cooling & Heating 12.5 / 15		AK-W160LH00 AK-W200LH00
Cooling & Heating 20 / 25		AK-W270LH00 AK-W320LH00

Economizer [PKEMD1CA0]



* Economizer can be used from 7.5 to 25 tons.

INVERTER PACKAGE

Category	COOLING ONLY	
	230, 1, 60	400, 3, 60
Cooling Only 3 / 4 / 5	 AK-C03620 AK-C04820 AK-C06020	
Cooling Only 7.5 / 10		 AK-Q1209C02 AK-Q1509C02
Cooling Only 12.5 / 15		 AK-Q1509C02 AK-Q1809C02
Cooling Only 20 / 25		 AK-Q2409C01 AK-Q3009C01



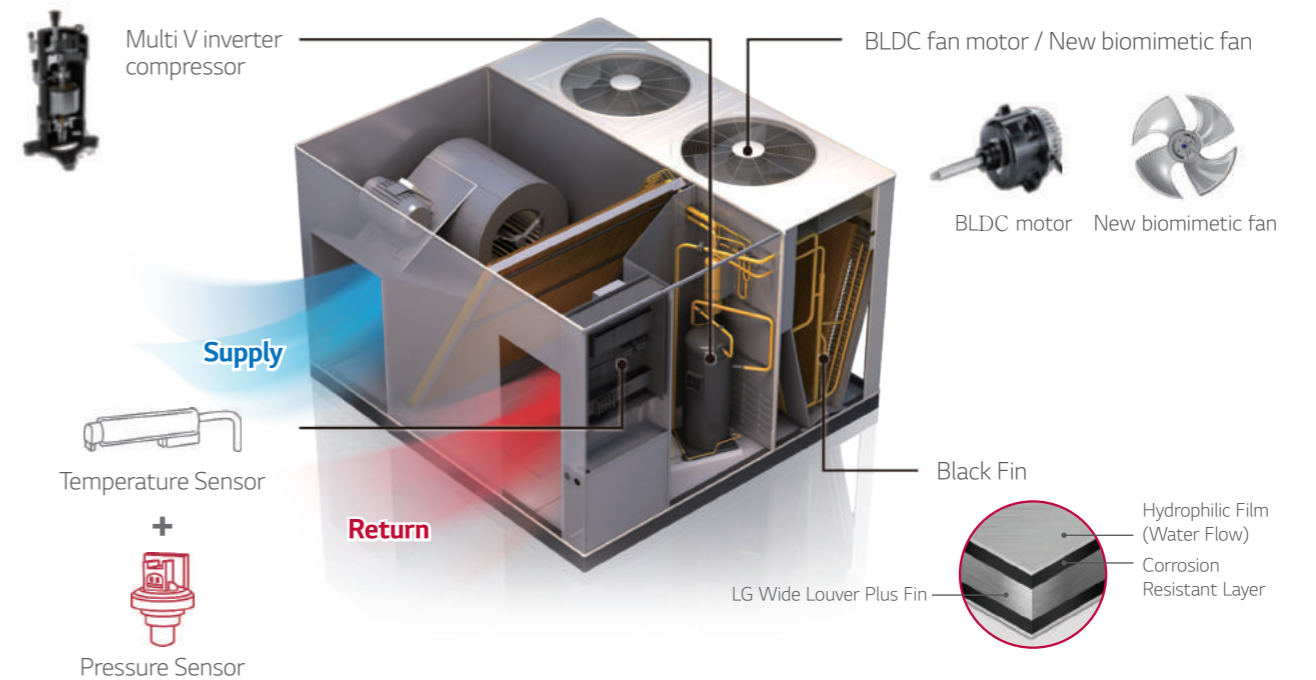
SUPERIOR EFFICIENCY

- World Top level IEER
- Superior Partial Load Efficiency
- Energy Savings with Linear Control
- Superior Efficiency Cooling & Heating
- Annual Energy Savings Estimation
- Payback
- Dual Sensing Control



ADVANCED KEY COMPONENTS FOR HIGH ENERGY EFFICIENCY

High energy efficiency with LG's cutting-edge core components and Inverter leading technology.

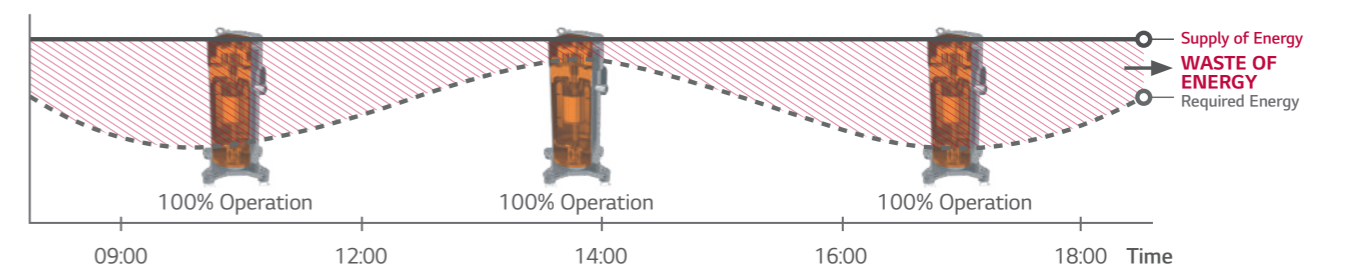


EXCELLENT PARTIAL LOAD EFFICIENCY

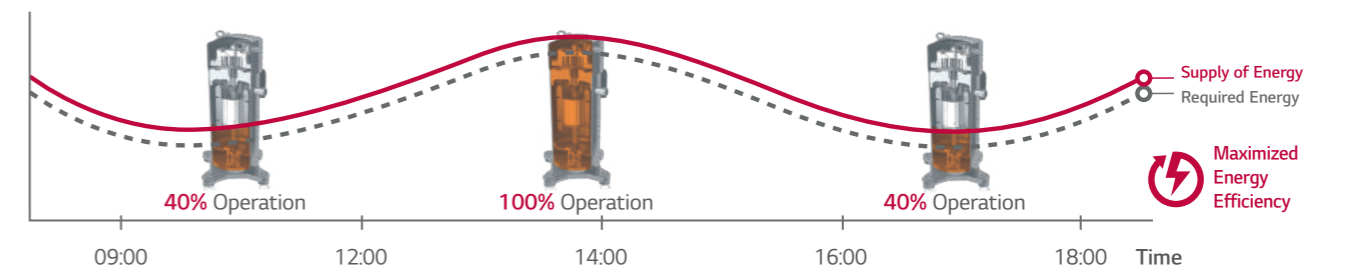
Inverter compressor maximizes energy efficiency through adjusting energy supply as required.

Energy saving concept comparison

Constant Speed Compressor



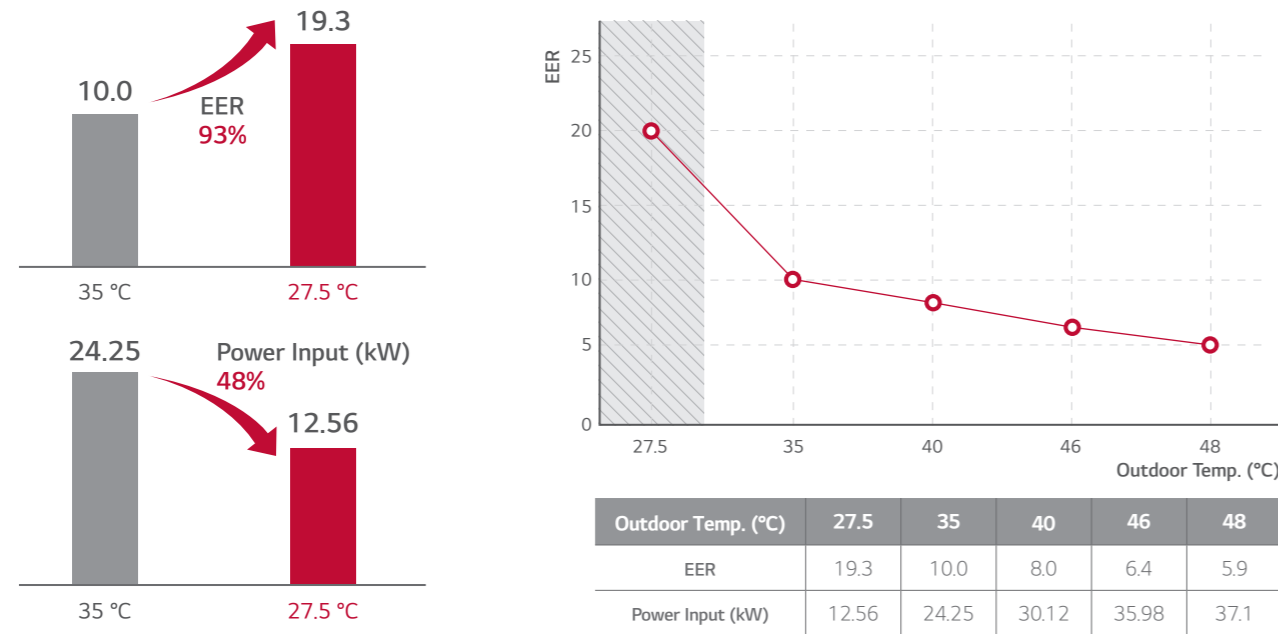
Inverter Compressor



⚡ SUPERIOR EFFICIENCY

ANNUAL ENERGY SAVINGS

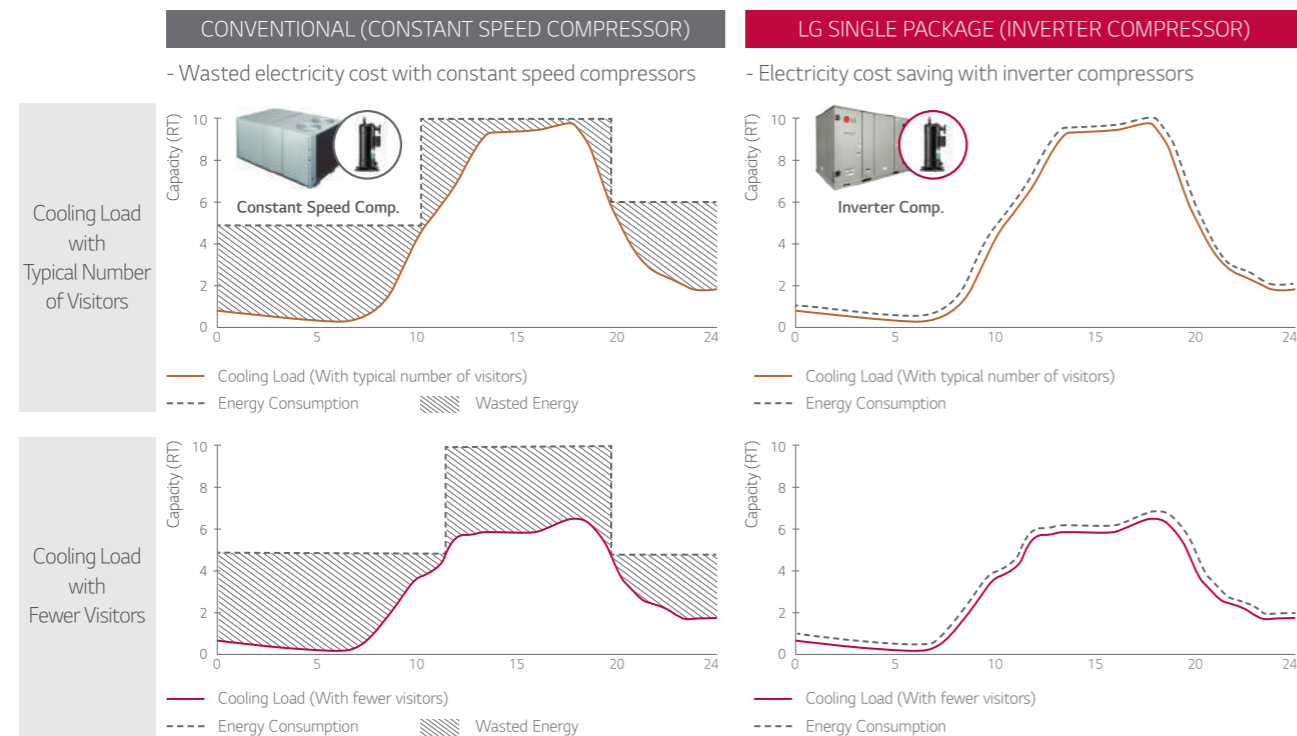
Target low pressure will be adjusted according to cooling load. LG provides energy saving by preventing on/off operation with inverter technology.



※ Model : LG AK-Q300DC01

ELECTRICITY COST SAVING

During low Demand Periods, customers can save electricity costs because LG Inverter Compressors can match the actual capacity needed without overcooling the space.

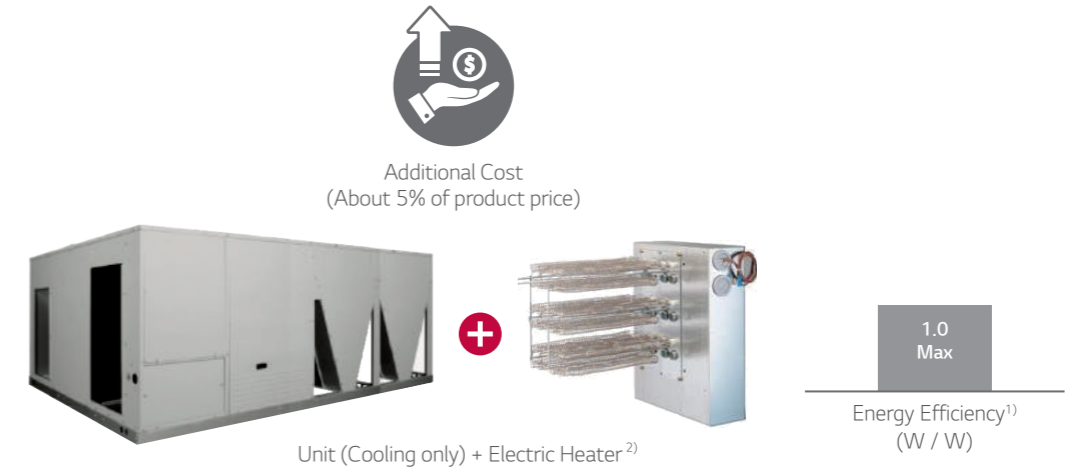


SUPERIOR EFFICIENCY HEAT PUMP

New inverter single package provides both heating and cooling while saving energy.

CONVENTIONAL

- Superior initial investment cost by installing electric heater for heating
- Superior electricity charges by auxiliary device



- 1) Energy efficiency is based on the following conditions :
- Indoor Temp. 21.1°C (70°F) DB / 15.6°C (60°F) WB
 - Outdoor Temp. 8.3°C (47°F) DB / 6.1°C (43°F) WB
- 2) Specification : 25kW / 460V / 3Ø / 60Hz

NEW INVERTER

- No additional investment due to no need for heater installation for heating
- Annual energy savings with superior efficiency heat pump system



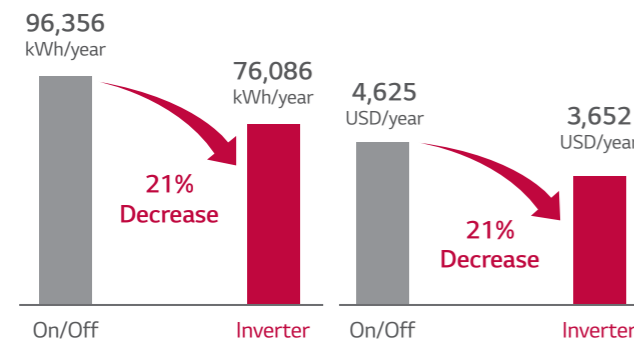
- 1) This result can be different depending on actual environment.
(In regions with low load condition, the efficiency of H/P product is higher.)

⚡ SUPERIOR EFFICIENCY

ANNUAL ENERGY SAVINGS ESTIMATION (KSA, RIYADH)

Electricity consumption are expected to decline by 21% compared to on/off model.

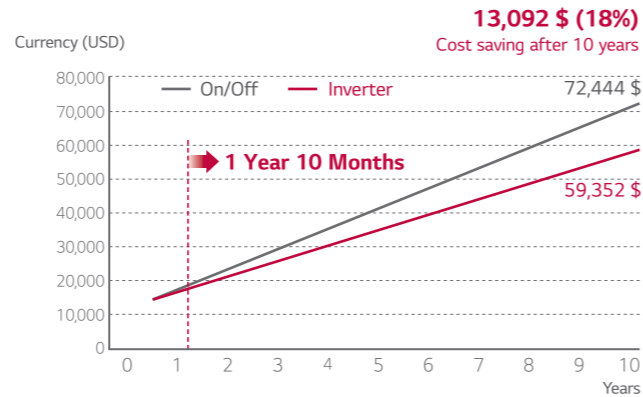
Electricity Consumption Electricity Cost



► Electric charges : 0.048 USD/kWh
(It may vary by region)

PAYBACK (KSA, RIYADH)

If you purchase the LG smart inverter, You can get back your investment cost after 1 year 10 months.

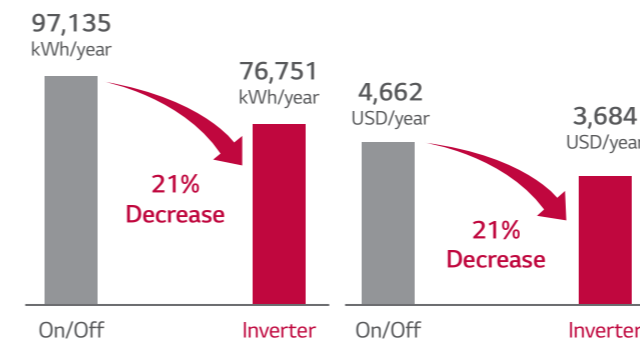


[Condition]
 - Capacity : 20RT Single Package
 - Operation time : 24 hours
 - Cooling partial load and power consumption calculated based on yearly weather data (target indoor temperature : 24°C)
 * This result can be different depending on actual environment

ANNUAL ENERGY SAVINGS ESTIMATION (KSA, DAMMAM)

Electricity consumption are expected to decline by 21% compared to on/off model.

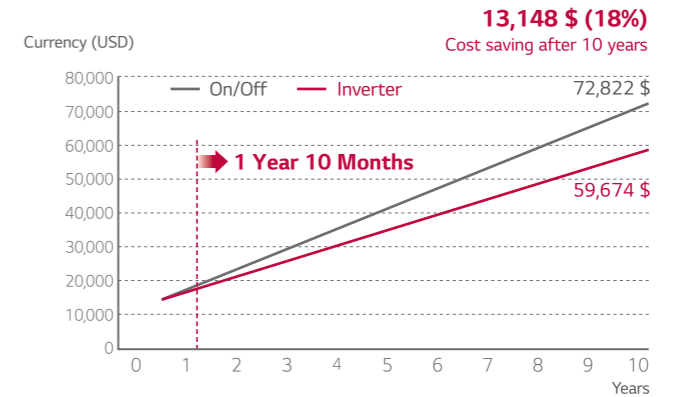
Electricity Consumption Electricity Cost



► Electric charges : 0.048 USD/kWh
(It may vary by region)

PAYBACK (KSA, DAMMAM)

If you purchase the LG smart inverter, You can get back your investment cost after 1 year 10 months.

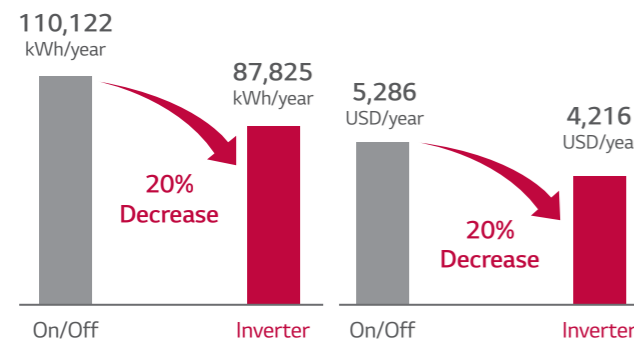


[Condition]
 - Capacity : 20RT Single Package
 - Operation time : 24 hours
 - Cooling partial load and power consumption calculated based on yearly weather data (target indoor temperature : 24°C)
 * This result can be different depending on actual environment

ANNUAL ENERGY SAVINGS ESTIMATION (KSA, JEDDAH)

Electricity consumption are expected to decline by 20% compared to on/off model.

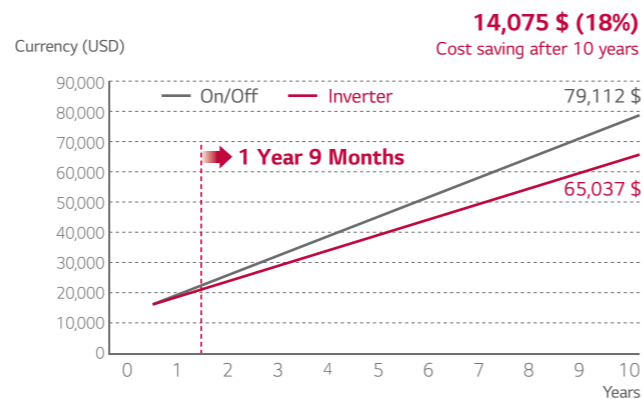
Electricity Consumption Electricity Cost



► Electric charges : 0.048 USD/kWh
(It may vary by region)

PAYBACK (KSA, JEDDAH)

If you purchase the LG smart inverter, You can get back your investment cost after 1 year 9 months.

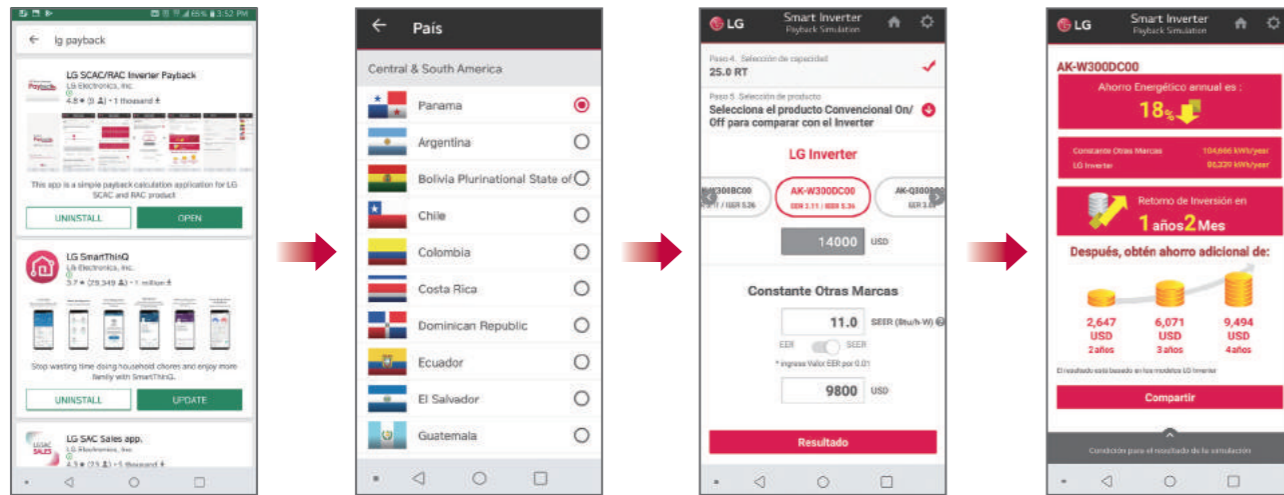


[Condition]
 - Capacity : 20RT Single Package
 - Operation time : 24 hours
 - Cooling partial load and power consumption calculated based on yearly weather data (target indoor temperature : 24°C)
 * This result can be different depending on actual environment

⚡ SUPERIOR EFFICIENCY

APPLICATION – LG INVERTER PAYBACK APP

You can easily simulate on mobile via payback app. (Install "LG SCAC / RAC Inverter Payback")



DUAL SENSING CONTROL

New model can be operated by dual sensors for comfort and efficient operation. (Temperature & Humidity)

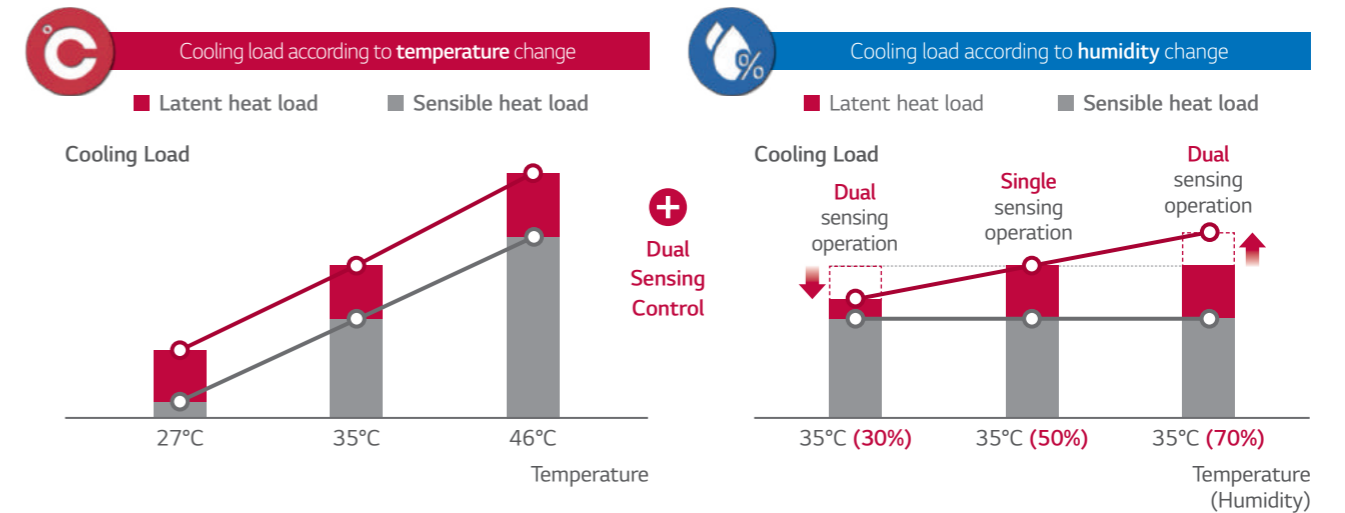
Why do we need dual sensing?

To provide a comfortable cooling and increase energy savings sensing both temperature and humidity is required.

Humidity Sensor



DUAL SENSING CONTROL



Dry condition

Dual sensing Control is a function that changes evaporation temperature according to temperature & humidity.

CONVENTIONAL	NEW INVERTER
<ul style="list-style-type: none"> - Excessive latent heat elimination regardless of humidity - Waste Energy to eliminate latent heat 	<ul style="list-style-type: none"> - Comfortable environment by making the room less dry - Increased Seasonal Efficiency
<p>1) Te : Evaporation Temperature 2) Temperature & humidity of outdoor</p>	

Wet condition

In wet summer season, the system senses the high humidity level and increases operating ratio to decrease humidity level rapidly for making room condition in comfort zone.

CONVENTIONAL	NEW INVERTER
<ul style="list-style-type: none"> - High humidity condition is not considered by only sensing the room temperature - General latent heat elimination regardless of humidity 	<ul style="list-style-type: none"> - Comfortable environment - With quick latent heat elimination by sensing humidity - At higher humidity, the compressor runs more powerfully
<p>1) Te : Evaporation Temperature 2) Temperature & humidity of outdoor</p>	



CONVENIENCE

Direct Drive Fan Motor
Enhanced Structure
Sliding Type Filter



DIRECT DRIVE FAN MOTOR

Easy maintenance

Beltless direct drive system is easy to maintain and cost effective.

CONVENTIONAL

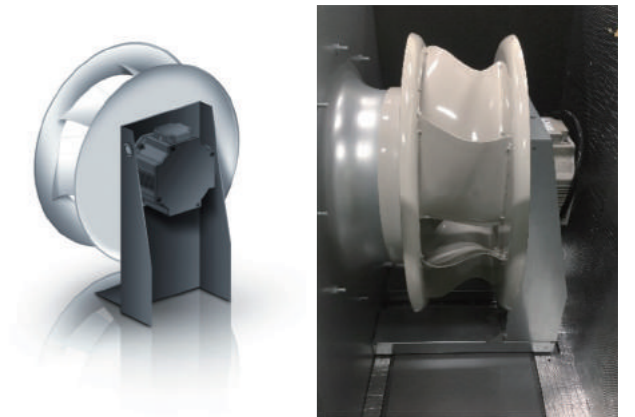
- Motor alignment, pulley and belt adjustment are required
- Grease periodically
- High cost of replacement and repair with large number of parts



Pulley V belt Pulley
Additional parts

NEW INVERTER

- No need to adjust pulley and belt periodically
- No need to grease periodically
- Low cost of replacement and repair with fewer parts



No additional parts
(Reduced parts and labor costs)

Easy installation

By applying a high static pressure motor, It has wide E.S.P coverage and easy to set the air volume.

CONVENTIONAL

- It is necessary to change the pulley and motor to change airflow



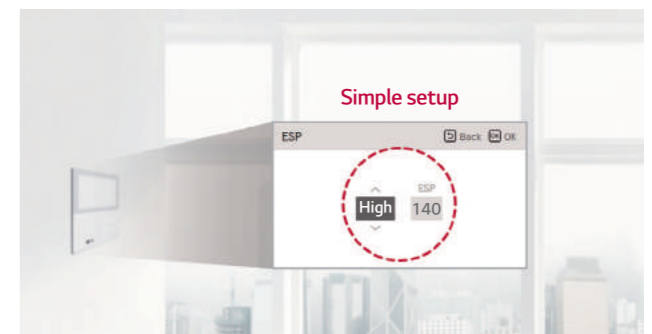
Pulley change
Turn adjust (Variable pulley)
Motor change

※ Motor operation range (Based on 9,400 CFM)



NEW INVERTER

- Set RPM by simple touch on remote control to change airflow



※ ESP setting is available through wired remote controller.

- Standard II (PREMTB100/10)
- Standard III (PREMTB001/01)
- Simple controller (PQRCUC2W)

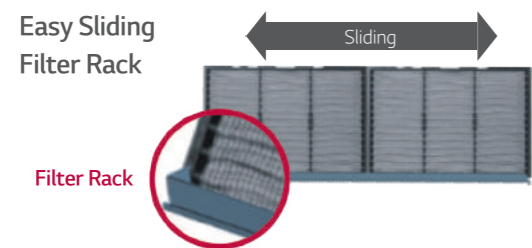
※ Motor operation range (Based on 9,200 CFM)



CONVENIENCE

SLIDING TYPE FILTER

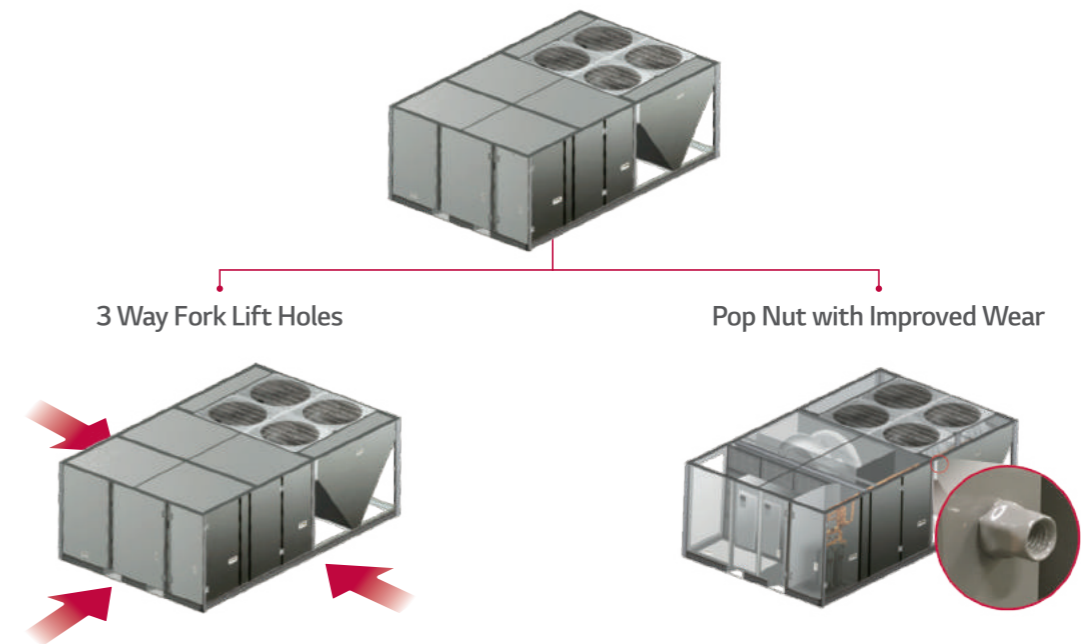
Easy maintenance and extended product life with sliding type filter. The pre-filter is easy to clean with water and replaceable 2 inch filter can also be installed.



1) Specification : 25 x 20 (in.) x 6 (EA)
 ※ When 2 inch filter is applied, Static pressure drops by 0.142 in.Aq.

ENHANCED STRUCTURE

3 Way fork lift holes easy to carry the product in various places and pop nut structure increases screw wear reliability.






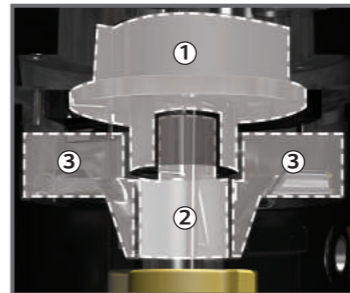

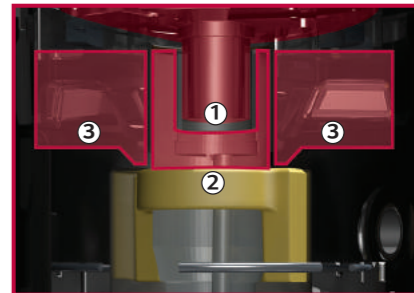

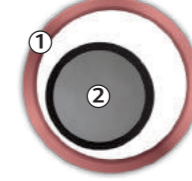
RELIABILITY

Ultimate Inverter Compressor
Protection for Voltage Fluctuation
Black Fin



ULTIMATE INVERTER COMPRESSOR

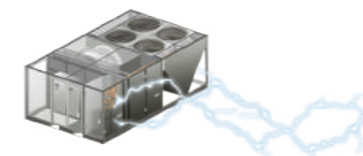
By applying world class technology of Multi V, superior efficient and reliable operation has been achieved. 18 years of inverter technology applied to LG new single package.

CONVENTIONAL		NEW COMPRESSOR	
- Inner bearing type	- Low speed operation with unstable structure	- Increased durability and reliability with outer bearing type	- Superior speed operation with reduction of bearing load and vibration
			
6.8 HP		9.6 HP	
	① Material : PTFE ¹⁾ ①+② Structure : Inner Bearing ③ Supporter		① Material : PEEK ²⁾ ①+② Structure : Outer Bearing ③ Supporter
1) PTFE : Polytetra fluoro ethylene 2) PEEK : Polyether ether ketone ※ Conventional : JBA068MAC (6.8 HP) x 2EA in product New inverter : JBA096MAC (9.6 HP) x 2EA in product			

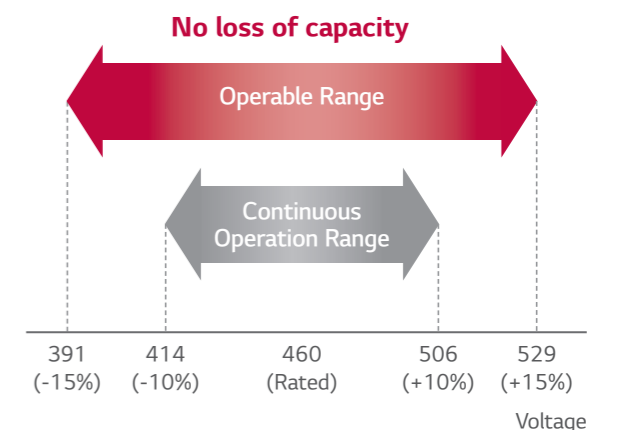
PROTECTION FOR VOLTAGE FLUCTUATION

Below low voltage limit, inverter compressor reduces frequency (Hz) and boost DC voltage, over high voltage limit, cuts off the relay to prevent damage of DC capacitor. And inverter is able to operate at a wider voltage range than constant speed model.

	Constant	LG Inverter
Low & High Voltage detection	No protection logic	Automatic detection and blocking
CT (Current transformer) current limit	On/Off operation	Inverter Control without stopping
DC peak detection	No need	Automatic detection and blocking
N phase reverse wiring (3 phase only)	No detection	Automatic detection
Missing phase detection (3 phase only)	No detection	Automatic detection



Product Protection



※ The allowable operation range is ±10% of rated voltage (460V).
 ※ This result can be different depending on actual environment.

RELIABILITY

BLACK FIN

The black coating with enhanced complex resin is applied for strong protection from various corrosive external conditions such as salt contamination and air pollution including fumes from factories. This improvement in durability prolongs the product's lifespan and lowers both the operational and maintenance costs.

Longer Lifespan, Lower Maintenance Costs

Hydrophilic Film (Water Flow)
The Hydrophilic coating minimizes moisture buildup on the fin.

Corrosion Resistant Layer
The Black coating provides strong protection from corrosion.

LG Wide Louver Plus Fin

Verification of Corrosion Resistance Performance Testing
Reference No.: 16251863 011
TUV Rheinland verify that corrosion resistance performance for aluminum sheet of heat exchanger of air conditioner is satisfied requirements at test method B of ISO 21287 standard according to reference no. 50251863 011.
Holder: LG Electronics Inc. 34, Wansan-ro, Seongnam-si, Gyeonggi-do, 15154, Korea
Product: Aluminum sheet of heat exchanger of air conditioner
Identification: Corrosion improved aluminum fin (Black II)
Applicable Standard: Test method B of ISO 21287 (Salt contaminated condition and Severe industrial or traffic environment)
Claim Verdict: Resists 27 years of simulated severe corrosion
Acceptance Criteria: LG795-E-1528
Date: 2019.05.19

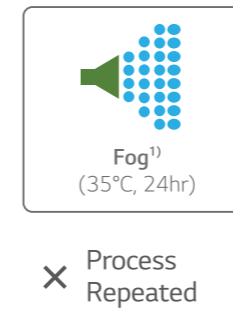
Verification Corrosion Resistance Performance Testing
Reference No.: 16251863 011
TUV Rheinland verify that the corrosion improved aluminum fin (Black II) of air conditioner heat exchanger has less than 0.05 % corrosion area after 10000 hours salt spray test.
Holder: LG Electronics Inc. 34, Wansan-ro, Seongnam-si, Gyeonggi-do, 15154, Korea
Product: Aluminum sheet of air conditioner heat exchanger
Identification: Corrosion improved aluminum fin (Black II)
Applicable Standard: LG795-E-1528/2019 ISO 9227:2017, ASTM B117 ISO 10289:1996, KS D 5982:2019
Date: 2019.10.16

※ Verification of corrosion resistance performance.
※ Black Fin is applied for Cooling & Heating model only.

Black Fin's performance of corrosion resistance is improved based on Conventional Fin.

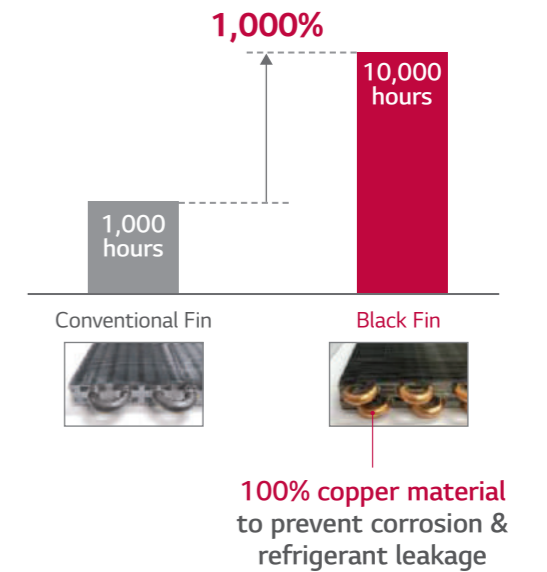
SST (Salt Spray Test)

Test Process



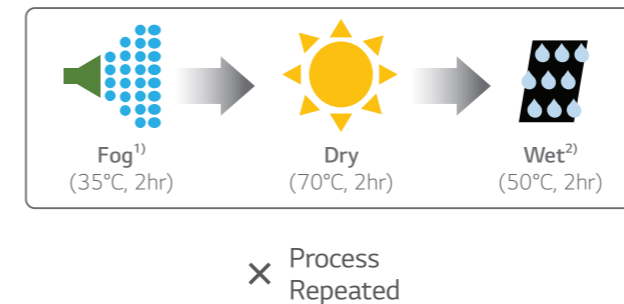
Test process is conducted according to ISO 9227.
1) Salty water concentration : NaCl aqueous solution (5%)

Test Result (0.05% Area of defects compared to initial)



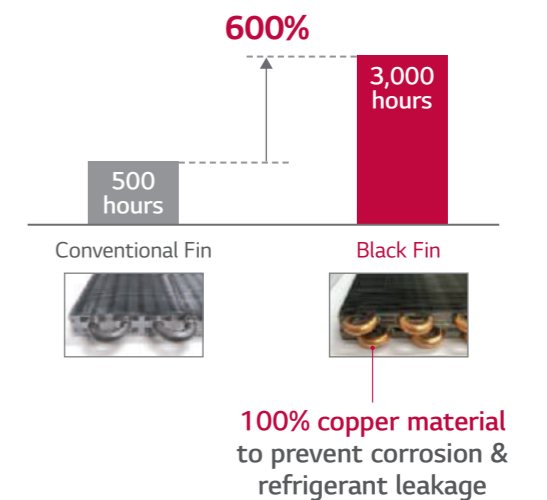
CCT (Cyclic Corrosion Test)

Test Process



Test process is conducted according to ISO 14933.
1) Salty water concentration : NaCl aqueous solution (5%)
2) Deionized water
※ Dry condition changed : 60°C, 4hr → 70°C, 2hr

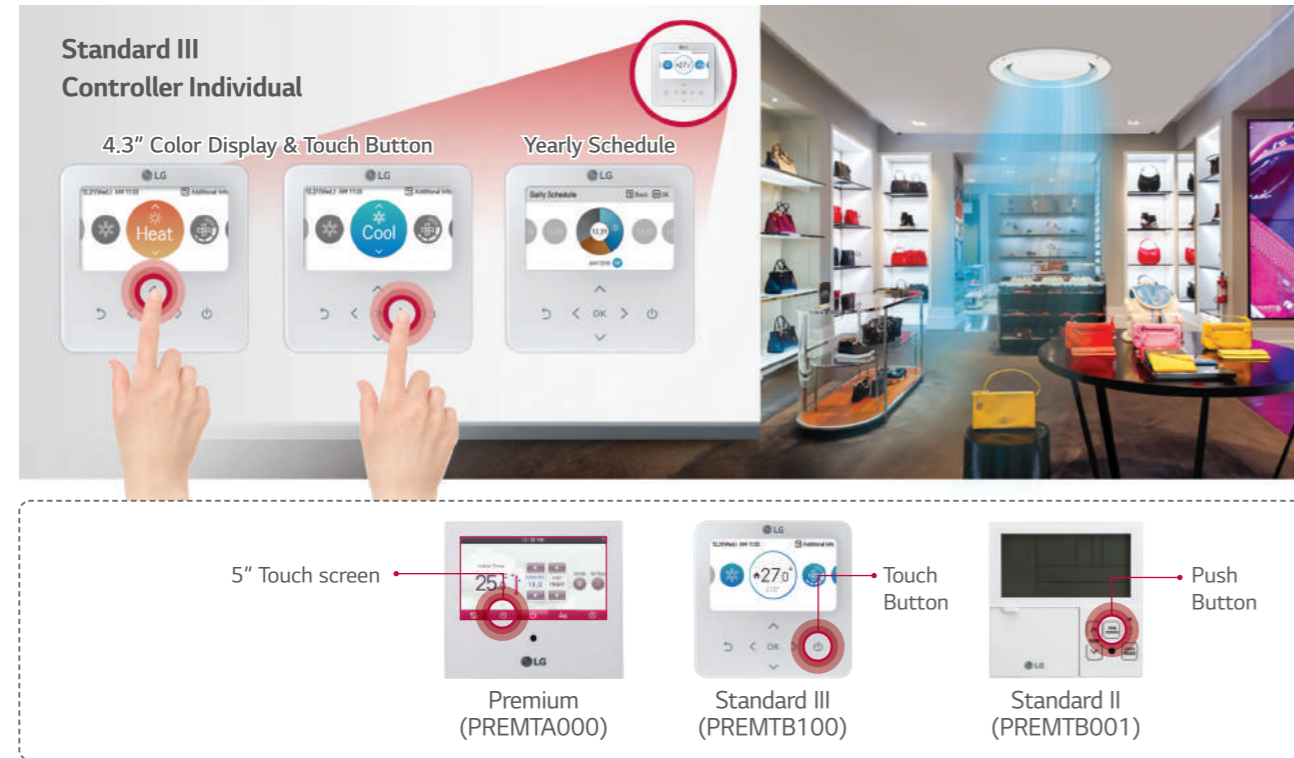
Test Result (0.05% Area of defects compared to initial)



CUSTOMIZED CONTROL

NEW DESIGN REMOTE CONTROLLER DESIGN

LG Individual Controller provides intuitive GUI with color LCD and touch type interface button.



※ Installed at field, ordered and purchased separately by the corresponding model name, supplied with separate package.

GROUP CONTROL

Group Control allows the user to control the operation of multiple units at once. This is the appropriate solution to control a big area as a one zone.



Appealing Design

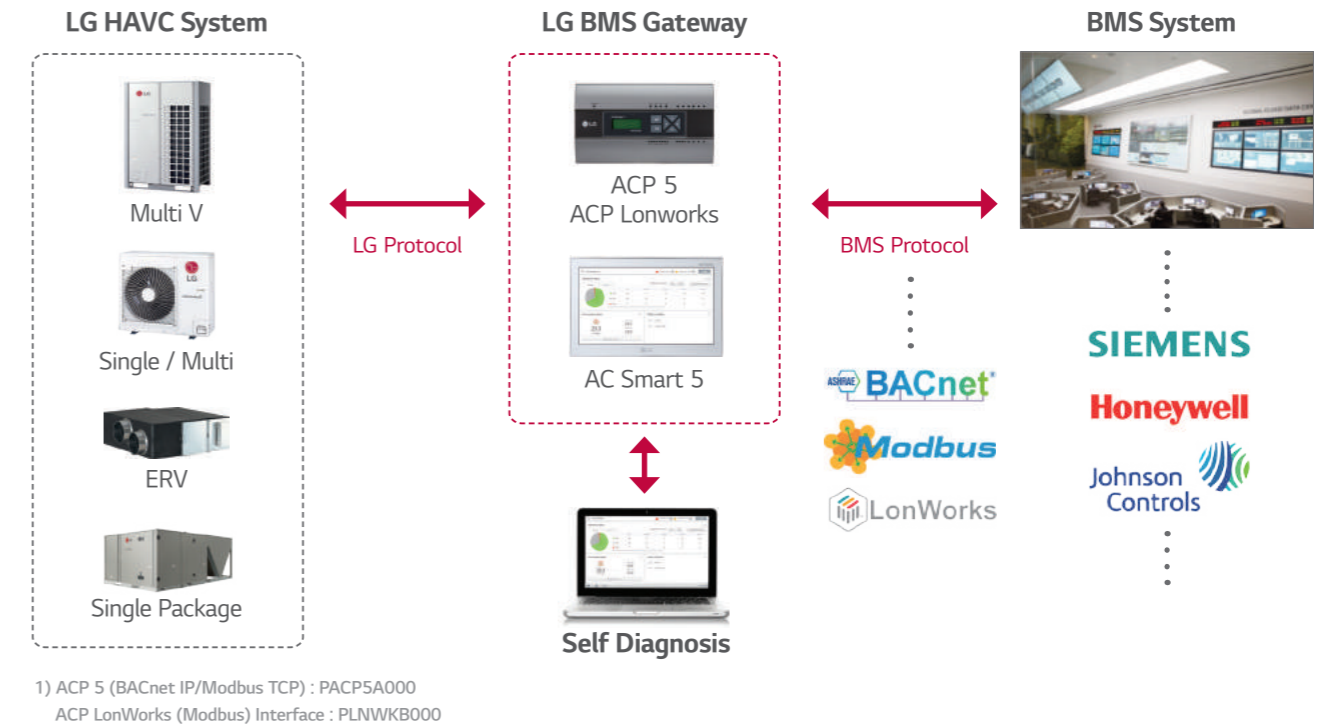


Controller & Installation Cost Saving



3rd PARTY BMS SYSTEM COMPATIBILITY

LG Inverter Single Package can be connected with gateway products for different protocols such as Modbus, BACnet and LonWorks. And gateway product offers self diagnosis interface thanks to smart GUI included.



ECONOMIZER (MODEL : PKEMD1CA0)

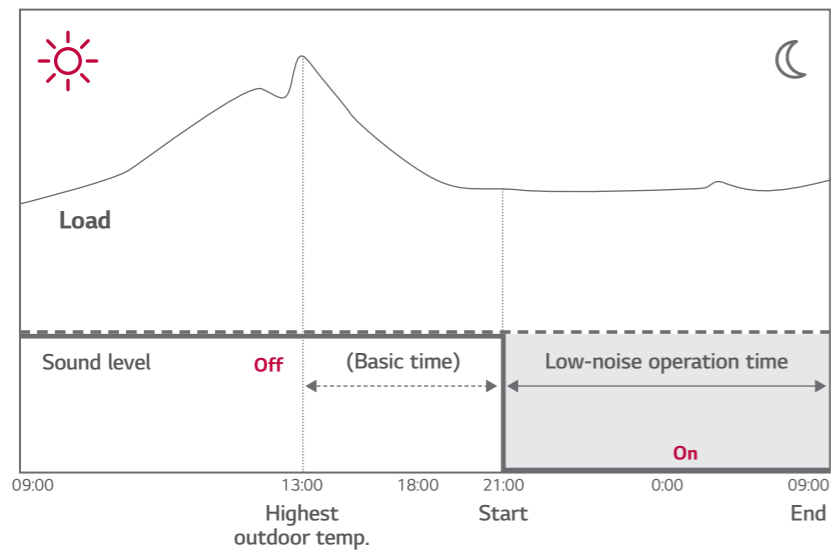
Provides outside air to a room to save energy and improve the air quality indoors.

FUNCTION	SPECIFICATIONS
<ul style="list-style-type: none"> - Differential Enthalpy Control - Includes Outdoor Air Rain Hood - Washable 1" Stainless Filter - Motorized 2-Position and Manual Operation Available - Damper Operation with Wired Remote Controller - AMCA Certified Low Leak Air Damper - Easy maintenance 	<ul style="list-style-type: none"> - Economizer Size : 1,149 x 743 x 597 - Filter Efficiency : MERV6 - Filter Size : 925 x 508 x 25 - Damper Opening Size : 930 x 510

LOW NOISE OPERATION

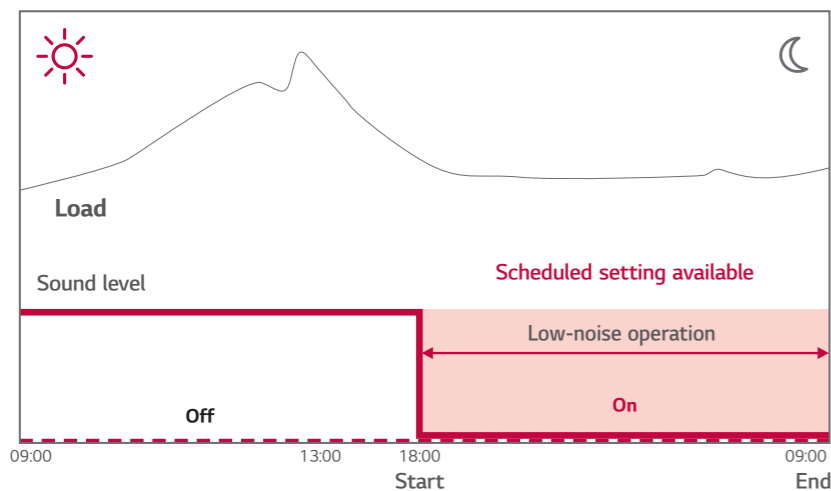
The Low-Noise Operation is possible regardless of the time where noise sensitive areas. Instead of installer setting, the low noise operation is set by a building manager easily.

Conventional
Outdoor Unit setting only



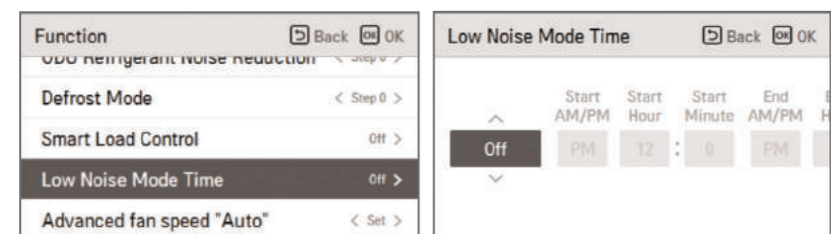
Only outdoor unit dip switch setting is possible.

New Inverter
Standard III wired Remote Controller setting possible



Can be easily activated in the remote controller.

※ Low-Noise Operation requires Standard III wired Remote Controller.



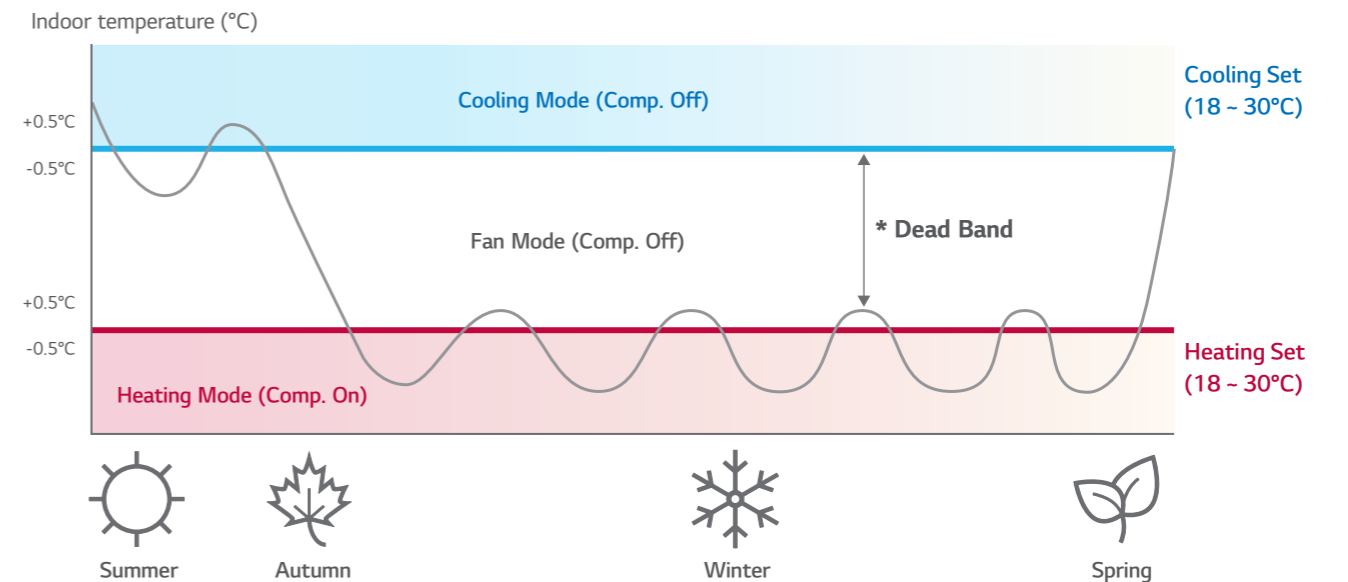
EASY SCHEDULING

Schedule function allows customers to arrange the operation setting of equipment according to their desired schedule. Customers easily schedule daily, weekly, monthly, yearly plan with a calendar, also an exception date enables patterned schedule.



2 SET POINT CONTROL

Auto Changeover can manage room temperature with changing Heating / Cooling mode and Compressor-off automatically. With setting heating and cooling set temperature just one time, comfortable condition will continue at all times. It is also possible to reduce the energy use by broadening the set temperature gap of cooling and heating.



※ 2 Set point Control requires Standard III or Premium wired remote Controller.
- Model : PREMTB100 (Standard III), PREMTA000 / PREMTA000A / PREMTA000B (Premium)
* Minimum temperature gap : Setting value (0 ~ 5°C)

SPECIFICATION

COOLING ONLY



1 Phase 220 ~ 240V 50Hz
1 Phase 220V 60Hz

Category				3	4	5	
Model Name				-	AK-C03620	AK-C04820	AK-C06020
Cooling Capacity	Net Capacity		kW (Rated)	10.26	13.50	17.25	
			Btu/h (Rated)	35,000	46,500	59,200	
	Gross Capacity		kW (Rated)	10.55	14.07	17.58	
			Btu/h (Rated)	36,000	48,000	60,000	
Power Input	Cooling		kW	2.69	3.86	5.10	
EER			Btu/Wh	13.00	12.05	11.60	
SEER			Btu/Wh	18.0	17.0	17.0	
Power Supply			V, Ø, Hz	230, 1, 60	230, 1, 60	230, 1, 60	
Running Current	Cooling	Rated	A	11.7	16.9	22.5	
Wiring Connections	Power Supply Cable (Included Earth)		No. x mm ²	3C x 4.0	3C x 4.0	3C x 4.0	
Dimensions	W x H x D		mm	1,280 x 1,065 x 1,110	1,280 x 1,065 x 1,110	1,280 x 1,065 x 1,110	
	W x H x D		inch	50-13/32 x 41-29/32 x 43-23/32	50-13/32 x 41-29/32 x 43-23/32	50-13/32 x 41-29/32 x 43-23/32	
Net Weight			kg (lbs)	174 (384)	174 (384)	174 (384)	
Compressor (#1, A Cycle)	Type		-	Twin Rotary	Twin Rotary	Twin Rotary	
	Motor Output		W x No.	4,000 x 1	4,000 x 1	4,000 x 1	
Compressor (#2, B Cycle)	Type		-				
	Motor Output		W x No.				
Refrigerant	Type		-	R410A	R410A	R410A	
	Precharged Amount (A-circuit)		g	3,600	3,600	3,600	
	Precharged Amount (B-circuit)						
	Control		-	EEV	EEV	EEV	
Refrigerant Oil	Type		-	FVC68D	FVC68D	FVC68D	
	Charged Volume		cc x No.	1,300 x 1	1,300 x 1	1,300 x 1	
Indoor Side Fan	Type		-	Centrifugal Blower Fan	Centrifugal Blower Fan	Centrifugal Blower Fan	
	Diameter		mm (inch)	Direct	Direct	Direct	
	Air Flow Rate	Nominal		m ³ /min	34.0	45.3	49.8
		Nominal		ft ³ /min	1,200	1,600	1,760
Dehumidification Rate			ℓ/h	2.23	3.47	5.58	
Outdoor Side Heat Exchanger	Fin Type		-	Gold fin / Wide Louver plus	Gold fin / Wide Louver plus	Gold fin / Wide Louver plus	
Outdoor Side Fan	Fan Type		-	Propeller	Propeller	Propeller	
	Motor Type		-	BLDC	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	75	75	75	
Drain Connection Size			-	NPT 3/4	NPT 3/4	NPT 3/4	
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 (23.0) ~ 54 (129.2)	-5 (23.0) ~ 54 (129.2)	-5 (23.0) ~ 54 (129.2)	

COOLING ONLY



3 Phase, 400V 60Hz

Category				7.5	10	
Model Name				-	AK-Q0909C01	AK-Q1209C02
Cooling Capacity	Net Capacity		kW (Rated)	26.4	36.6	
			Btu/h (Rated)	90,000	125,000	
	Gross Capacity		kW (Rated)	27.5	38.4	
			Btu/h (Rated)	94,000	131,000	
Power Input	Cooling		kW	7.50	10.60	
EER			Btu/Wh	12.0	11.8	
SEER			Btu/Wh			
Power Supply			V, Ø, Hz	400, 3, 60	400, 3, 60	
Running Current	Cooling	Rated	A	11.8	16.3	
Wiring Connections	Power Supply Cable (Included Earth)		No. x mm ²	4C x 8.4	4C x 8.4	
Dimensions	W x H x D		mm	2,250 x 1,106 x 1,130	2,230 x 1,237 x 1,958	
	W x H x D		inch	88-19/32 x 43-17/32 x 44-1/2	87-25/32 x 48-11/16 x 77-3/32	
Net Weight			kg (lbs)	343 (756)	530 (1,168)	
Compressor (#1, A Cycle)	Type		-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output		W x No.	5,300 x 1	5,300 x 1	
Compressor (#2, B Cycle)	Type		-			
	Motor Output		W x No.			
Refrigerant	Type		-	R410A	R410A	
	Precharged Amount (A-circuit)		g	6900.0	13000.0	
	Precharged Amount (B-circuit)					
	Control		-	EEV	EEV	
Refrigerant Oil	Type		-	FVC68D	FVC68D	
	Charged Volume		cc x No.	1,200 x 1	1,200 x 1	
Indoor Side Fan	Type		-	Sirocco Fan	Sirocco Fan	
	Diameter		mm (inch)	Belt	Belt	
	Air Flow Rate	Nominal		m ³ /min	85.0	113.3
		Nominal		ft ³ /min	3,000	4,000
Dehumidification Rate			ℓ/h	9.9	13.8	
Outdoor Side Heat Exchanger	Fin Type		-	Gold fin / Wide Louver plus	Gold fin / Wide Louver plus	
Outdoor Side Fan	Fan Type		-	Propeller	Propeller	
	Motor Type		-	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	70	75	
Drain Connection Size			-	Male PT 3/4"	Female NPT 1"	
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 ~ 54 (23.0~129.2)	-5 ~ 54 (23.0~129.2)	

SPECIFICATION

COOLING ONLY



3 Phase, 400V 60Hz

Category				12.5	15
Model Name				AK-Q1509C02	AK-Q1809C02
Cooling Capacity	Net Capacity	kW (Rated)		40	52.5
		Btu/h (Rated)		136,000	180,000
	Gross Capacity	kW (Rated)		41.5	54.2
		Btu/h (Rated)		141,800	185,100
Power Input	Cooling	kW	11.70	15.50	
EER		Btu/Wh	11.6	11.6	
SEER		Btu/Wh			
Power Supply		V, Ø, Hz	400, 3, 60	400, 3, 60	
Running Current	Cooling	Rated	A	18.1	24.0
Wiring Connections	Power Supply Cable (Included Earth)	No. x mm ²	4C x 8.4	4C x 8.4	
Dimensions	W x H x D	mm	2,230 x 1,237 x 1,958	2,230 x 1,242 x 3,520	
		inch	87-25/32 x 48-11/16 x 77-3/32	87-25/32 x 48-29/32 x 138-19/32	
Net Weight		kg (lbs)	530 (1,168)	885 (1,951)	
Compressor (#1, A Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,300 x 1	4,200 x 1	
Compressor (#2, B Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	4,200 x 1	4,200 x 1	
Refrigerant	Type	-	R410A	R410A	
	Precharged Amount (A-circuit)	g	13000.0	9000.0	
	Precharged Amount (B-circuit)			9000.0	
	Control	-	EEV	EEV	
Refrigerant Oil	Type	-	FVC68D	FVC68D	
	Charged Volume	cc x No.	1,200 x 1	1,200 x 1	
Indoor Side Fan	Type	-	Sirocco Fan	Sirocco Fan	
	Diameter		mm (inch)	Belt	Belt
			Nominal	m ³ /min	141.6
	Air Flow Rate		Nominal	ft ³ /min	5,000
Dehumidification Rate		ℓ/h	15.6	20.7	
Outdoor Side Heat Exchanger	Fin Type	-	Gold fin / Wide Louver plus	Gold fin / Wide Louver plus	
Outdoor Side Fan	Fan Type	-	Propeller	Propeller	
	Motor Type	-	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	75	85
Drain Connection Size			-	Female NPT 1"	Female NPT 1"
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 ~ 54 (23.0~129.2)	-5 ~ 54 (23.0~129.2)

COOLING ONLY



3 Phase, 400V 60Hz

Category				20	25
Model Name				AK-Q2409C01	AK-Q3009C01
Cooling Capacity	Net Capacity	kW (Rated)		70.6	80.9
		Btu/h (Rated)		241,000	276,000
	Gross Capacity	kW (Rated)		73.6	85
		Btu/h (Rated)		251,100	290,000
Power Input	Cooling	kW	21.50	26.20	
EER		Btu/Wh	11.2	10.5	
SEER		Btu/Wh			
Power Supply		V, Ø, Hz	400, 3, 60	400, 3, 60	
Running Current	Cooling	Rated	A	34.0	42.0
Wiring Connections	Power Supply Cable (Included Earth)	No. x mm ²	4C x 13.3	4C x 13.3	
Dimensions	W x H x D	mm	2,230 x 1,242 x 3,520	2,230 x 1,242 x 3,520	
		inch	87-25/32x48-29/32x138-19/32	87-25/32x48-29/32x138-19/32	
Net Weight		kg (lbs)	950 (2,094)	950 (2,094)	
Compressor (#1, A Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,300 x 1	5,300 x 1	
Compressor (#2, B Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,300 x 1	5,300 x 1	
Refrigerant	Type	-	R410A	R410A	
	Precharged Amount (A-circuit)	g	12000.0	12000.0	
	Precharged Amount (B-circuit)		12000.0	12000.0	
	Control	-	EEV	EEV	
Refrigerant Oil	Type	-	FVC68D	FVC68D	
	Charged Volume	cc x No.	1,400 x 1	1,400 x 1	
Indoor Side Fan	Type	-	Sirocco Fan	Sirocco Fan	
	Diameter		mm (inch)	Belt	Belt
			Nominal	m ³ /min	226.5
	Air Flow Rate		Nominal	ft ³ /min	8,000
Dehumidification Rate		ℓ/h	26.18	29.82	
Outdoor Side Heat Exchanger	Fin Type	-	Gold fin / Wide Louver plus	Gold fin / Wide Louver plus	
Outdoor Side Fan	Fan Type	-	Propeller	Propeller	
	Motor Type	-	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	85	85
Drain Connection Size			-	Female NPT 1"	Female NPT 1"
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 ~ 54 (23.0~129.2)	-5 ~ 54 (23.0~129.2)

SPECIFICATION

COOLING & HEATING



3 Phase, 380 ~ 415V, 50/60Hz

Nominal Capacity (Rated/Max)		RT	7.5/10	10/11	15/18	
Model Name		-	AK-W110LH00	AK-W130LH00	AK-W200LH00	
Cooling Capacity	Net Capacity	kW (Rated/Max)	26.4 / 34.6	34.3 / 38.1	51.0 / 64.5	
		Btu/h (Rated/Max)	90,000 / 118,000	117,000 / 130,000	174,000 / 220,000	
	Gross Capacity	kW (Rated/Max)	27.0 / 35.2	35.2 / 39.0	52.6 / 66.1	
		Btu/h (Rated/Max)	91,960 / 119,960	120,000 / 133,000	179,500 / 225,500	
Power Input	Cooling	kW	7.37 / 15.0	10.08 / 15.5	15.26 / 30.00	
EER		Btu/Wh	12.2	11.6	11.4	
SEER		Btu/Wh	20	19	18.5	
Power Supply		V, Ø, Hz	380~415, 3, 50/60	380~415, 3, 50/60	380~415, 3, 50/60	
Running Current	Cooling	Rated	A	11.8	15.9	23.4
Wiring Connections	Power Supply Cable (Included Earth)	No. x mm ²	4C x 13.3	4C x 13.3	4C x 21.2	
Dimensions	W x H x D	mm	1,130 x 1,242 x 2,250	1,130 x 1,242 x 2,250	2,230 x 1,242 x 2,400	
	W x H x D	inch	44-1/2 x 48-29/32 x 88-19/32	44-1/2 x 48-29/32 x 88-19/32	87-25/32 x 48-29/32 x 94-1/2	
Net Weight		kg (lbs)	440 (970)	440 (970)	705 (1,554)	
Compressor (#1, A Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,500 x 1	5,500 x 1	5,300 x 1	
Compressor (#2, B Cycle)	Type	-			HSS DC SCROLL	
	Motor Output	W x No.			5,300 x 1	
Refrigerant	Type	-	R410A	R410A	R410A	
	Precharged Amount (A-circuit)	g	9000	9000	5200.0	
	Precharged Amount (B-circuit)				5200.0	
	Control	-	EEV	EEV	EEV	
Refrigerant Oil	Type	-	FW68D	FW68D	FW68D	
	Charged Volume	cc x No.	1,500 x 1	1,500 x 1	1,200 x 1	
Indoor Side Fan	Type	-	Plug Fan	Plug Fan	Plug Fan	
	Diameter	mm (inch)	Direct	Direct	Direct	
	Air Flow Rate	Nominal	m ³ /min	85	113	170
		Nominal	ft ³ /min	3,000	4,000	6,000
Dehumidification Rate		ℓ/h	9.1	12.1	18.1	
Outdoor Side Heat Exchanger	Fin Type	-	Black fin / Wide Louver plus	Black fin / Wide Louver plus	Black fin / Wide Louver plus	
Outdoor Side Fan	Fan Type	-	Propeller	Propeller	Propeller	
	Motor Type	-	BLDC	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	80	80	80
Drain Connection Size			-	Male NPT 3/4"	Male NPT 3/4"	Male NPT 1"
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 ~ 54 (23.0~129.2)	-5 ~ 54 (23.0~129.2)	-5 ~ 54 (23.0~129.2)

* In case of Heatpump model, AHRI certification program is limited up to 20RT model. so, LG will provide LG laboratory test report of 25RT model.

COOLING & HEATING

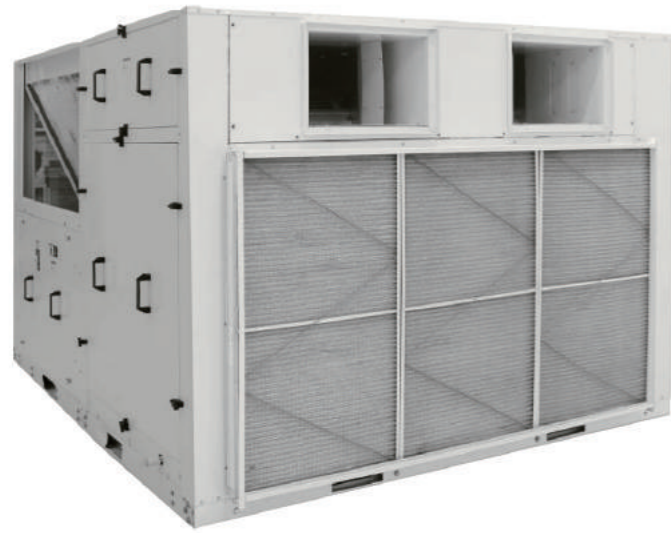


3 Phase, 380 ~ 415V, 50/60Hz

Nominal Capacity (Rated/Max)		RT	20/26	23/29	
Model Name		-	AK-W270LH00	AK-W320LH00	
Cooling Capacity	Net Capacity	kW (Rated/Max)	70.0 / 90.3	81.0 / 101.1	
		Btu/h (Rated/Max)	240,000 / 308,000	276,000 / 345,000	
	Gross Capacity	kW (Rated/Max)	72.3 / 92.3	83.6 / 103.8	
		Btu/h (Rated/Max)	246,900 / 314,900	285,200 / 354,200	
Power Input	Cooling	kW	21.3 / 32.1	26.0 / 39.2	
EER		Btu/Wh	11.3	10.6	
SEER		Btu/Wh	19.0	18.3	
Power Supply		V, Ø, Hz	380~415, 3, 50/60	380~415, 3, 50/60	
Running Current	Cooling	Rated	A	33.0	40.0
Wiring Connections	Power Supply Cable (Included Earth)	No. x mm ²	4C x 33.6	4C x 33.6	
Dimensions	W x H x D	mm	2,230 x 1,242 x 3,520	2,230 x 1,242 x 3,520	
	W x H x D	inch	87-25/32 x 48-29/32 x 138-19/32	87-25/32 x 48-29/32 x 138-19/32	
Net Weight		kg (lbs)	915 (2,017)	915 (2,017)	
Compressor (#1, A Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,500 x 1	5,500 x 1	
Compressor (#2, B Cycle)	Type	-	HSS DC SCROLL	HSS DC SCROLL	
	Motor Output	W x No.	5,500 x 1	5,500 x 1	
Refrigerant	Type	-	R410A	R410A	
	Precharged Amount (A-circuit)	g	9000.0	9000.0	
	Precharged Amount (B-circuit)		9000.0	9000.0	
	Control	-	EEV	EEV	
Refrigerant Oil	Type	-	FW68D	FW68D	
	Charged Volume	cc x No.	1,500 x 1	1,500 x 1	
Indoor Side Fan	Type	-	Plug Fan	Plug Fan	
	Diameter	mm (inch)	Direct	Direct	
	Air Flow Rate	Nominal	m ³ /min	227	261
		Nominal	ft ³ /min	8,000	9,200
Dehumidification Rate		ℓ/h	24.1	30.1	
Outdoor Side Heat Exchanger	Fin Type	-	Black fin / Wide Louver plus	Black fin / Wide Louver plus	
Outdoor Side Fan	Fan Type	-	Propeller	Propeller	
	Motor Type	-	BLDC	BLDC	
Sound Pressure Level	Cooling	Rated	dB(A)	77	77
Drain Connection Size			-	Male NPT 1"	Male NPT 1"
Operation Range (Outdoor Temperature)	Cooling	Min. ~ Max.	°C DB (°F DB)	-5 ~ 54 (23.0 ~ 129.2)	-5 ~ 54 (23.0 ~ 129.2)

* In case of Heatpump model, AHRI certification program is limited up to 20RT model. so, LG will provide LG laboratory test report of 25RT model.

ADDITIONAL LINE UP



The Largest Capacity Single Package

STANDARD FEATURES

- Refrigerant : R410A.
- Power Supply : 380-415V / 3PH / 60Hz.
- Factory Wired with Single Point Power Input.
- Constant Scroll Compressor.
- High Pressure & Low Pressure Safety Switches.
- Power Controller, High / Low Voltage, Phase Loss / Reversal Protection.
- All units are provided with ON-Delay timers for Anti-short cycling.
- Internal Motor Protection for 3Ø Indoor & Outdoor motors.
- All Units are designed to operate with 24V Universal Thermostat.
- Thermal Expansion Valve
- Condenser Fans are Propeller type Direct Driven, draw through Vertical Discharge with fan guard mounted to the Panel.
- Condenser & Evaporator Coils made of Copper tubes and Aluminum fins.
- Weather resistant steel cabinet, qualified for 1,000 Hours of Salt Spray test.
- 2" Disposable Air Filter.
- Anti Corrosion Heresite Treatment on condenser coil HEX
- Hydrophilic coating on Evaporator HEX
- IP 55 Class F for Blower Motor

COOLING ONLY



3 Phase, 380 ~ 415V, 60Hz

Nominal Capacity		RT	30	
Model Name		-	AK-C3609H00	
Cooling Capacity @ T1*		Btu/h	350,000	
Power Consumption @ T1*		W	34,400	
EER @ T1*		-	10.15	
Cooling Capacity @ T3**		Btu/h	294,000	
Power Consumption @ T3**		W	38,800	
EER @ T3**		Btu/Wh	7.55	
Nominal Air Flow		CFM	12,000	
External Static Pressure		Inch H ₂ O g	0.5*	
Power Supply		V / Ph / Hz	380-400 / 3 / 60	
Refrigerant	Type	-	R410A	
	Precharged Amount	kg	32.0	
	Standard Circuit	NOS	2	
	Control	-	TXV	
Evaporator	Blower	Type	Centrifugal	
		Drive	Belt Drive	
		Dia x Width	18" x 18" - Twin	
		Quantity	1	
	Blower Motor	Power Supply	V / Ph / Hz	380-400 / 3 / 60
		Type	-	Induction
		Quantity	-	1
		HP	-	10
		IP	-	IP55
	Air Filter Type		-	Disposable Air Filter
Coil	Type	-	Corrugated Al Fin with Inner grooved copper coil	
	Tube Dia / No of row / FPI	-	3/8" / 4 / 15	
	Face Area	SQ.FT	17.22	
Condenser	Fan	Type	Propeller / Direct Driven	
		Quantity	-	6
		Dia of Fan	Inch	26"
	Coil	Type	-	Corrugated Al Fin with Inner grooved copper coil
		Tube Dia / No of row / FPI	-	3/8" / 3 / 15 3/8" / 4 / 15
		Number of Coils	-	4
		Face Area / Coil	SQ.FT	23.24
		Total Face Area	SQ.FT	46.48
	Fan Motor	Power Supply	V / Ph / Hz	208-230 / 1 / 60
		HP	-	0.75
IP		-	IP20	
Motor RPM		-	1,130	
Motor Type		-	ECM	
Condensate Drain Size		Inch	1"	
Dimensions	Length	mm	3,945	
	Width	mm	2,150	
	Height	mm	2,075	
Unit Weight		kg	2,020	

