# **FEATURE OVERVIEW**

INVERTER	]		CORE	TECH	SM	ART	ENERGY E	FFICIENCY
1 (YEAR) WARRANTY		Energy Efficiency Cooling Heating	Dual Inverter Compressor	R32 Refrigerant	Embedded Wi-Fi	Smart Diagnosis	Active Energy Control	Energy Display
Prestige	(E) 61 (100)	9k 12k  A+++  A+++	•		•	•	•	•
ARTCOOL Gallery		9k 12k	•	•	●³ (Ready)			
ARTCOOL	7, 9, 12, 18, 24 kBtu  NEW  9, 12, 18 kBtu	9k 12k 18k 24k  A++ A+  7k  Multi <sup>4</sup>	•	•	•	•	•	•
Deluxe	<b>⊠</b> -   ±	9k 12k 18k 24k  A++ A++  7k  Multi <sup>4</sup>	•	•	•	•	•	•
Standard Plus	B	9k 12k 18k 24k	•	•	•	•	•	•
Standard	8	9k 12k 18k 24k A++ A+	•	•		•	•	•

DURABILITY		HEALTH		FAST C	OOLING & H	EATING		сом	FORT	
Gold Fin™	Plasmaster Ionizer Puls	Dual Protection Filter	Auto Cleaning	Jet Cool	4 Way Swing	Fast Heating	Comfort Air	Low Noise 19dB	Silent Mode 3dB	Quick & Easy Installation
•	•	•	•	•	•	•	•	•	•	•
•			•	•	• 3 way	•		•	•	•
•	•		•	•	•	•	•	9,12k Only	•	•
•	•		•	•	•	•	•	•	•	•
•	•		•	•	•	•	•	9,12k Only	•	•
•	•		•	•	•	•	•	•	•	•
•			•	•	•	•	•	9,12k Only	•	•
•			•	•	•	•	•	•	•	•
•			•	•	18, 24K Only	•	•	9,12k Only	•	•

When connected to Multi Outdoor unit, Silent Mode 3dB is working by simply setting the dip switch on the PCB of the outdoor unit,
 When combines with 4dkBtu, Cooling A+, Heating A
 Wi-Fi Ready: can be connected by using Wi-Fi controller (PWFMDD200)
 Please refer to the specifications of Multi outdoor units.

# **CORE TECH**





# **Dual Inverter Compressor**

# • What is the Dual Inverter Compressor?

A compressor is the heart of an air conditioner, and monitoring whether it works properly, effectively, or noisily that can cause stress as well as cost more money. LG's Dual Inverter Compressor provides an effective solution, resulting in an air conditioner that cools faster, lasts longer, and operates quieter than conventional models.



# · How it Works

## Varied-Speed Dual Rotary

A compressor motor with a wider rotational frequency that is energy efficient and has a higher volumetric quick cooling capacity than any conventional compressors.





# · Product Reliability Improvement

The Dual Inverter Compressor reduces the vibration and with it the sound pressure levels. The reduction in vibration reduces the possibility of fractures occurring in the the surrounding pipework.



# R32 Refrigerant

# • Pain Point

Due to accelerated global warming and the destruction of the ozone layer, various international conventions and meetings are held to enhance restrictions to the use of refrigerant or enforce the use of eco-friendly refrigerants. In order to reduce environmental destruction, refrigerant R32 is internationally acclaimed for being Eco-friendly. It has the unprecedented feature as a low volume refrigerant that is as efficient as any conventional refrigerant; thus qualifying as a green refrigerant.



# · How it Works

Utilising a small amount of the R32 refrigerant also qualifies it to be a highly green efficient system.

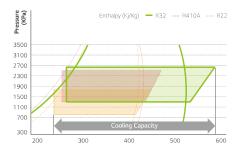
# Alleviate Global Warming & Ozone Layer Destruction

R32 efficiently works even in small volume compared to existing R410A refrigerant, which decreases potential hazard of global worming.

	R410A	R32	
Composition	Blend of R32 50% + R125 50%	Pure R32 (No blend)	
GWP (Global Warming Potential)	2087.5	675	

# High Compressibility

R32's high compressibility rate gives more powerful cooling performance and efficiency compared to existing refrigerant R22 and R410A.



# Benefit

Eco-friendly Refrigerants that can prevent environmental pollution.

# **High-Efficiency & High-Performance Refrigerant**Reduce refrigerant charge by 15% R410A Preparation for an

Reduce retrigerant charge by 15% R410A Preparation for an increase in efficiency for both heating and cooling. R410A Preparation for easy install. (R410A blended refrigerant, R32 single refrigerant)

# **SMART**



# **Embedded Wi-Fi**

Control your air conditioners by using Android or iOS based smartphones. This advanced technology provides you many benefits.

# • LG Smart ThinQ



Download the 'LG SmartThinQ' app from the Google Downloads or the Appstore.



LG Smart ThinQ

# · How it Works

# Embedded Wi-Fi modem

Enable "LG Smart ThinQ" on your air conditioner.



By using the embedded Wi-Fi modem, get ready for innovation without boundaries.



# Easy Registration and Log-in

Follow the interactive set-up LG Account steps that will activate smart ThinQ's impressive features.



# Wi-Fi Connectivity

Each individual member of your family can customise the air conditioner temperature and fan speed accordingly and then save the settings in their app to run it later. These settings can be saved for each air conditioner too.

# **Multiple Devices**



Multi-Control



# Benefit

# Simple operation for various functions

On/Off, Current Temp Mode, Set Temp







# Vane Control



# Straight forward Management











# Integrated Home Appliances Control

Control / Monitor all your LG appliances from one place.



# Access your air conditioner anytime and from anywhere with a Wi-Fi equipped device and LG's exclusive control app, Smart ThinQ.



\* Can be controlled by multiple users, but not simultaneously

# **SMART**



# **Smart Diagnosis**

Smart Diagnosis allows you to check setup, installation, troubleshooting and other information conveniently from your smartphone.

- \* Specifications may vary for each model
  \* When connected to Multi ODU, Smart Diagnosis function may not be supported.

# · What is the Smart Diagnosis?

Smart Diagnosis allows users to conveniently check setup, installation, troubleshooting and other information directly from a smartphone.

- \* Builds upon widespread smartphone use and offers greater USP diversification
- \* Perfect for consumers who are unable to view information about their air conditioner via a display or remote control.

# · How it works

By using "LG Smart ThinQ" App and clicking "Start Smart Diagnosis", monitor and check diagnosis results conveniently via Wi-Fi.







# Benefit

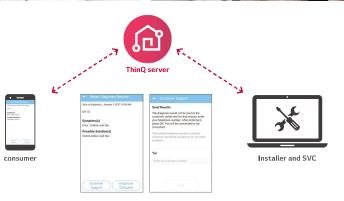
Easily comprehensible error messages make detecting a solution and contacting the service center simple and convenient

## For consumer



## For Installer and SVC





- Easily check operational status of a product without a display or one that provides limited information
- Save energy by monitoring key operational information and power consumption
- Using the Maintenance Guide helps to improve device performance and increase product life-span,
- Understand the product better by easily confirming operational status and information
- Intuitively diagnose problems by comparing current and past usage data
- Maintain installation capabilities and reduce installation errors by quickly confirming device operational status

# **SMART**



# **SIMs**

By connecting SIMs chip, you can check the status of your air conditioner and diagnoseproblems from your smartphone.

- \* Specifications may vary for each model.
- \* When connected to Multi ODU, SIMs function may not be supported.

# · What is the LG SIMs?



Monitor the status of your air conditioner and accurately diagnose problems by connecting it to a smartphone via a SIMs chip.

\* SIMs : Smart Inverter Monitoring System

# How It Works



# SIMS App

1. Use a SIMs chip to connect a smartphone to an air conditioner.

2. Monitor and diagnose problems in real time using the SIMs app.

# Benefit

# Easy Monitoring

Diagnose problems anytime, anywhere with a SIMs chip.

## Easy Diagnosis & Quick Response

Easily monitor IDU/ODU and diagnose problems. Save and review diagnostic data.

# Main

Current outdoor temperature Indoor temperature Inverter Comp frequency Operating opening Error code / Frequency limits Indoor. Outdoor fan speed



## Outdoor Unit

Frequency / Fan RPM DC Link / Input Current Input Voltage EEV operation mode Restart timer

Compressor mode / EEV opening



# Indoor Unit

Indoor Unit Capacity / Operation Mode THM mode / REM mode FAN operating condition / EEV opening Room Temperature / Suction Temperature Intermediate Temperature Exit Temperature



Room Temperature Heat exchanger pipe temperature Compressor discharge temperature Frequency / Outdoor temperature Compressor suction temperature Electric current / Voltage









# \* Smartphone Requirements (iOS: 6.1 or later, Android: 2.3 or later)

# **Low Refrigerant Detection**

Early notification of low refrigerant protects your air conditioner from a risk of damage.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions.

  \* When connected to Multi ODU, Low Refrigerant Detection function may not be supported.

# How It Works

# Early Detection of Low Refrigerant Levels The Air Conditioner is automatically shut

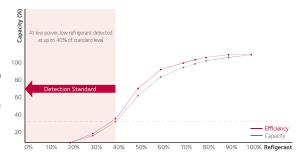
down when low refrigerant level is detected.

## 3 Checkpoints for Low Refrigerant Level: 1) The heat exchanger temperature is

- comparatively cool
- 2) The outdoor unit is working properly
- 3) The energy consumption is working under a standard pattern

If any of the above conditions are not met, for a maximum of 4 times, after 15 minutes of Air Conditioner operation, a Low Refrigerant level is detected and the Air Conditioner is

## Capacity and Effectiveness of the Refrigerant Levels



- \* This function only works under the following conditions:
- Indoor/Outdoor temperature is up to 20 degrees Celsius
- Cooling and dehumidification mode

# Benefit

# Longer Lifespan for Air Conditioner





When Low Refrigerant Level is detected, it alternately shows CH and 36 on the display.



Inside Insulator Meltina







Burnout



\* Some models show CH and 38 alternately on the display.

# **ENERGY EFFICIENCY**



# **Supreme Energy Efficiency**

LG's revolutionary Inverter technology boasts powerful yet quiet performance while minimising energy consumption. With world class energy efficiency, bask in the cosiness of the atmosphere surroundings whilst saving energy.

- \* Based on H09AL Model
- \* Specifications may vary for each model.

# · High Efficient Compressor and Reversing Valve

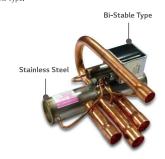
# Rotary Compressor and Motor Efficiency

The number of suction connections has been reduced from two to one to increase the efficiency of the refrigerant compression during low speed conditions. The DC motor in LG air conditioners remains unsurpassable incomparable to in the world's best efficiencies.



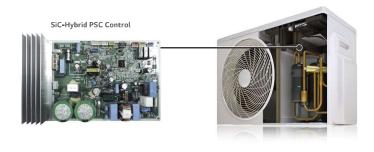
# Bi-Stable Reversing Valve

The Input power of 4-way valve has been reduced to OW by using a Bi-Stable type.



# Improved Inverter Drive Efficiency

Used to optimise the time of current flow by controlling the number of converter switching according to energy consumption status. Displays comparatively higher performance and advanced energy efficiency than conventional Inverter air conditioner by reducing power loss with an advanced material component called SiC.





# **Active Energy Control 4 - Step**

LG's Active Energy Control adjusts the energy consumption level and cooling capacity by controlling maximum frequency of the compressor motor.

- \* Specifications may vary for each model.
- \* When connected to Multi ODU, Active Energy Control function may not be supported,

# Concept & Benefit

Cooling a home can come at a high cost particularly during the hot summer months. Avoid those costs and save energy by taking advantage of LG's 4-Step Energy Control System.

Normal.



Step 1.

# · How It Works



# **ENERGY EFFICIENCY**

# WALL MOUNTED KEY FEATURES

# **PERFECT HEALTHCARE**



# **Energy Display**

LG's Energy Display panel monitors the amount of energy levels used. Save on energy consumption while enjoying the cooling by checking your energy level on the panel.

- \* Specifications may vary for each model.
- \* When connected to Multi ODU, Energy Display function may not be supported.

# · How it Works

# Magic Display & Remote Control

With the push of a button on the remote control, indoor unit's LCD display shows the current and total energy use, thus making the users aware of reducing energy consumption.



# Benefit

# Nomal Mode Current Setting Temp



# Electric Power Displays Current Energy Use



# · Additional Benefit

# Fan Speed

•	
Display	Speed
F5	High
F4	Medium-High
F3	Medium
F2	Medium-Low
Fl	Low

## Sleep Mode



For example, setting 1hr

# \*Plasmaster Ionizer\*\*LUS

The powerful plasma lonizer protects you from bad odors and harmful and contagious particles in the air with over 3 million ions to sterilize not only the air passing through the air conditioner, but also surrounding surfaces for a safer, and cleaner environment.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions.

# How It Works

# Sterilization and Deodorization (Utilizes Over 3 Million Ions)

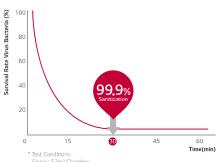
Plasmaster Ionizer+ reduces harmful and contagious microscopic particles by infusing the air passing through the air conditioner with over 3 million ions



# • Test Result

# Sterilization Performance Evaluations

Sterilize Bacteria (E.coli colon bacillus) over 99.9% in 30 min.



Space : 52m<sup>3</sup> Chamber
Temperature & Humidity : Normal
Bacteria : Staphylococus Aureus

## 2,1 odor strength decrease in 60 minutes

An odor of measured as 2 European odor units (ouE/m³) or less indicates that the level of odor falls within permissible limits.



Odor strength reduce 3.6  $\,\Rightarrow\,$  1.5 / The Odor floating in the room as well as curtain and clothes.

# **PERFECT HEALTHCARE**



# **Dual Protection Filter**

The Dual Protection Filter collects dust.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions

# · What is the Dual Protection Filter?

The Dual Protection Filter, designed to capture dust particles over 10 μm in size, is the first line of defense and hindrance against finer particles.



# • Additional Benefit

## Easy to Open

Easily detachable full surface cover helps clean the air conditioner flawlessly.



The filter is designed for easy handling and guick cleaning, which lengthens its lifespan.





# **Auto Cleaning**

The interior of the air conditioner is maintained clean by drying off the heat exchanger, then sterilizing the interior once more.

\* Specifications may vary for each model.

# · Pain Point

The main cause of odor within air conditioners is mold and bacteria growing on the heat exchanger. These germs can spread when the heat exchanger is wet.



# · How It Works

# Cleans Filter with Regular Airflow

The comprehensive auto cleaning function prevents the formation of bacteria and mold on the heat exchanger, providing an enhancing environment.





By dehumidifying, the auto cleaning

By preventing polluting of the heat exchanger caused by various germs and bacteria, the performance and life span of the air conditioner do not wither away even after a period of 10 years.

# Benefit

# Removes Harmful Particles

Auto Cleaning provides clean air by preventing bacteria, mold and odors that can otherwise accumulate in an indoor unit.



might be harmful.



Prevention





Elimination Elimination

# **FAST COOLING & HEATING**



# **Fast Cooling**

The cool airflow reaches all the corners of the room, keeping the space cool and comfortable.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions.

# How It Works

# Bigger Skew Fan

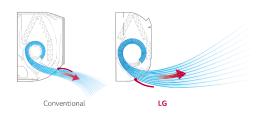
A 25% larger skew fan emanates highly powerful blasts of air.





# Cooling Outlet

A larger, optimally designed cooling outlet emanates to large areas and cools spaces faster.

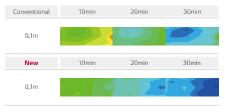


# • Test Result



\* Test Conditions : : Indoor temperature 33°C, Outdoor temperature 35°C, Relative humidity 60%. Setting temperature 24°C

# Changes in Temperature Over 30 Minutes



\* Test Conditions :
Outdoor temperature : 35°C, Indoor temperature : 33°C,
Humidity : 60%, Remote control : 24°C High

# Jet Cool

LG air conditioners provide optimized high-speed airflow, which can cool rooms faster while delivering cool air evenly in every direction.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions.

# How It Works

## One Click "Jet Mode"

Reduces the temperature of outflowing air to 18°C for 30 minutes with just one click.



# • More Powerful Performance

By reducing the second vortex, which decreases airflow within the air outlet, and enlarging the fan size, the amount of airflow is increased to 13,0 CMM.



# **FAST COOLING & HEATING**



# 4-Way Swing

Cool air reaches out to the entire room regardless of where the air conditioner is installed

\* Specifications may vary for each model.

# · How It Works

# 6-Step Vane, Control up to 70°

The vertical vane, which moves up and down, has 6 different settings including full-auto swing.



<sup>\*</sup> Angle can be different from each model and working mode.

# 5-Step Louver, Control up to 55°

The louver, which sways left and right, has 5 different settings including full auto-swing.



# **Fast Heating**

LG Residential Air Conditioners satisfy your heating needs while consuming less energy, by heating a wider space in a shorter period of time to create a warm and comfortable living environment.

- \* Specifications may vary for each model.
- \* Depending on the experimental conditions.

# · How It Works

# 4 way Auto Swing (Easy Airflow Control)

4 Way Auto Swing adjusts airflow based on the surrounding environment, allowing for optimal distribution of warm air to living areas and enabling quick heating.



## Vertical Airflow

When heating, the vane sends heated air downwards to maintain a pleasant and balanced room temperature.



# • Easy and Simple Control

Airflow direction can be changed by LG ThinQ Wi-Fi app.

# Up/Down Swing

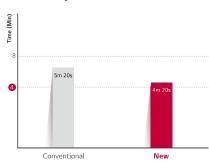


# Left/Right Swing



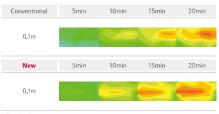
# • Benefit & Test Result

# 22% Quick Heating



\* Test Conditions : Outdoor temperature : 7°C, Indoor temperature : 12°C, Humidity : 87%, Remote control : 30°C Power

# Changes in Temperature Over 20 Minutes



\* Test Conditions :
Outdoor temperature : 7°C, Indoor temperature : 12°C,
Humidity : 87%, Remote control : 30°C Power

# **EXTREME DURABILITY**



# 10-Year Inverter Compressor Warranty

LG, with confidence in product quality, preserves is better lives for customers by providing 10 years warranty for Inverter Compressor of Air conditioners.

\* Specifications may vary for each model.

# · What is the 10 Year Warranty?

The compressors is for the Air Conditioner what the engine is to the vehicle. With the 10 year warranty on the compressor, users can avail of the benefits of LG air conditioner for a longer period on time.



# · Benefit & Verification

## Reliable Air Conditioner

Product safety is emphasized by offering a 10-year warranty on the compressor to reassure customers about product durability.



## Verification

TUV Rheinland, Long Term Accelerated-reliability Test & High Marginal Test

- \* Long Term Accelerated-Reliability test LG's unique testing method with reinforced operating condition for a product life assurance to test and determine the product life cycle in a short period of time by accelerating the life cycle.
- \* High Marginal Test

TÜVRheinland

Test method to secure durability in various adverse conditions that may occur in the field by performing comp reliability test against higher pressure and temperature than the designed range of pressure and temperature which the comp operates in

\* Verification obtained from TUV Rheinland for 10-year product life cycle

# Single Rotary Workstein Workste



# Gold Fin™

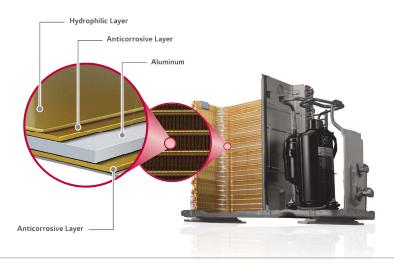
The Gold Fin™ coating protects the surface of the heat exchanger from unnecessary wear and corrosion.

- \* Specifications may vary for each model.
- \* Depending on the experimental condition

# How It Works

# Crosscut View of Heat Exchanger

The gold-colored special coating on the fin of the heat exchanger prevents corrosion, extending the life of the unit.



# Test Result

## Conventional Fin



\* Test result 360 hrs. after being exposed to sodium chloride

Gold Fin™



# **COMFORT**



# **Comfort Air**

LG provides pure hygienic and temperature regulated atmosphere surrounding your living space. An automatic vane angle adjustment sets perfect vane angle and air volume.

\* Specifications may vary for each model.

# Concept

If the air conditioner remains ON while asleep, it can lower body temperature or cause discomfort, especially if the outflow of cool air is directly close to the room's occupants. This can be eliminated by the Comfort Air vane angle thus providing a comfortable environment to the sleeping occupants.

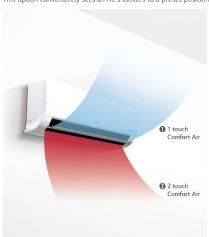
# · How It Works

Control Panel



## Comfort Vane

This option conveniently sets an AC's louvers to a preset position so that outflowing air is directed away from a room's occupants.



# Scene 1: Inclines to a maximum 80° angle,

Sets vane angle to highest position: Optimized for gentle airflow cooling.

# Indoor Unit Display





Scene 2: Declines to a maximum 10° angle,

Sets vane angle to lowest position: Optimized for gentle airflow

Indoor Unit Display



Remote Controller Display



# **Low Noise**

LG Air Conditioners operate at 19dB low noise level, moreover provide healthy soft air by just 1 touch.

\* Specifications may vary for each model.

# · How It Works

## LG's Unique Skew Fan

By minimizing the surface pressure of the fan blade when in contact with the air peak noise are reduced to a level that is among the lowest in the world.









BLDC Fan Motor

With strong torque and powerful ND magnetism as well as precise speed control of 13 different steps for smooth operation, the BLDC motor provides substantial air volume and high static pressure, while keeping electrical and mechanical noise lower, and making high-speed operation available.



- Low Efficiency.
- Heat Problem during overhauling.

- Difficult precise speed control









# ALVC (Active Low Vibration Control)

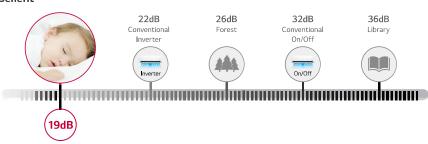
A speed-error component estimates the load to compensate for imbalances, which are the primary causes of vibration and noise, enabling the rotation of the motor without vibration at low Hz levels.







Benefit



# **COMFORT**



# Silent Mode

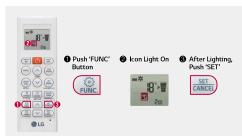
Silent mode ensures a tranquil and serene experience for the user by reducing noise disturbances while you are resting.

- \* Specifications may vary for each model.
- \* When connected to Multi Outdoor unit, Silent Mode is working by simply setting the dip switch on the PCB of the outdoor unit.

# • How It Works

In Silent Mode, the overall sound level of the outdoor unit drops by up to 3dB and the sound level of the indoor unit also decreases.

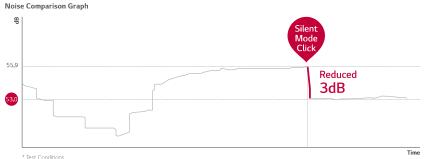
## Press the Silent Button



## Controls the Outdoor Compressor



# • Test Result



Spec : Selecting Silent Mode reduces the noise of an outdoor fan unit by 3dB Assessment: 36,2 dB emitted from center/side of unit at a distance of 1m.

# **Quick & Easy Installation**

LG air conditioner is designed for an easy and efficient installation, making possible to install several units in a short period of time

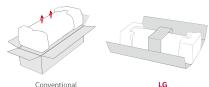
\* Specifications may vary for each model.

# Concept

By reducing the manpower and time required for installation, it is now possible to install more units in less time.

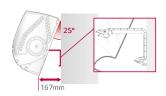
# · How It Works

# One Simple Packing Box



# Installation Support Clip

A support clip creates adequate space between the wall and the unit for easier installation.



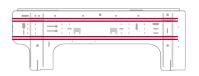
# Detachable Bottom Cover

The air conditioner's bottom cover is detachable for easier installation and access.



# Installation Plate Improvement

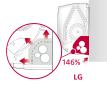
LG's installation plate is larger and customized to reduce installation time.



# Wider Tubing Space

The space provided for tubing facilitates the whole installation process and hides the unorganized parts, making it appear clean





# Quick button for running test

The test button is conveniently located and easy to find.

