

# What is Free combination

## Previous Single Split

### Combination



Need many number of outdoor units



## Free Combination

### Combination



All combinations are possible with a small number of outdoor units



# What is Free Combination

In the case of U24A unit, one outdoor unit can be combined with 11 indoor units,  
So the number of outdoor unit models can be reduced.



# What is Free Combination

By combining one outdoor unit with a large number of indoor units, the total number of model is reduced to provide convenience to customer

## Customer benefit

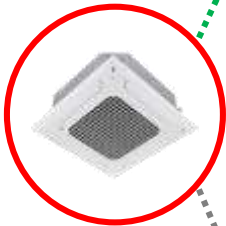
- ▶ Customers can choose the combination based on their purchase purpose

### Combination case (24kBTu Example)

### Benefit

24kBTu  
Example

4Way Cassette  
Indoor Unit



Standard ODU



### STANDARD COMBINATION

“High Efficiency”  
“Energy Saving”

Entry ODU



### ENTRY COMBINATION

“Affordable Inverter”  
“Rational Shopping”

## Dealer benefit

- ▶ Simplified Outdoor line-up will make stock & warehouse operation easier

### Conventional

### FREE COMBINATION

Totally 12 Different  
Outdoor Model units



Only 5 Outdoor Units covers  
all STANDARD & ENTRY  
Combination

※ Please refer to the specification pages for available Entry combination products & capacities

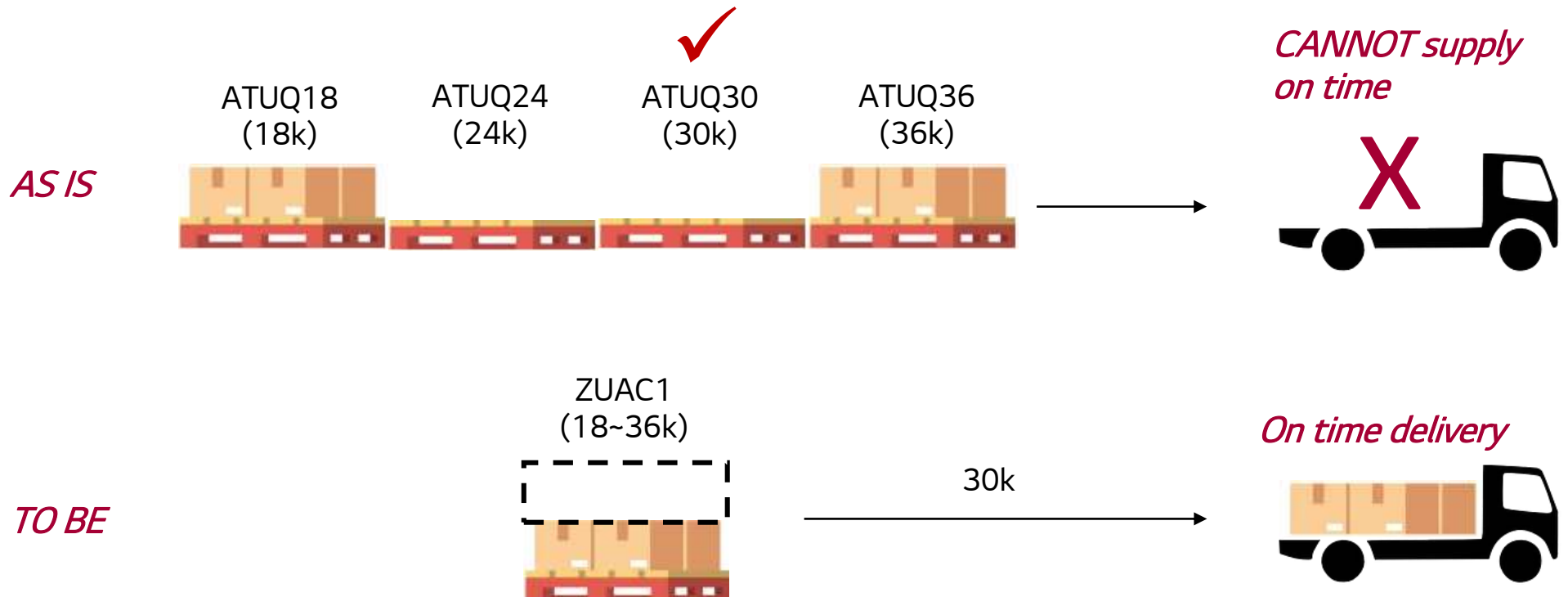
※ Based on 9~48kBTu Single Commercial A/C line up

# Operation Improvement

## 1. Quick response to demand



“ We made forecast and **ordered 18k and 36k**, but **demand occurs at 30k**.  
The delivery schedule is over 2 weeks, so we could not meet the customer’s due date.  
And our stock is remain continuously. ”



# Operation Improvement

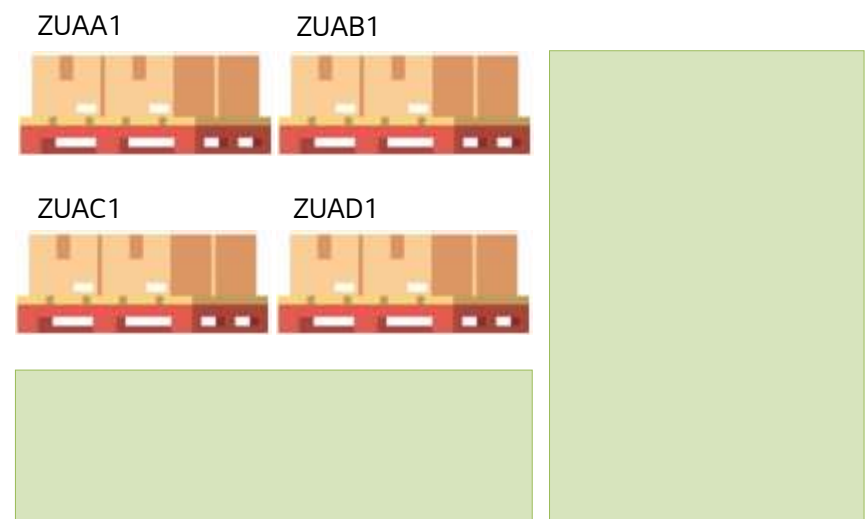
## 2. Efficiency of Storage Area



*“ We could not increase in house stock of LG products,  
because our **warehouse area is limited.** ”*

*AS IS*

*TO BE*



*Storage Area 55% ↓*



# ***SINGLE SPLIT***

Product Introduction

# Contents

---



1. Intro - '22 LG Single Split
2. Why LG Single Split?
3. Appendix



# Intro

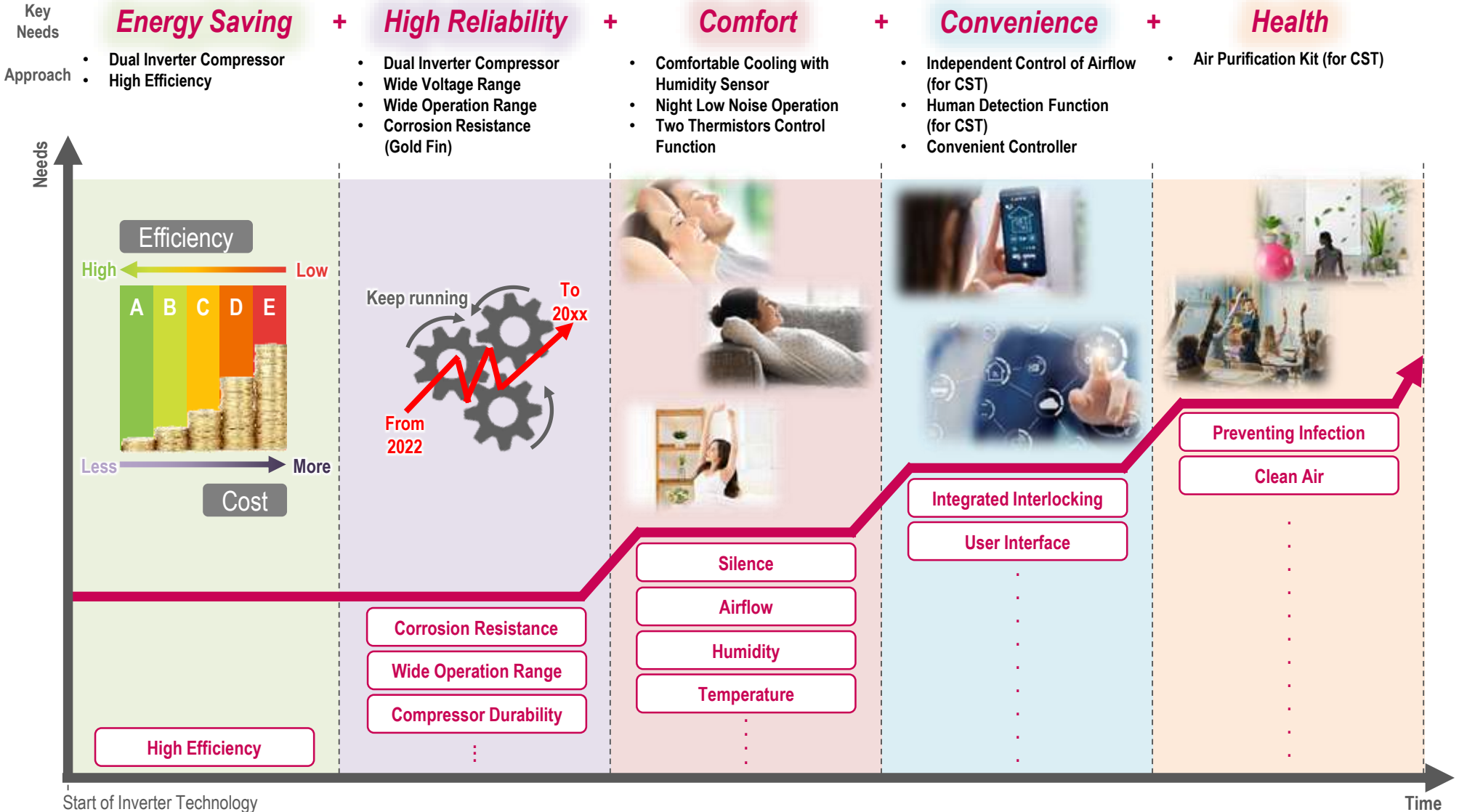
---

- Market Trend of HVAC Systems
- LG Technology
- `22 NEW KEY USP
- Total Line up
- R32 Refrigerant



# Market Trend of HVAC Systems

LG Single CAC can provide customers optimized solutions by taking into account the customer's needs and meeting these needs through a variety of products.





High Reputation in LG Technology



Total HVAC Solutions

LG  
Technology

## Benefits

- ✓ Energy Saving
- ✓ Reliability
- ✓ Comfort & Health
- ✓ Convenience

**Inverter Compressor / High Efficiency**

**Wide Operation Range / Corrosion Resistant Heat Exchanger**

**Dual Sensing (Temperature + Humidity) / Air Purification Kit**

**Wi-Fi Control / Human Detecting Sensor**

# NEW KEY USP

## Free Combination NEW!

One outdoor unit can be freely combined with many different indoor units.



## R32 (Next-Generation Refrigerant) NEW!

LG Single split uses an eco-friendly refrigerant to lower the global warming potential.

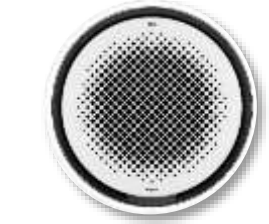


# R32 Single Split



## Round Cassette NEW!

Round Cassette is suitable for modern design Interior (Design award winner)



Round Design



## Air purification kit

Air Purification models are extended in New R32 Inverter line up

As-is

New Air Purification models



4way CST



































1way CST



Round CST

# Line up and Combination NEW!

| kBtu/h   |   | Type  | 9  | 12   | 18  | 24   | 30   | 36  | 42 | 48  | 60  |
|--|---|---|--|--|---|--|--|---|----|---|---|
| <b>Single Split</b>  | <b>Outdoor Unit</b>   |  Standard      |  U12A |  U12A |  U18A |  U24A |  |  U36A (2R) |    |  U36A (3R) |   |
|  |   |  Entry         |  |  |  U12A |  U18A |  U24A |  U24A      |    |  U36A (2R) |  U36A (3R) |
|  | <b>Ceiling Mounted 4Way Cassette</b><br> |  S             |  |  | ●   | ●  |  |   | ●  |   | ●   |
|  |   |  E             |  |  | ●   | ●  | ●  |   | ●  |   |   |
|  | <b>Ceiling Concealed Duct</b><br>        | Mid Static<br> |  S    |  |   | ●  | ●  |   | ●  |   | ●   |
|  |   | Low Static<br> |  S    | ●  | ●   | ●  | ●  |   |    |   |   |
|  | <b>Ceiling Suspended</b><br>             |  S             |  |  |   |  |  |   | ●  |   | ●   |
|  |   |  E             |  |  | ●   | ●  | ●  |   | ●  |   |   |
|  | <b>1Way Cassette</b><br>               |  S            |  | ●  | ●   | ●  |  |   |    |   |   |
|  | <b>Round Cassette</b><br>              |  S           |  |  |   |  |  |   | ●  | ●   |   |
| <b>Floor Standing</b><br> |  S                                     |   |  |  |   | ●  |  | ●   |    | ●   |   |
|  |  E                                     |   |  |  |   |  | ●  | ●   |    |   |   |

# R32 (Next-Generation Refrigerant)

R32 is a next generation refrigerant that efficiently carries heat and has lower environmental impact

## Refrigerant Trends

- Regulations have increasingly become stricter from greater consideration for the global environment because of the Montreal Protocol in 1987 and the Kyoto Protocol in 1997, resulting in a shift to refrigerants with even lower environmental impact
- Although the mainstream refrigerant R410A has an Ozone Depletion Potential (ODP) of 0, its Global Warming Potential (GWP) still remains an issue
- While R32 also has an Ozone Depletion Potential (ODP) of 0, the refrigerant has only approximately 1/3 of the Global Warming Potential (GWP) of R410A
- If all R410A is converted to R32, the impact to global warming from HFCs in 2030 would be reduced by the CO2 equivalent of approximately 800 million tons (19%) compared to the continued use of R410A
- R32 has a Global Warming Potential (GWP) that is one-third lower and is remarkable for its low environmental impact compared to the refrigerants widely used such as R22 and R410A

## Environmental Impact

|   | ODP<br>(Ozone Depletion Potential) | GWP<br>(Global Warming Potential) |
|---|------------------------------------|-----------------------------------|
| R12<br>(CFC)<br><i>Chlorofluorocarbon</i>               | 1.0                                | 10,900                            |
| R22<br>(HCFC)<br><i>Hydrogenated Chlorofluorocarbon</i> | 0.055                              | 1,810                             |
| R410A<br>(HFC)<br><i>Hydrofluorocarbon</i>              | 0                                  | 2,088                             |
| <b>R32<br/>(HFC)</b>                                    | <b>0</b>                           | <b>675</b>                        |

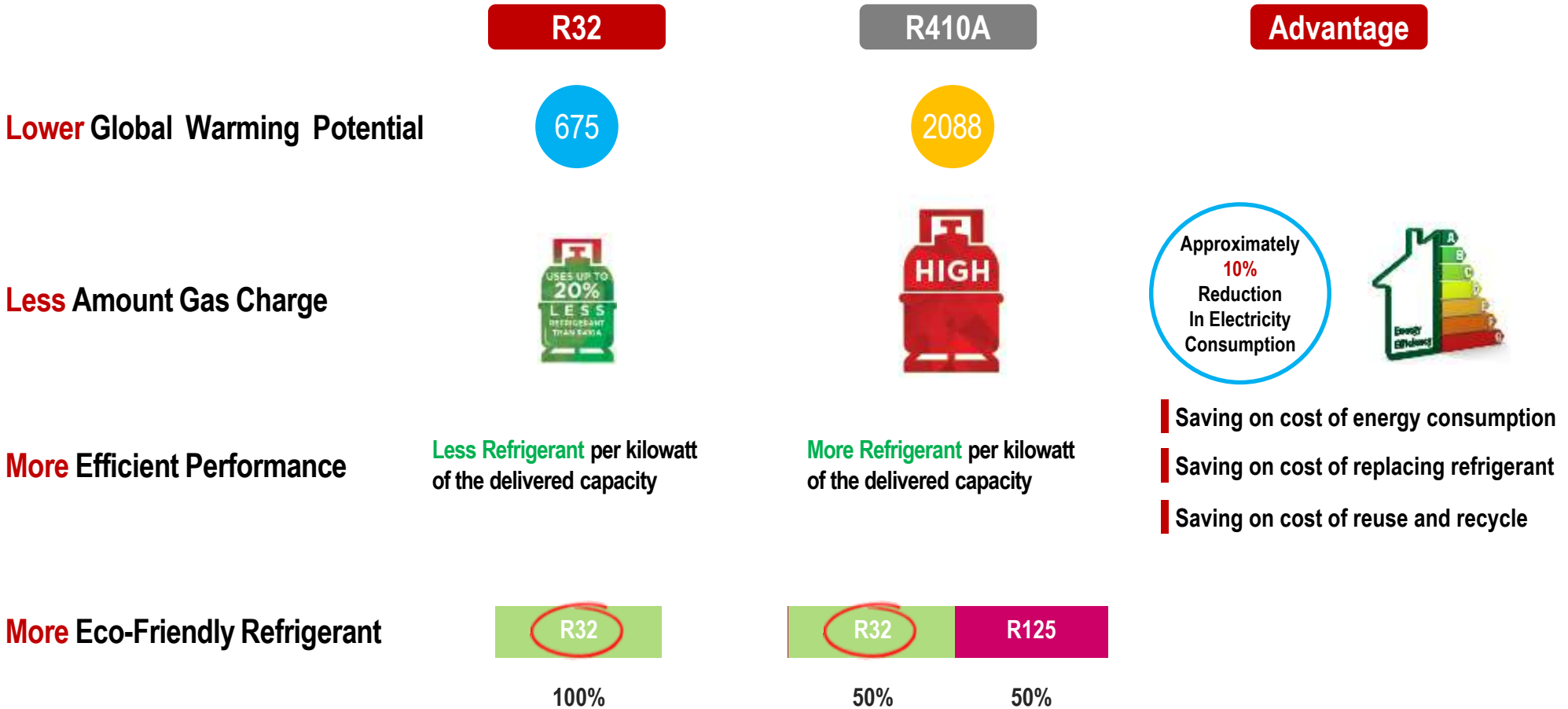
\*67.6% reduction compared to R410A  
\*62.7% reduction compared to R22

\*\*[Source] Values for 100 year Global Warming Potential (GWP) from IPCC Fourth Assessment Report

# R32 (Next-Generation Refrigerant)

Small capacity air-conditioners are being mostly moved toward R32 refrigerant applied and R32 refrigerant has many advantages over R410A refrigerant

Due to the moderate flammability of R32 refrigerant, it is risky to use R32 refrigerant in large volumes in buildings



**[Caution]**

\*More precaution should be needed to use R32 refrigerant due to slightly higher toxicity level

\*Higher discharge temperature may cause oil degradation in the compressor, which may damage some of the components in it



## Why LG Single Split?

---

- Energy Saving
- Reliability
- Comfortable Environment
- Convenient Control System
- Indoor Units



# Why LG Single Split?

## Energy Saving

---

Why LG smart inverter | High Efficiency | Payback app | Annual Energy Saving & Payback  
Dual Sensing Control | Human Detection

## Reliability

---

Dual Inverter Compressor | Wide voltage range | Low noise and Vibration | Wide operation range  
Corrosion Resistance gold fin | Long Pipe Installation

## Comfortable Environment

---

Maintain the Perfect Balance | Provide Customizable Comfort | Provide Clean Air | Air Quality Visualization

## Convenient Control System

---

LG ThinQ™ | Residential Smart Home Solution | Easy Control (Central Controller) | Mobile LGMV  
User-friendly Remote Controller

## Indoor Units

---

4way cassette | 1way cassette | Round cassette | Ceiling suspended | Floor standing | Ceiling duct



# Why LG smart inverter

Energy Saving

## Constant and Variable?

Constant speed runs only ON/OFF operation, while variable speed adjusts its frequency upon external conditions, just like dimmable lighting can be controlled its brightness by ambient light.

Constant speed



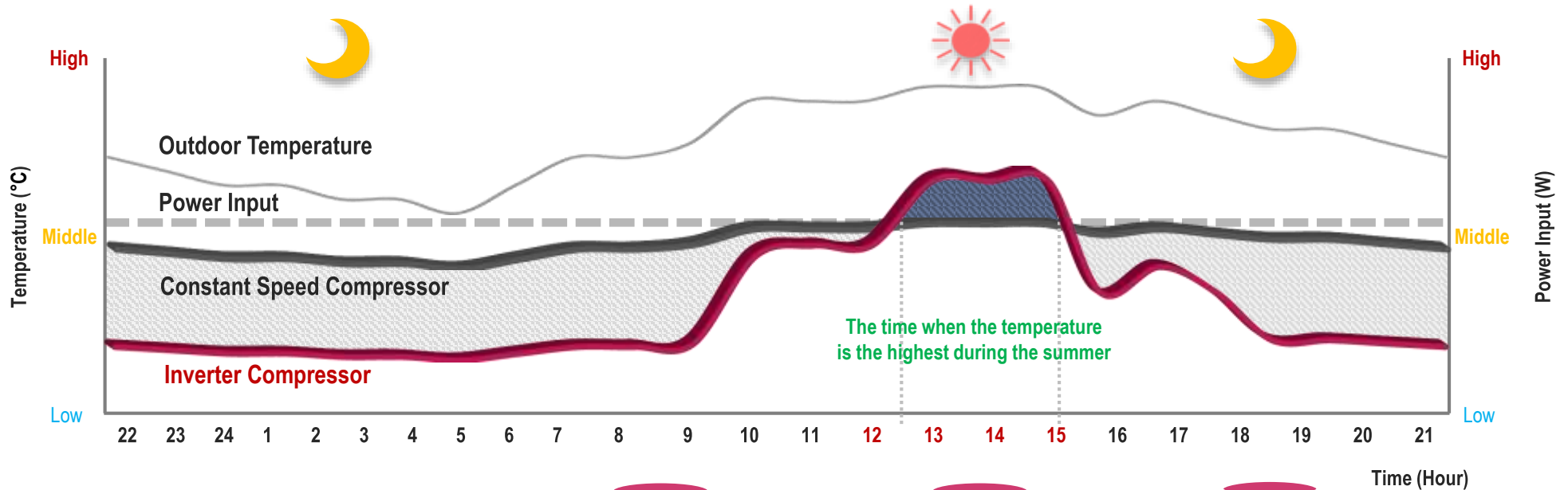
Variable speed



# Why LG smart inverter

Energy Saving

Unlike Constant Speed Compressor, Inverter Compressor can operate optimally depending on the cooling load and correspond to the cooling load sufficiently



Constant Speed Compressor



Energy Wasting



Insufficient Cooling



Energy Wasting



Inverter Compressor



Energy Saving



Sufficient Cooling

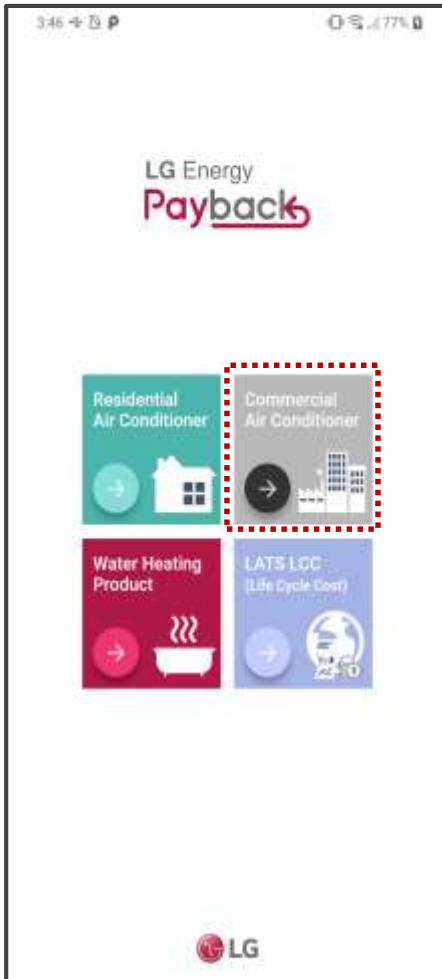


Energy Saving

# Payback Application

Energy Saving

Customers can easily make energy simulations of LG Single CAC products and other products through the Payback application.



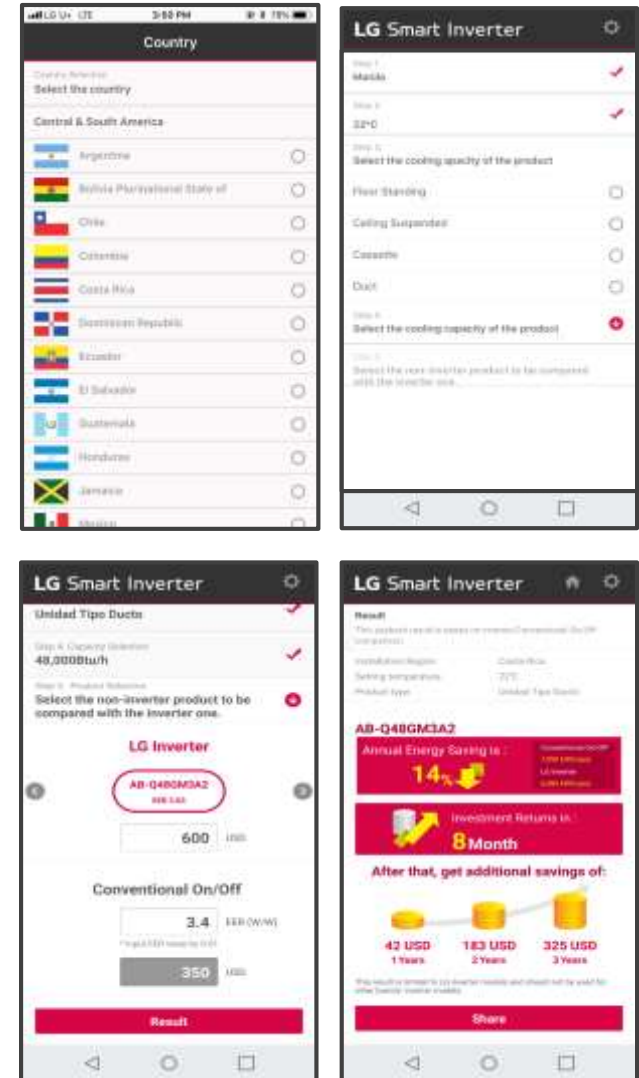
## ➤ Advantages

- You can **use it easily**.
- You can **check the latest product information**.
- You can **share information through e-mail and SNS**.
- You can **manage product maintenance information**.

## ➤ Main Functions



- Annual Energy Usage Comparison
- Annual Energy Consumption



※ You can install the LG Energy Payback application from the Google Play Store for Android phone or the App Store for iPhone.  
※ The LG Energy Payback application may differ according to countries.

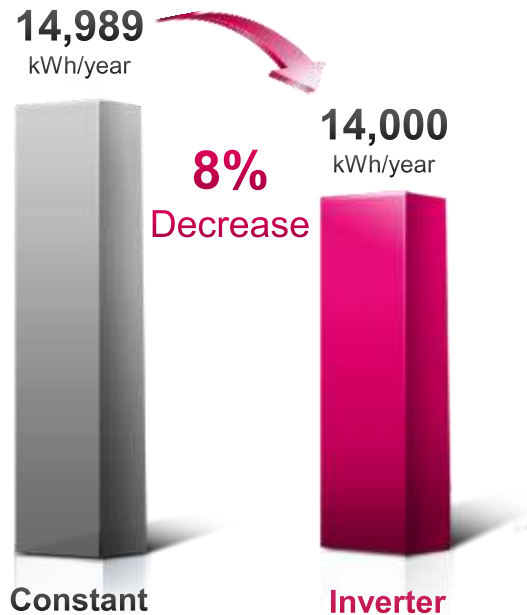
# Annual Energy Saving & Payback \_Vietnam

Energy Saving

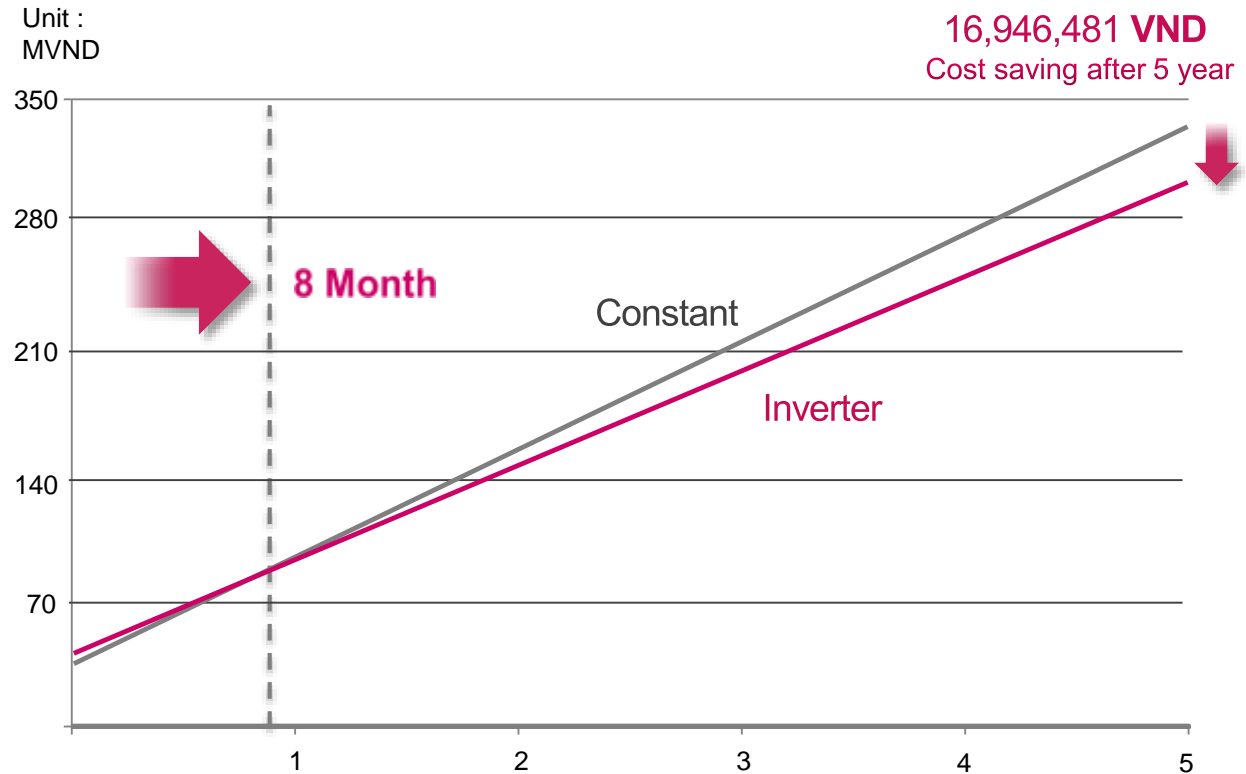
Electricity consumption are expected to decline by 8% compared to Constant model

If you purchase the LG smart inverter, You can get back your investment cost after 8 month.

## Electricity Consumption



## Payback graph



[Conditions]

- Capacity : 36 kBtu/h Cassette
- Operating time : 08:00~20:00
- Cooling partial load and power consumption calculated based on yearly weather data (target indoor temperature: 18°C) Vietnam (Hochiminh)
- Electricity Cost : 3923VND/kWh

※ This result can be different depending on actual environment

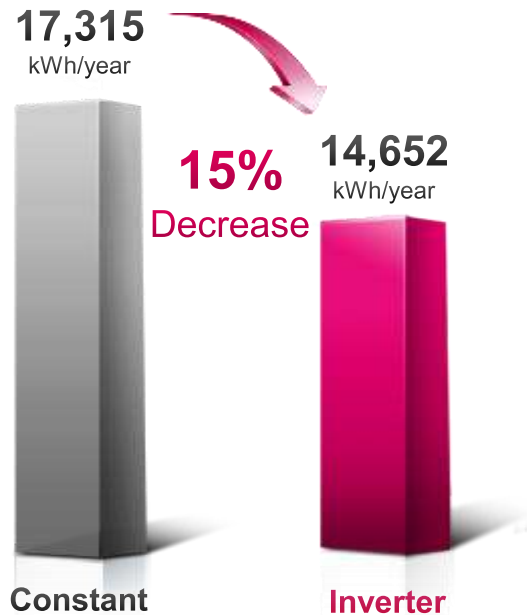
# Annual Energy Saving & Payback \_Indonesia

Energy Saving

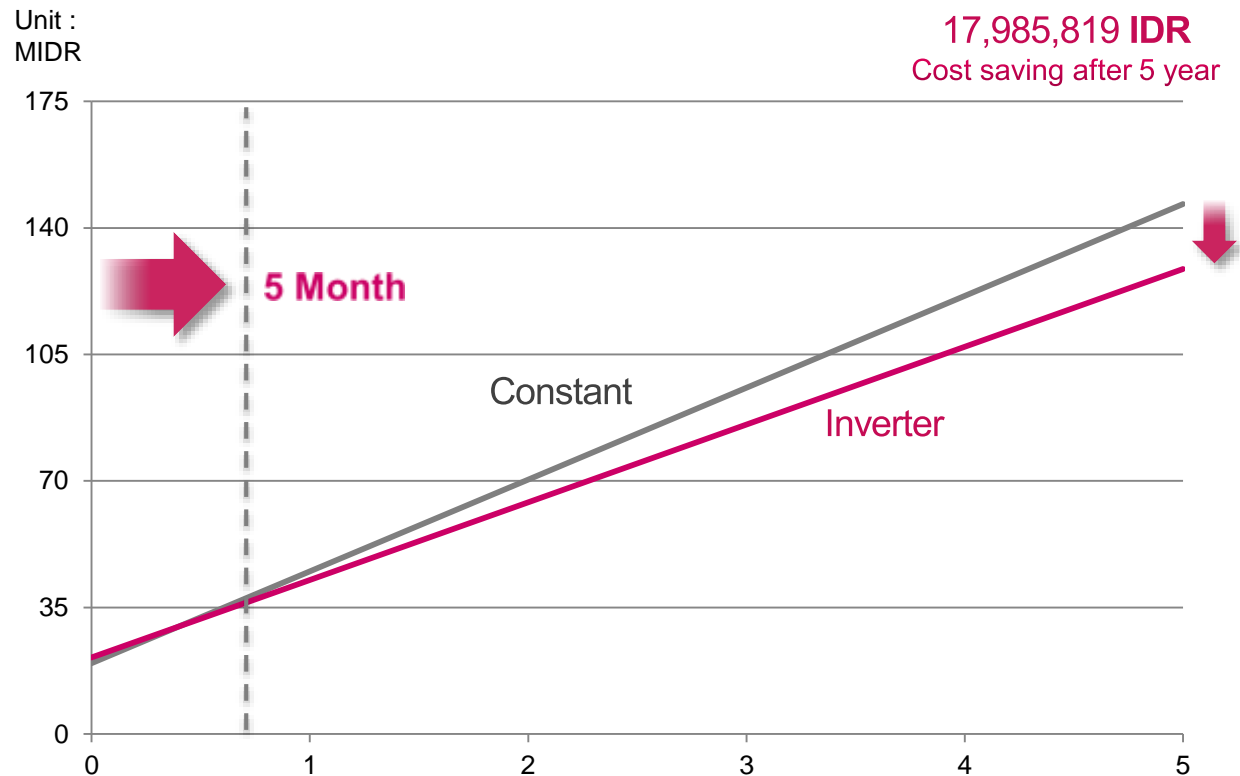
Electricity consumption are expected to decline by 15% compared to Constant model

If you purchase the LG smart inverter, You can get back your investment cost after 5 month.

## Electricity Consumption



## Payback graph



[Conditions]

- Capacity : 36 kBtu/h Cassette
- Operating time : 08:00~20:00
- Cooling partial load and power consumption calculated based on yearly weather data (target indoor temperature: 18°C) Indonesia (Jakarta)
- Electricity Cost : 1467IDR/kWh

※ This result can be different depending on actual environment



# Dual Sensing Control\_ Dry Summer

Energy Saving

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

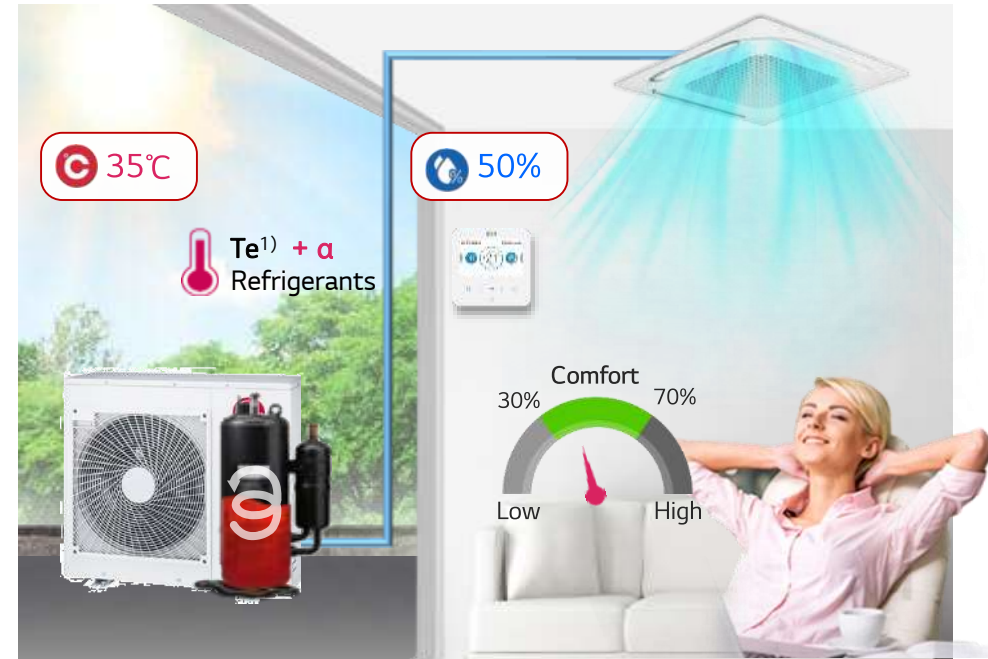
## Previous

- Single sensing Smart Load Control (Temperature only)
- Excessive latent heat elimination regardless of humidity
- Waste Energy to eliminate latent heat



## New

- Dual sensing Smart Load Control (Temperature and Humidity)
- Comfortable environment by making the room less dry
- Increased Seasonal Efficiency



1) Te : Evaporation Temperature

\* Dual Sensing Control requires Standard III Wired Remote Controller(optional).

# Dual Sensing Control\_ Wet Summer

Energy Saving

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.

## Previous

- High humidity condition is not considered by only sensing the room temperature.
- General latent heat elimination regardless of humidity

## New

- Comfortable environment
- With quick latent heat elimination by sensing humidity
- At higher humidity, the compressor runs more powerfully

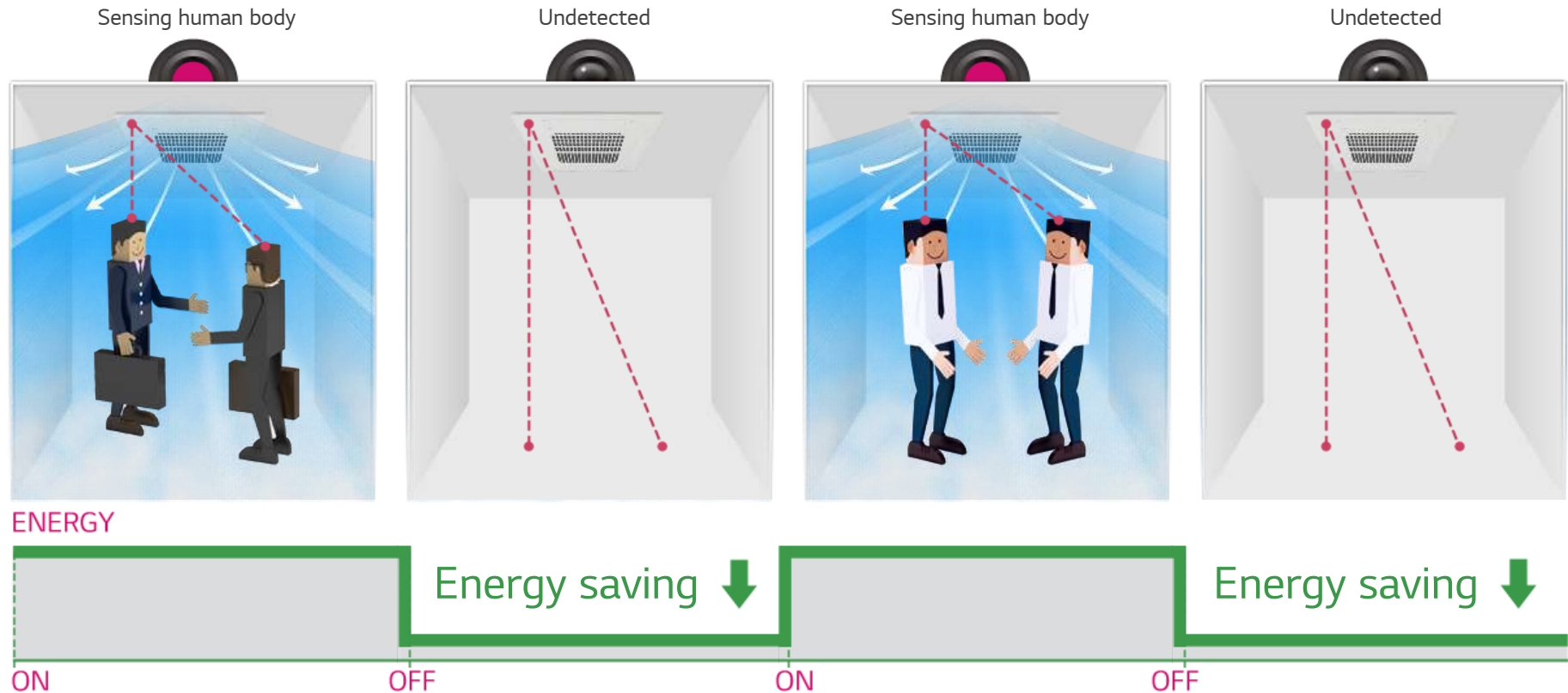


1) Te : Evaporation Temperature

\* Dual Sensing Control requires Standard III Wired Remote Controller(optional)

# Human Detection

The indoor unit automatically stops when detecting absence. It runs as the same as previous mode when sensing human body.



※ Setting screen on the remote controller



※ Sensor is optional accessory (PTVSM A0) : only can be applied to PT-MCHW0(CST Panel)

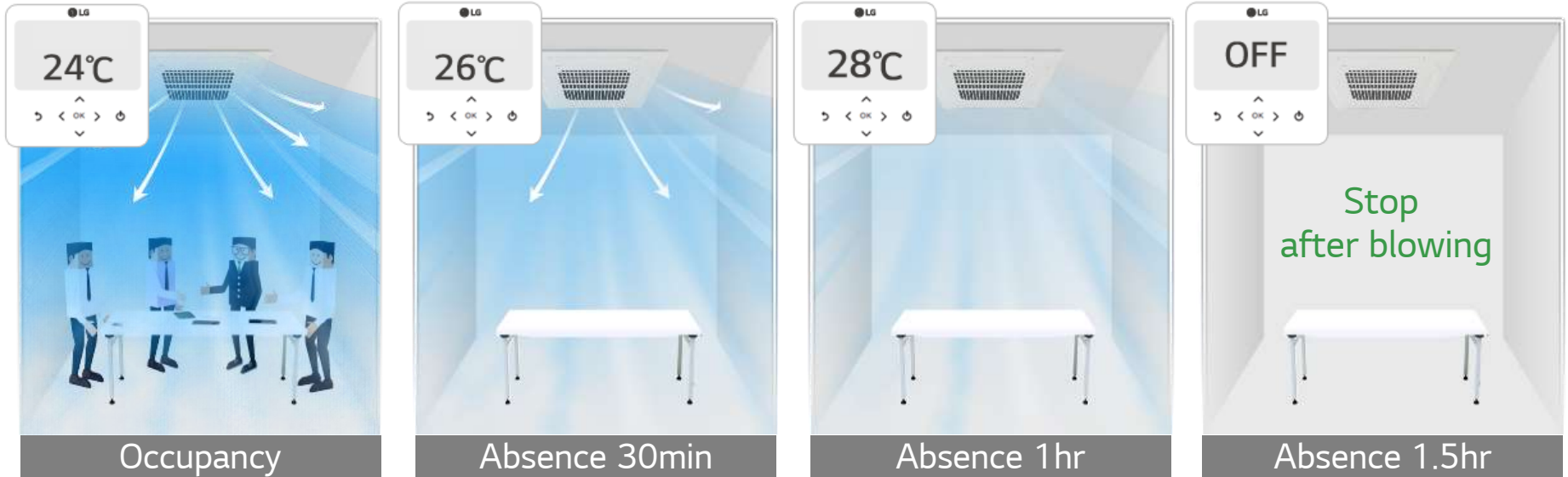
※ To use this function, new remote controller, PREMTB100 or PREMTBB10 is needed



# Human Detection

Energy Saving & Reliability

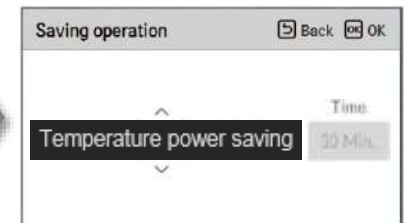
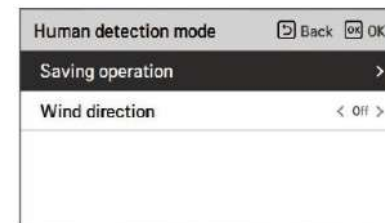
Energy savings by automatically setting target temperature during absence. (5/10/15/30/60/90 min.)



ENERGY



※ Setting screen on the remote controller



※ Sensor is optional accessory (PTVSMA0) : only can be applied to PT-MCHW0(CST Panel)

※ To use this function, new remote controller, PREMTB100 or PREMTBB10 is needed



# Why LG Single Split?

## Energy Saving

---

Why LG smart inverter | High Efficiency | Payback app | Annual Energy Saving & Payback  
Dual Sensing Control | Human Detection

## Reliability

---

Dual Inverter Compressor | Wide voltage range | Low noise and Vibration | Wide operation range  
Corrosion Resistance gold fin | Long Pipe Installation

## Comfortable Environment

---

Maintain the Perfect Balance | Provide Customizable Comfort | Provide Clean Air | Air Quality Visualization

## Convenient Control System

---

LG ThinQ™ | Residential Smart Home Solution | Easy Control (Central Controller) | Mobile LGMV  
User-friendly Remote Controller

## Indoor Units

---

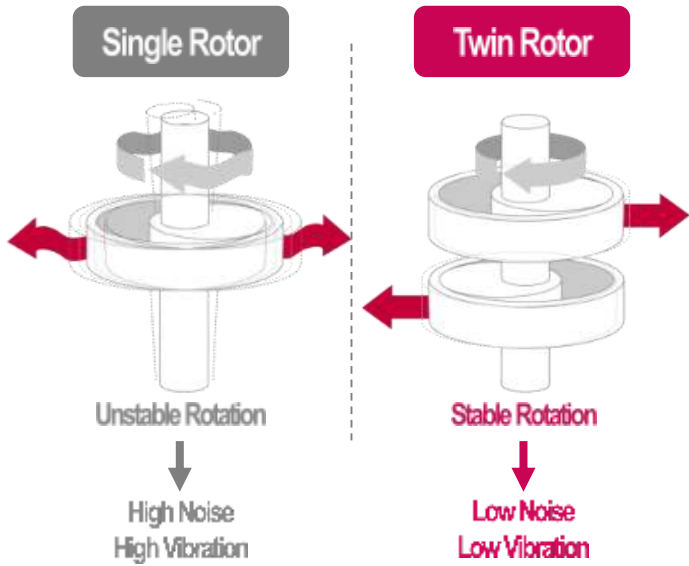
4way cassette | 1way cassette | Round cassette | Ceiling suspended | Floor standing | Ceiling duct

# Dual Inverter compressor

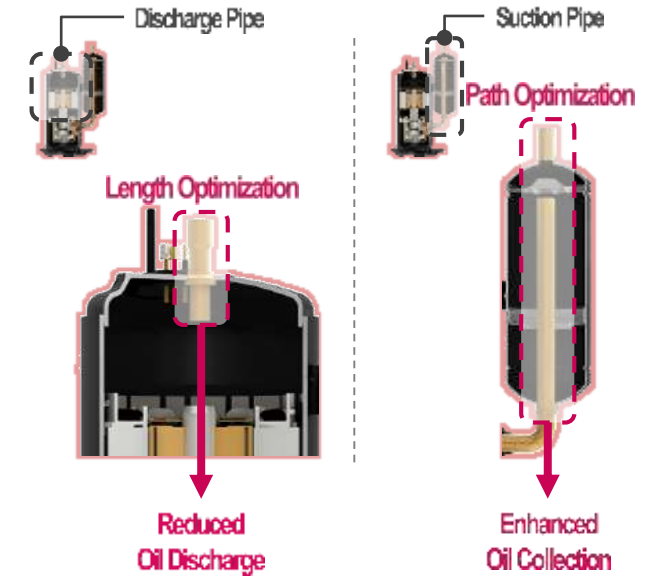
Reliability

The Dual Inverter Compressor has a structure optimized for stability, so it can be operated with low vibration and low noise.

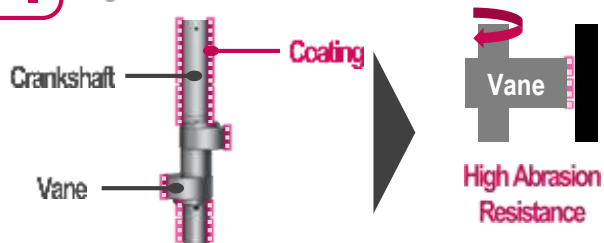
## Twin Rotor Stable Rotation / Low Noise / Low Vibration



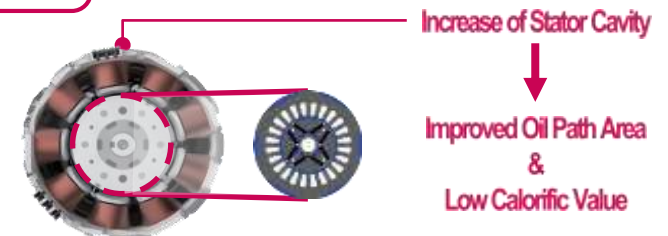
## Flow Optimization Reduced Oil Discharge / Enhanced Oil Collection



## Surface Coating High Abrasion Resistance

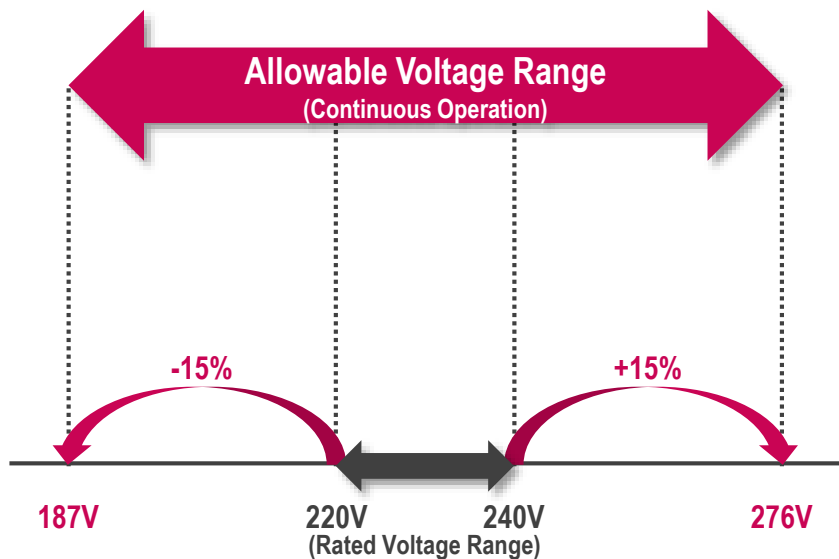


## Concentric Motor Improved Oil Path Area / Low Calorific Value

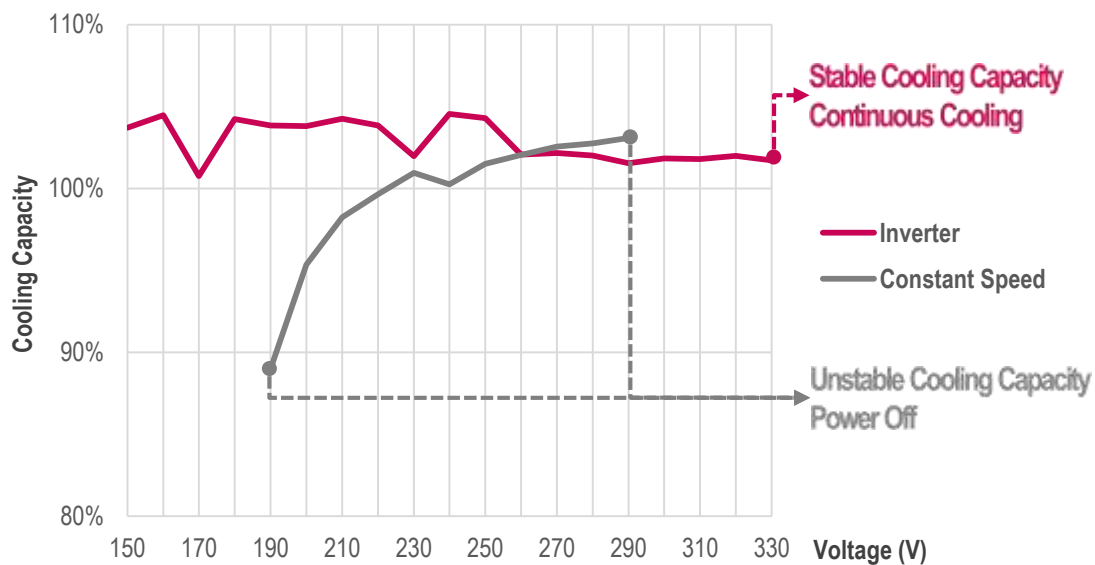


# Wide voltage range

The outdoor unit can operate in a wide range of voltages thanks to the inverter compressor. Its capacity is more stable according to the voltage change compared to that of the constant speed compressor product.



## Cooling Capacity according to Voltages



### Constant Speed Comp.

- ① **Unstable Cooling Capacity**
  - 130% of cooling capacity at 290V.
  - 89% of cooling capacity at 190V
- ② **Power Off**
  - If the voltage exceeds 290V
  - If the voltage is less than 190V

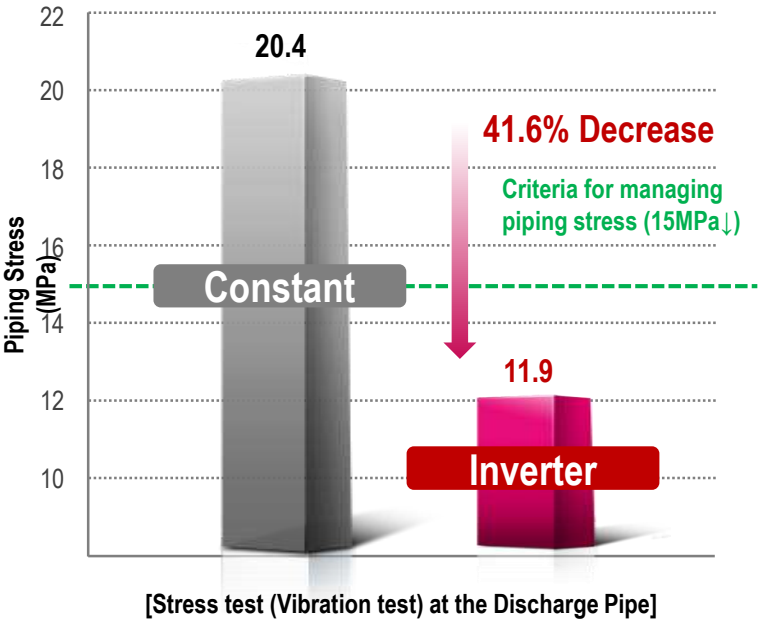
### Inverter Comp.

- ① **Stable Cooling Capacity**
- ② **Continuous Cooling**

※ The test result may vary depending on the surrounding environment.  
 ※ Click on the magnifying glass mark to see the LG internal test result.

Piping Stress of Twin Rotary Inverter Compressor's discharge pipe can be reduced to approximately 41.6% compared to Constant Speed Compressor, which leads to low vibration, low noise and enhanced durability

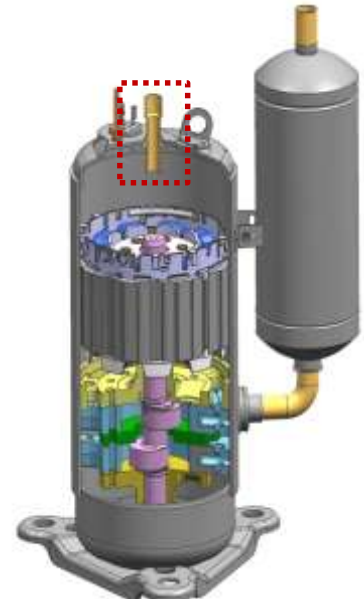
## Piping Stress



## Constant



## Inverter



\*\*[Test Condition]

- 1) Test Models : AP-H488T2A0 (Constant), ZUUQ\*\*GA0 (Inverter)
- 2) Indoor Ambient Temperature : 27°C
- 3) Outdoor Ambient Temperature : 35°C

\*\*The test has been carried out in LG Electronics

\*\*The result can be different depending on actual environment

As the Piping Stress Increases

- i) Noise Increases
- ii) Vibration Increases
- iii) Reliability Decreases

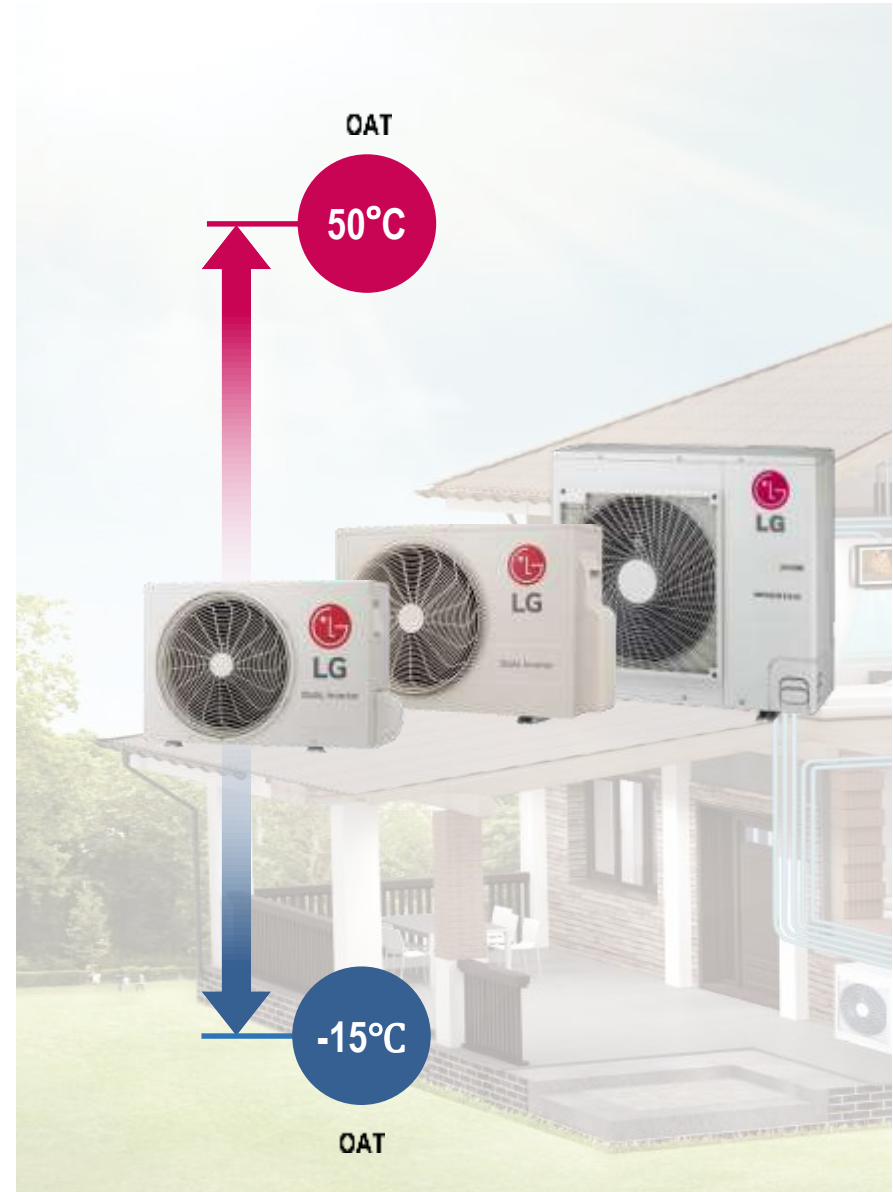
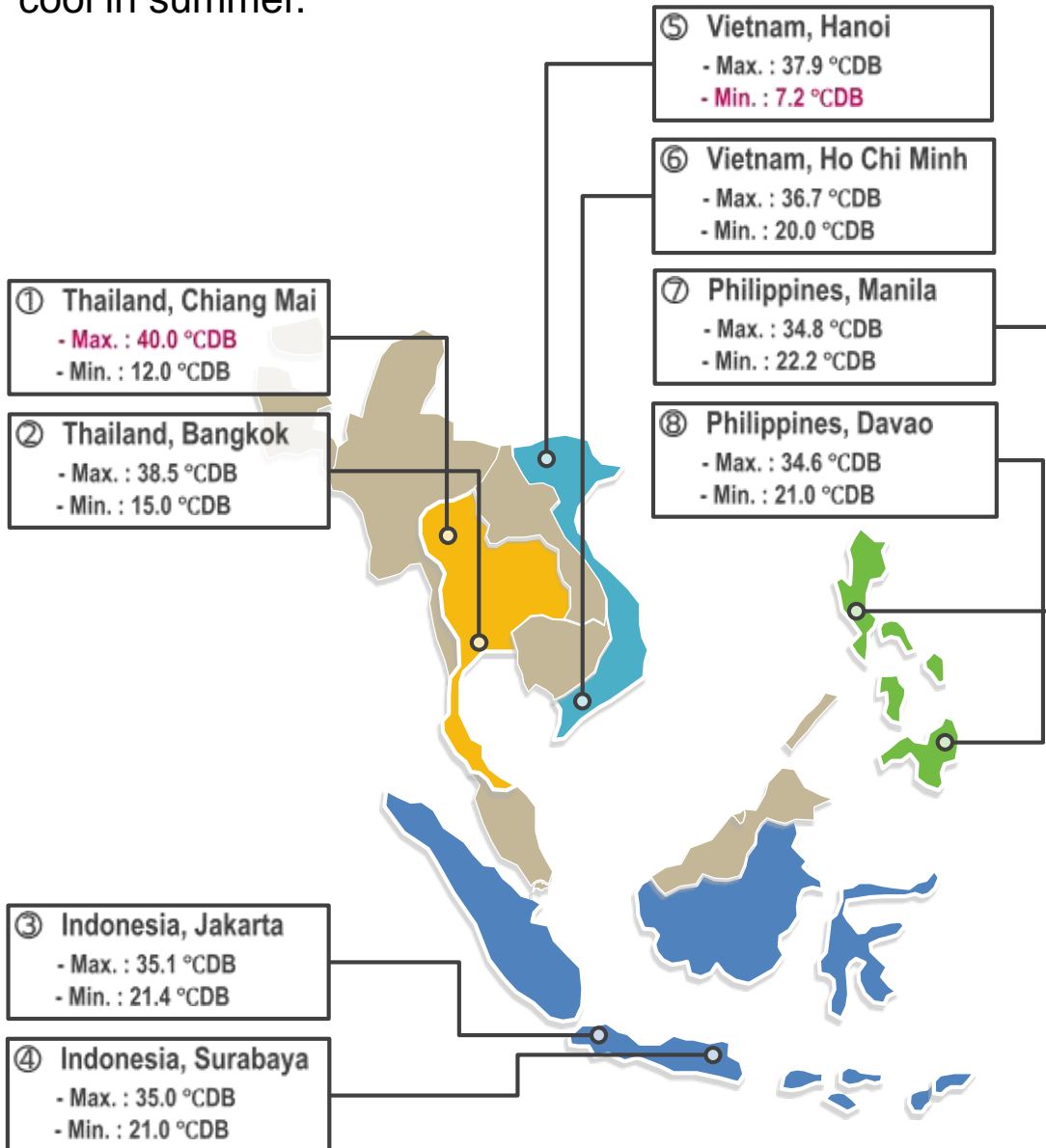
As the Piping Stress Decreases

- i) Noise Decreases
- ii) Vibration Decreases
- iii) Reliability Increases

# Wide Operation range

Reliability

LG Inverter product can be operated even at an outdoor temperature of 48°C, so customer can stay cool in summer.



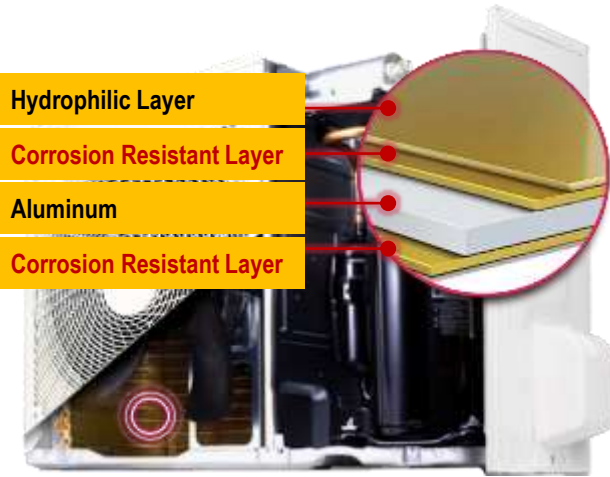


# Corrosion Resistance Gold Fin

Reliability

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

## Gold Fin



**Resistant to Corrosion**

## Test Standard

LG (70)-E-1026 : 2018 Aluminum plate coil III

ISO 9227 : 2017 Corrosion tests in artificial atmospheres – Salt Spray Tests

ASTM B 117 Standard Practice for Operating Salt Spray (Fog) Apparatus

ISO 10289 : 1999 Method corrosion testing of metallic and other inorganic coatings on metallic substrates

KS D 9502 : 2019 Salt Spray Test Method

## Test Results

|             |  |   |   |
|-------------|--|---|---|
| Test period | 2019-06-17 ~ 2020-02-28 (5000 h)   |   |   |
| Criteria    | Not more than 0.05 % of corrosion area ratio. (over R.N. 9.5)  |   |   |
| Results     | Pass.  |   |   |
|             | #1   | #2  | #3  |
|             | RN 9.5   | RN 9.8  | RN 9.8  |
|             | Not more than 0.05 % of corrosion area ratio.  | Not more than 0.02 % of corrosion area ratio. | Not more than 0.02 % of corrosion area ratio. |
| Photos      | #1   | #2  | #3  |
|             |  |   |   |
| Remark      | The results obtained do not permit far-reaching conclusions on the corrosion resistance of the tested. |   |   |

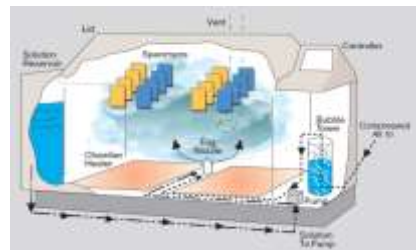
**Salt Spray Test Result** (5% Area of defects compared to initial)

5,000 hr

Fog (35°C, RH 95%)



Gold Fin



## Certified Test Report

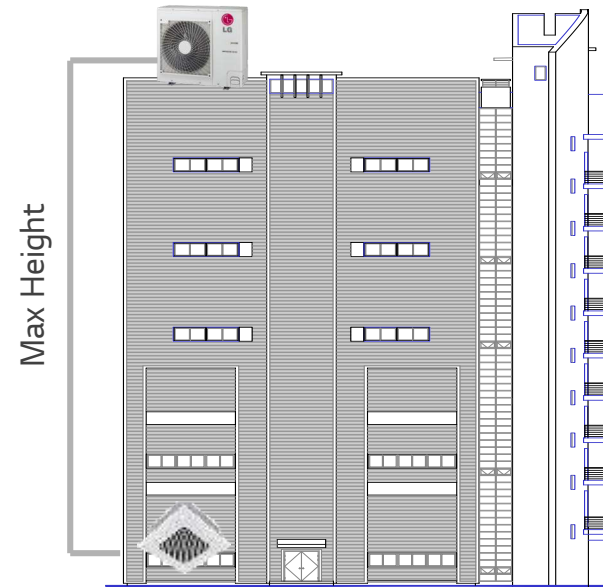
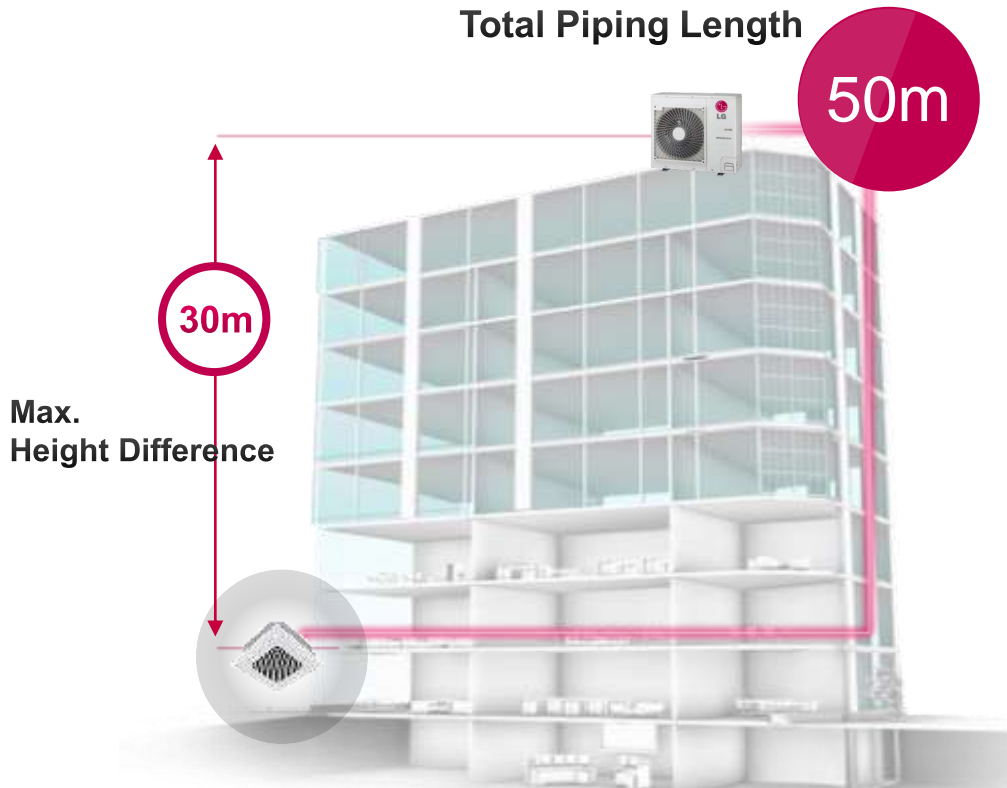
|  |   |   |
|--|---|---|
|  |   |   |
| Prüfbericht - Nr.: 50350573 001<br>Test Report No.:  | Auftrags-Nr.: 156108781<br>Order No.:   | Seite 1 von 6<br>Page 1 of 6  |
| Kunden-Referenz-Nr.: S.J. Seo<br>Client Reference No.:   | Auftragsdatum:<br>Order date: 2019-05-17  |   |
| Auftraggeber:<br>Client: LG Electronics Inc.<br>84, Wanae-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, 51554, Rep. of Korea   |   |   |
| Prüfgegenstand:<br>Test item: Aluminum sheet of heat exchanger of air conditioner  |   |   |
| Bezeichnung / Typ-Nr.:<br>Identification / Type No.: Corrosion improved aluminum fin (Gold II)   |   |   |
| Auftrags-Inhalt:<br>Order content: Performance test  |   |   |
| Prüfgrundlage:<br>Test Specification: LG(70)-E-1026:2018<br>ISO 9227:2017, ASTM B117<br>ISO 10289:1999, KS D 9502:2019   |   |   |
| Wareneingangsdatum:<br>Date of receipt: 2019-06-17   |   |   |
| Prüfmuster-Nr.:<br>Test sample No.:  |   |   |
| Prüfzeitraum:<br>Testing period: 2019-06-17 ~ 2020-02-28   |   |   |
| Ort der Prüfung:<br>Place of testing: LG Electronics Inc.<br>Changwon R&D center   |   |   |
| Prüflaboratorium:<br>Testing laboratory: LG Electronics Inc.<br>Changwon R&D center  |   |   |
| Prüfergebnis:<br>Test result: Pass   |   |   |
| geprüft/ Tested by:  | kontrolliert/ reviewed by:  |   |
| 2020-03-10<br>Date   | Sang-Min Kim<br>Date  |   |
| Name/Bezeichnung<br>Name/Position  | Unterschrift<br>Signature   | Unterschrift<br>Signature   |
| Sonstiges / Other:   |   |   |
| Zustand des Prüfgegenstandes bei Anlieferung:<br>Condition of the test item at delivery:   |   | Prüfmuster vollständig und unbeschädigt<br>Test item complete and undamaged |
| 1 = sehr gut<br>2 = gut<br>3 = befriedigend<br>4 = ausreichend<br>5 = mangelhaft   | 6 = nicht geprüft<br>7 = nicht gelistet<br>8 = nicht anwendbar<br>9 = nicht spezifiziert<br>10 = nicht spezifiziert<br>11 = nicht spezifiziert<br>12 = nicht spezifiziert<br>13 = nicht spezifiziert<br>14 = nicht spezifiziert<br>15 = nicht spezifiziert<br>16 = nicht spezifiziert<br>17 = nicht spezifiziert<br>18 = nicht spezifiziert<br>19 = nicht spezifiziert<br>20 = nicht spezifiziert |   |
| Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht ausserwesentlich vervielfältigt werden. Dieser Bericht hinsichtlich nicht zur Verwendung eines Prüfzeichens.<br>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark |   |   |
| TÜV Rheinland Korea Ltd. Young City, H-Cover, 35, Midde-ro 28-gil, Yeongju-si, Gyeongsangbuk-do, Seoul 407298, Rep. of Korea<br>Tel. +82 2 950 9082, Fax. +82 2 950 9881 Mail: enlg@kor.tuv.com Web: www.kor.tuv.com   |   |   |

# Long Pipe Installation

Reliability

Maximum pipe length up to 50m and elevation length up to 30m provides flexibility for various condition and easy installation.

| Model name                          | ZUAA1 | ZUAB1 | ZUAC1 | ZUAD1/3 | ZUAE1/3 |
|-------------------------------------|-------|-------|-------|---------|---------|
| Maximum pipe length                 | 30m   | 30m   | 50 m  | 50 m    | 50 m    |
| Maximum Height Difference (ODU-IDU) | 15m   | 20m   | 30 m  | 30 m    | 30 m    |



[Test condition]

- Location : LG HQ
- Installation : Apply the maximum pipe length by model
- Period : 3 month (checking oil level in real time)
- No use U-Trap



# Why LG Single Split?

## Energy Saving

---

Why LG smart inverter | High Efficiency | Payback app | Annual Energy Saving & Payback  
Dual Sensing Control | Human Detection

## Reliability

---

Dual Inverter Compressor | Wide voltage range | Low noise and Vibration | Wide operation range  
Corrosion Resistance gold fin | Long Pipe Installation

## Comfortable Environment

---

Maintain the Perfect Balance | Provide Customizable Comfort | Provide Clean Air | Air Quality Visualization

## Convenient Control System

---

LG ThinQ™ | Residential Smart Home Solution | Easy Control (Central Controller) | Mobile LGMV  
User-friendly Remote Controller

## Indoor Units

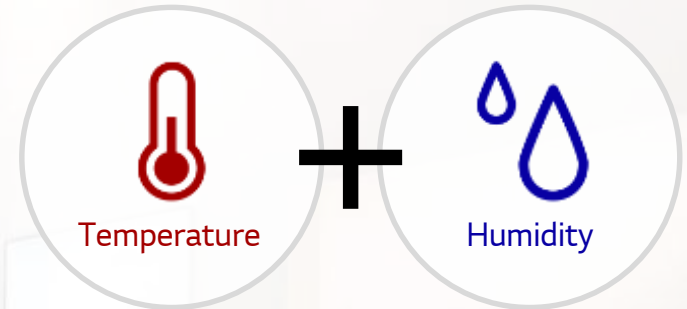
---

4way cassette | 1way cassette | Round cassette | Ceiling suspended | Floor standing | Ceiling duct

# Maintain the Perfect Balance

Comfortable Environment

By sensing both temperature and humidity, this feature helps avoid over-cooling and dehumidification, maximizing comfort



\* Dual Sensing Control requires Standard III Wired Remote Controller(optional)

# Provide Customizable Comfort

Comfortable Environment

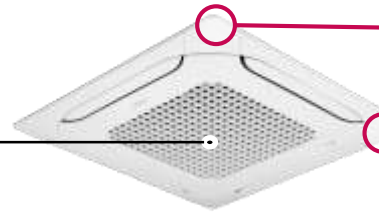
A unit can sense a customer's presence and provide you with direct/indirect airflow options to make your space more comfortable



# Provide Clean Air \_4Way Cassette

Comfortable Environment

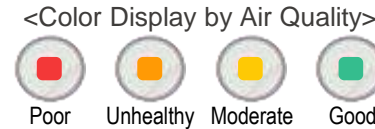
5-Step air cleaning process removes invisible, ultra fine dust, odor and germs to ensure a clean and healthy living environment



PM1.0 Sensor



Smart Indicator



## 5-Steps Air Cleaning Process

### » 5th Step – Ionizer

deactivate bacteria and virus that cause food poisoning and pneumonia

### » 4th Step – Deodorization

High efficiency gas absorption technology by application of corotation concept  
Deodorizing Efficiency Up!  
Pressure loss Down!

### » 3rd Step – Captures Microfine dust

Fine to ultra-fine dust  
removal of up to 99%

### » 2nd Step – Dust Electrification

Anion increases the electrostatic force of dust Improves dust  
collection efficiency on filter

### » 1st Step – Pre-filter

Multi layer structure allows dust removal efficiency to be 2.5  
times higher and dust is also reduced by more than 40%



※ Air purification kit and panel are optional. Electrical diffusion makes dust electrification.

※ Air Purification Kit Air Cleaning Performance





# Provide Clean Air \_1Way Cassette

Comfortable Environment

5-Step air cleaning process removes invisible, ultra fine dust, odor and germs to ensure a clean and healthy living environment



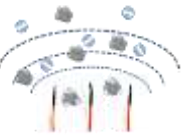
## ➤ 1st Step – Pre-filter

Multi layer structure allows dust removal efficiency to be 2.5 times higher and dust is also reduced by more than 40%



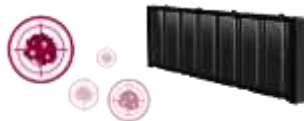
## ➤ 2nd Step – Dust Electrification

Anion increases the electrostatic force of dust Improves dust collection efficiency on filter



## ➤ 3rd Step – Captures Microfine dust

Fine to ultra-fine dust removal of up to 99%



## ➤ 4th Step – Deodorization

High efficiency gas absorption technology by application of corotation concept  
Deodorizing Efficiency Up!  
Pressure loss Down!



## ➤ 5th Step – Ionizer

deactivate bacteria and virus that cause food poisoning and pneumonia



※ Air purification kit and panel are optional. Electrical diffusion makes dust electrification.

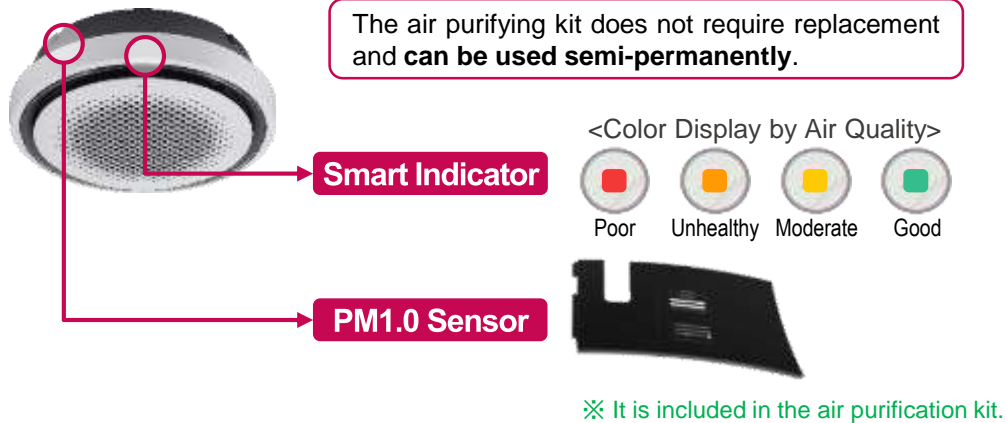
※Air Purification Kit Air Cleaning Performance



# Provide Clean Air \_Round Cassette

Comfortable Environment

4-Step air cleaning process removes invisible, ultra fine dust, odor and germs to ensure a clean and healthy living environment



## 4-Steps Air Cleaning Process

### ➤ 4th Step – Deodorization filter

This filter can trap odor & harmful gases.



### ➤ 3rd Step – PM1.0 filter

Fine to ultra-fine dust removal of up to 99%



### ➤ 2nd Step – Dust Electrification

This component releases ions to increase the electrostatic force of the particles, improving the capture efficiency of the PM1.0 filter.



### ➤ 1st Step – Pre-filter

This filter traps large dust particles first when the indoor air enters the indoor unit.



## Wired Remote Controller



## Air Quality Visualization (Control & Monitoring)



| Classification | Good | Moderate | Unhealthy | Poor |
|----------------|------|----------|-----------|------|
| PM10 (µg/m³)   | 0~54 | 55~154   | 155~254   | 255~ |
| PM2.5 (µg/m³)  | 0~12 | 13~35    | 36~55     | 56~  |
| PM1.0 (µg/m³)  | 0~12 | 13~35    | 36~55     | 56~  |

※ Display color may change depending on the region / country.

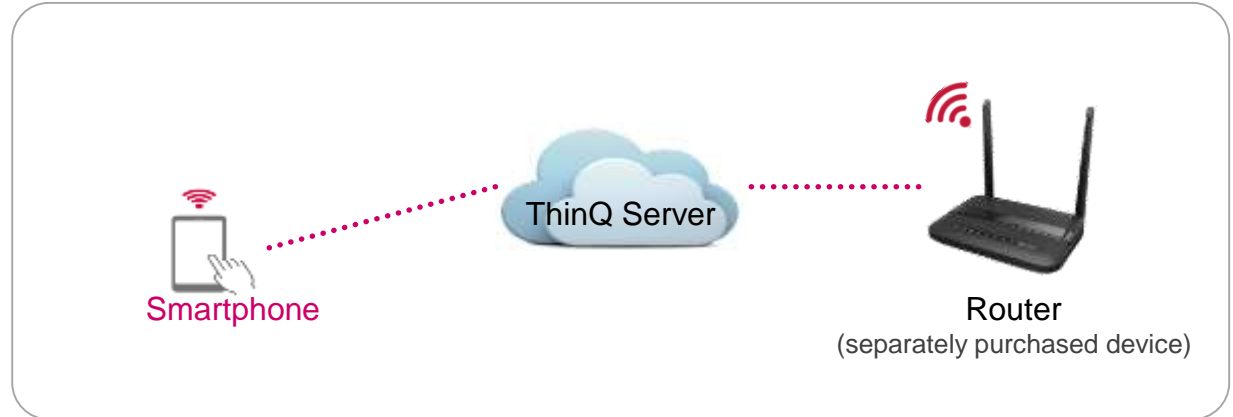


### LG ThinQ



AVAILABLE ON THE  
App Store

GET IT ON  
Google play



#### Mobile Remote Control

- Power On / Off
- Mode Setting
- Fan Speed Setting
- Air Flow

#### Air Purification Control

- On / Off



#### Air Quality Monitoring

- PM 10
- PM 2.5
- PM 1.0
- Graph View of Measurement History (Day, Week, Month, Year)



※ The LG ThinQ application can be downloaded from the Google Play or App Store application.  
※ Available functions may differ depending on the model.  
※ Wi-Fi modem(PWFMDD200) is an accessory.



# Why LG Single Split?

## Energy Saving

---

Why LG smart inverter | High Efficiency | Payback app | Annual Energy Saving & Payback  
Dual Sensing Control | Human Detection

## Reliability

---

Dual Inverter Compressor | Wide voltage range | Low noise and Vibration | Wide operation range  
Corrosion Resistance gold fin | Long Pipe Installation

## Comfortable Environment

---

Maintain the Perfect Balance | Provide Customizable Comfort | Provide Clean Air | Air Quality Visualization

## Convenient Control System

---

LG ThinQ™ | Residential Smart Home Solution | Easy Control (Central Controller) | Mobile LGMV  
User-friendly Remote Controller

## Indoor Units

---

4way cassette | 1way cassette | Round cassette | Ceiling suspended | Floor standing | Ceiling duct

Control your air conditioners using the smart internet devices as Android or iOS based smartphones



\*Wi-Fi is installed



- On/Off
- Mode Selection
- Current temperature
- Set temperature
- Reservation
- Filter Management
- Smart Diagnosis
- Vane Control

### Mobile Remote Control

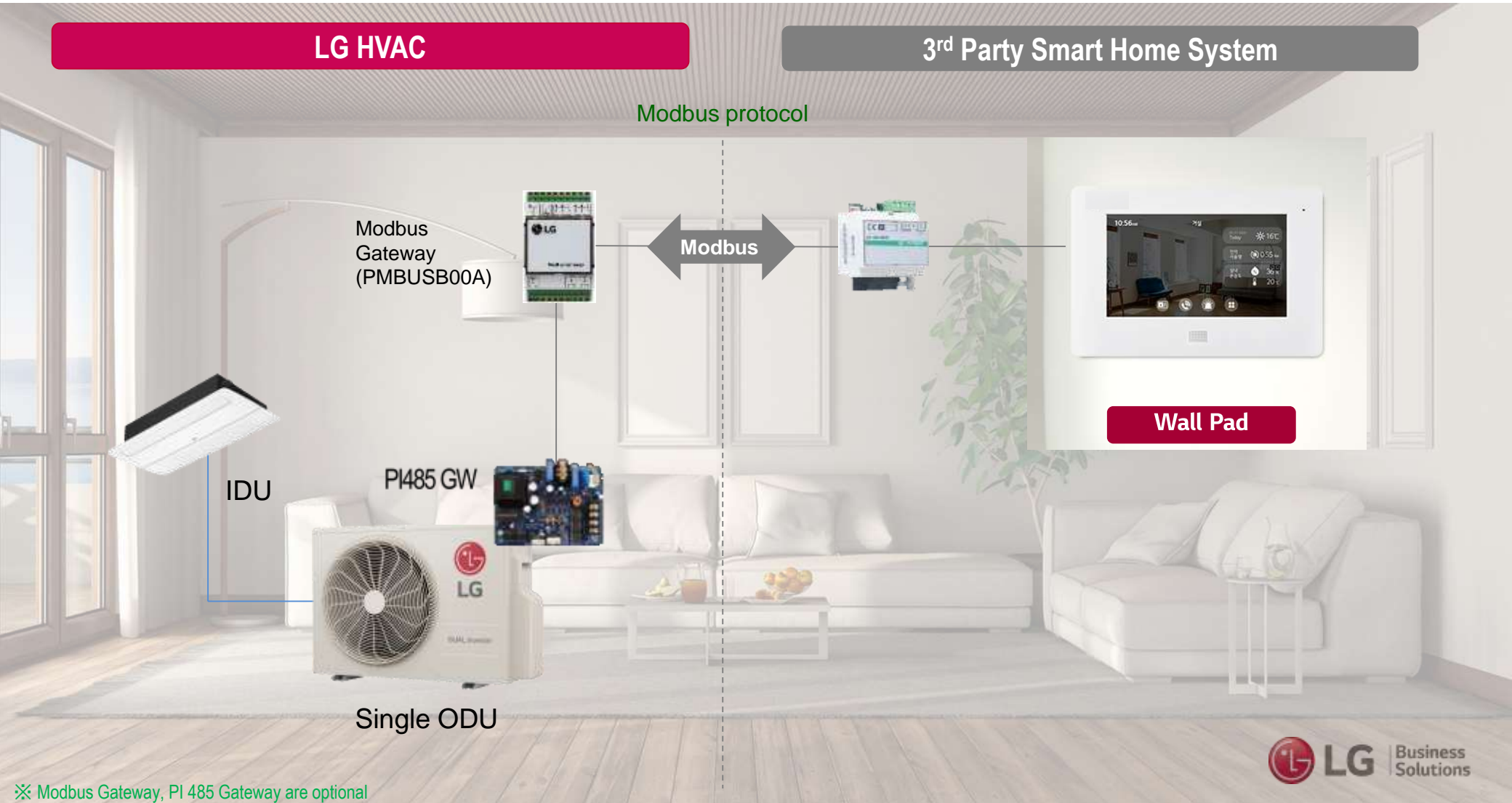
Remote control by using mobile phone



# Residential Smart Home Solution

Convenient Control System

Establishment of smart home interlocking solution to target the residential market



※ Modbus Gateway, PI 485 Gateway are optional

# Easy Control (Central Controller)

Convenient Control System

PI-485 is a gateway device that provides communication between LG Outdoor Units and LG central controllers such as ACP, AC Smart.

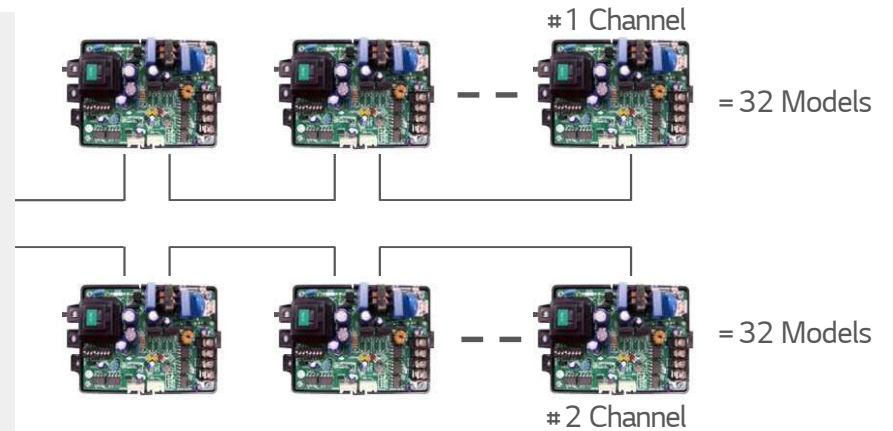


※ CN\_PWR:  
AC 220V Connector

※ BUS\_A & BUS\_B:  
RS-485 (+) & (-)

PI 485 Gateway  
(PMNFP14A1)

|   |  |   |
|---|--|---|
|   |  |   |
| <p>AC Ez Touch<br/>(PACEZA000)<br/>Max. 1 Channel<br/><b>Max. 32 unit</b></p> | <p>AC Smart 5<br/>(PACS5A000)<br/>Max. 2 Channels<br/><b>Max. 128 unit</b></p> | <p>ACP 5<br/>(PACP5A000)<br/>Max. 4 Channels<br/><b>Max. 256 unit</b></p> |





LGMV (Monitoring View) helps engineers to inspect and monitor air conditioning unit easily.



### Error Indicator

| Error Code | Contents   |
|------------|--|
| 01         | Air temperature sensor of indoor unit                          |
| 02         | Inlet pipe temperature sensor of indoor unit                   |
| 03         | Communication error :<br>Wired Remote Controller ↔ Indoor Unit |
|            | ⋮  |



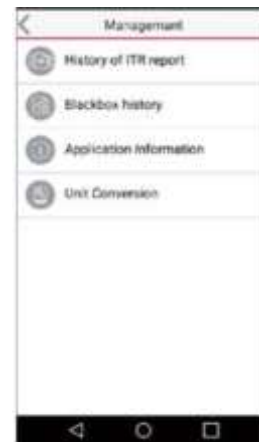
Cycle Monitoring



Diagnosis



Installation



Smart Management

A technician not only can check the cycle information with diagrams & graph, but also check easily the error status (troubleshooting guide) and take action immediately.

※ Search "Mobile LGMV" on Google or Apple store then download the app.

※ Wi-Fi modem (PWFMD200) is required by option.

# User-friendly Remote Controller

Convenient Control System

Standard III Wired Remote Controller is designed for luxurious interior design and is designed to easily control an indoor unit with a simple button layout.

## User-friendly Design

- Intuitive and easy-to use
- 4.3 inch display & circular icon
- simple button layout.



## Easy Operation Scheduling

- Users can easily set the operation schedule from daily to yearly.



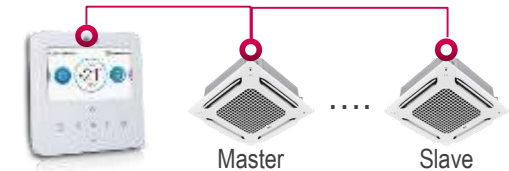
## Multiple Language Support

- English, French, German, Spanish, Italian Portuguese, Polish, Czech, Russian, Chinese

Standard III  
Wired Remote Controller

## Group Control

- Many indoor units can be controlled at a time.



## Temperature & Humidity Display

- It has a temperature sensor and a humidity sensor, so it can display indoor air temperature and humidity.



## External Equipment Control

- Users can turn on or off the external equipment through the 1 digital output port.





# Why LG Single Split?

## Energy Saving

---

Why LG smart inverter | High Efficiency | Payback app | Annual Energy Saving & Payback  
Dual Sensing Control | Human Detection

## Reliability

---

Dual Inverter Compressor | Wide voltage range | Low noise and Vibration | Wide operation range  
Corrosion Resistance gold fin | Long Pipe Installation

## Comfortable Environment

---

Maintain the Perfect Balance | Provide Customizable Comfort | Provide Clean Air | Air Quality Visualization

## Convenient Control System

---

LG ThinQ™ | Residential Smart Home Solution | Easy Control (Central Controller) | Mobile LGMV  
User-friendly Remote Controller

## Indoor Units

---

4way cassette | 1way cassette | Round cassette | Ceiling suspended | Floor standing | Ceiling duct

Inverter Single Split

# Indoor unit

Ceiling Mounted Cassette  
4way



# Stylish Design Panel

4Way Ceiling Cassette

4 way cassette panel adapted a unibody shape that matches with the ceiling.



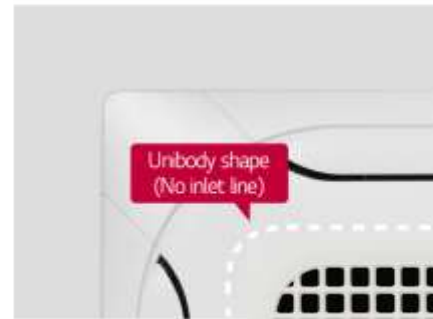
## STYLISH DESIGN PANEL

New 4 way cassette panel adapted a unibody shape that matches with the ceiling.

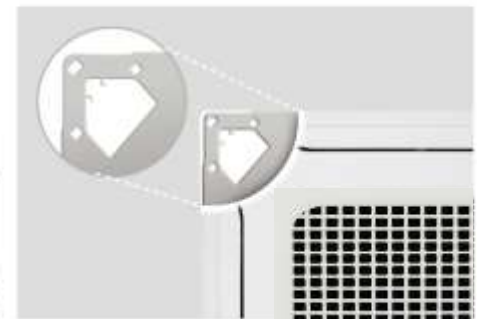
Interior fit



Lineless surface



Detachable corner



## HUMAN DETECTION SENSOR & HUMIDITY SENSOR



Human detection sensor  
(PTVSMAD)

- Apply human detection sensor
- Apply vision sensor
- Saving energy
- Supply comfortable air flow
- The sensor is an optional accessory that can only be applied on PT-MCGW0



reddot design award

# Compact Size

## 4Way Ceiling Cassette

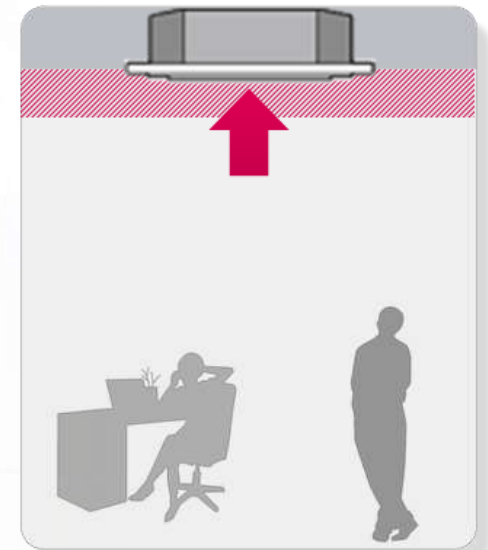
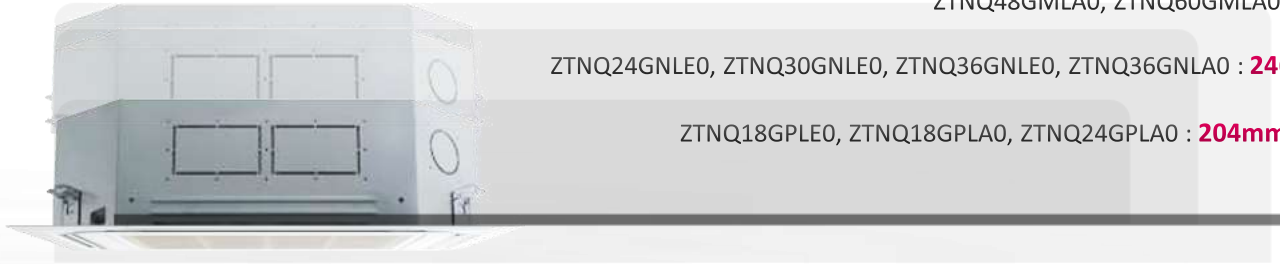
Slim & compact design not only saves space but also reduces installation costs. It's designed to suit most of building designs and fit into various spaces.

Length Width : 840X840mm

ZTNQ48GMLA0, ZTNQ60GMLA0 : **288mm**

ZTNQ24GNLE0, ZTNQ30GNLE0, ZTNQ36GNLE0, ZTNQ36GNLA0 : **246mm**

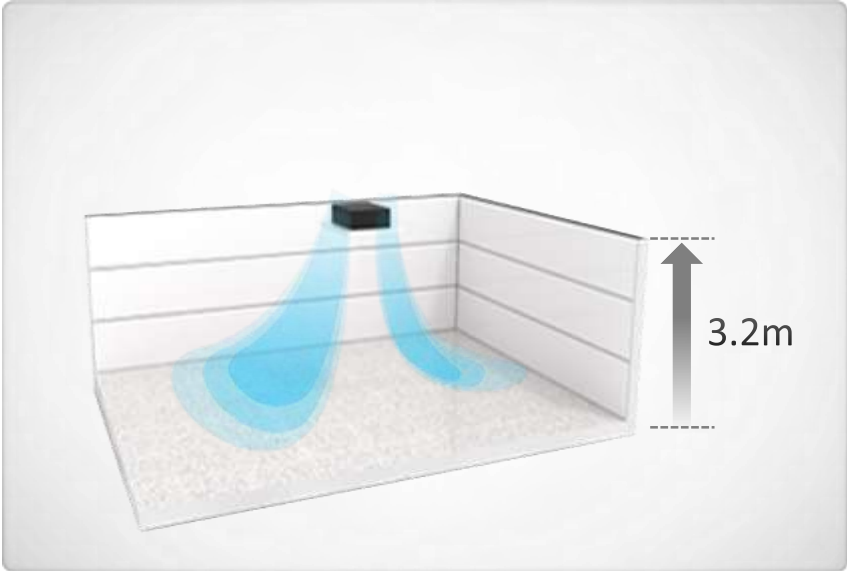
ZTNQ18GPLE0, ZTNQ18GPLA0, ZTNQ24GPLA0 : **204mm**



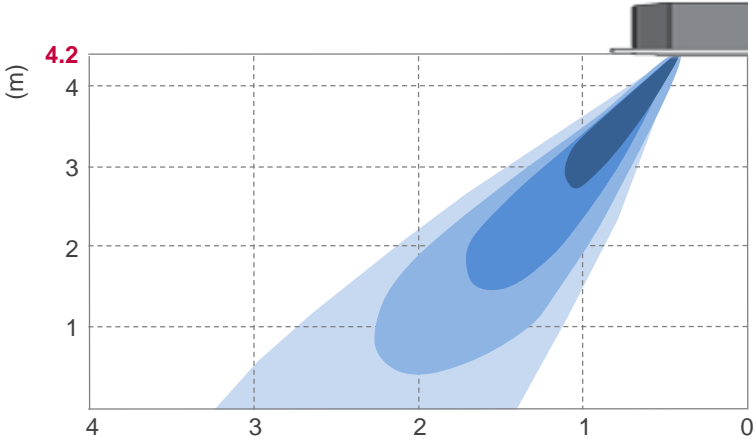
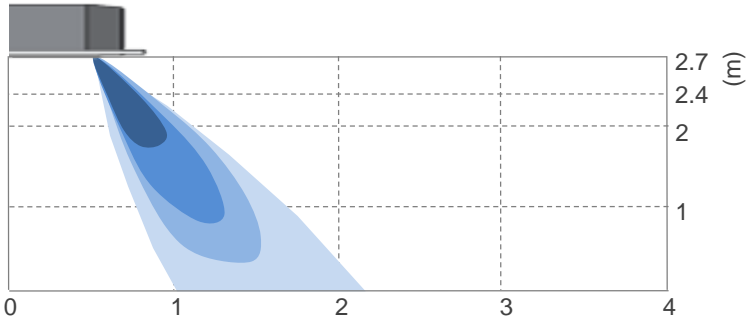
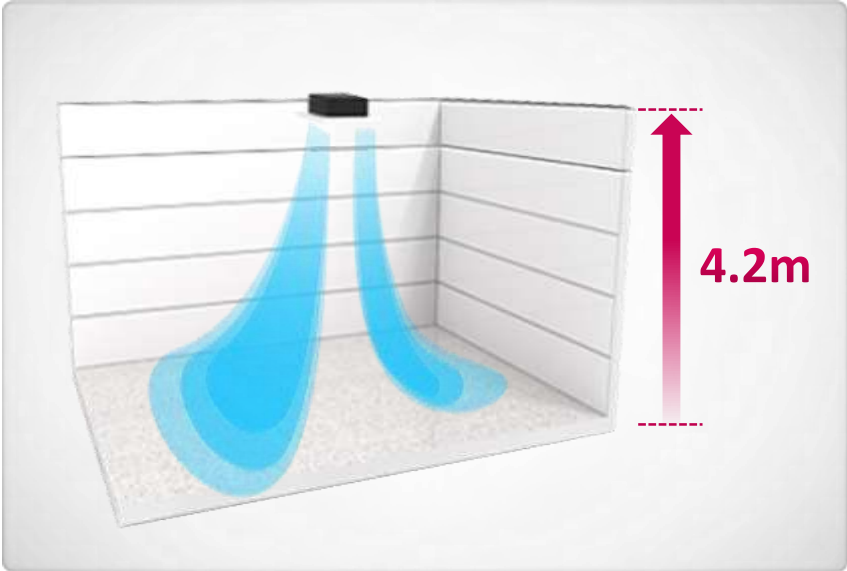
# High Ceiling Mode

Airflow in a space with a 4.2m ceiling height is possible with this indoor unit. Further, air flow can be strengthened by adjusting the fan speed.

Basic mode



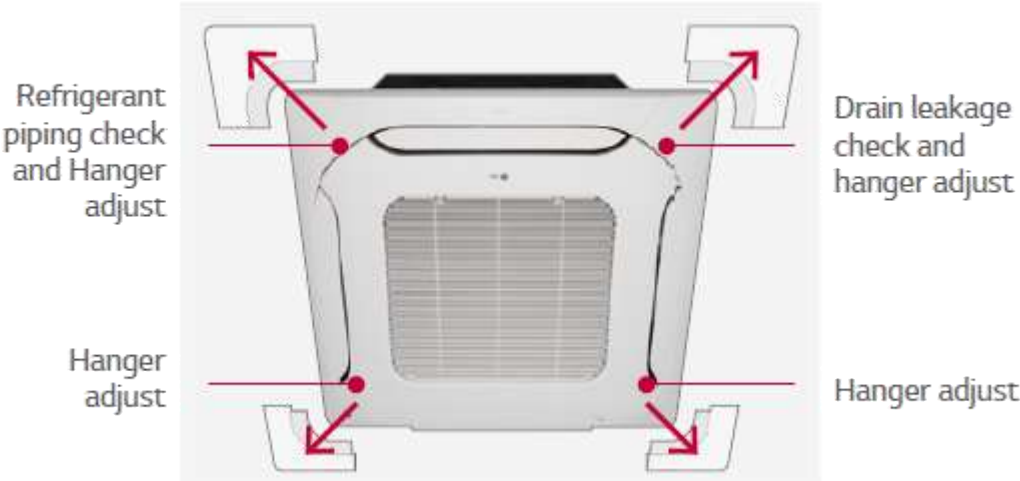
High ceiling mode



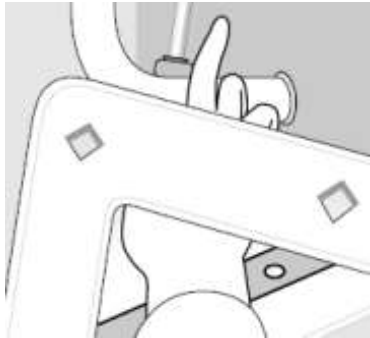
# Convenient Panel Installation

The detachable corner design makes it easy to adjust the hanger during installation and to check for leakages in the drain connection pipe. And it is easy to install the panel to the body, using the button type panel design.

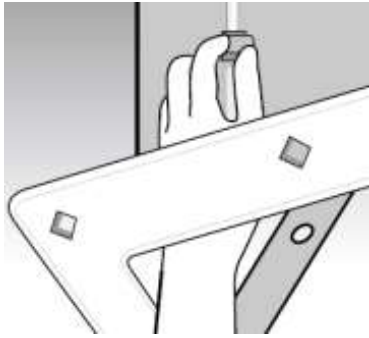
## Detachable Corner Design



Drain Leakage Check



Hanger adjust



## One Push Panel

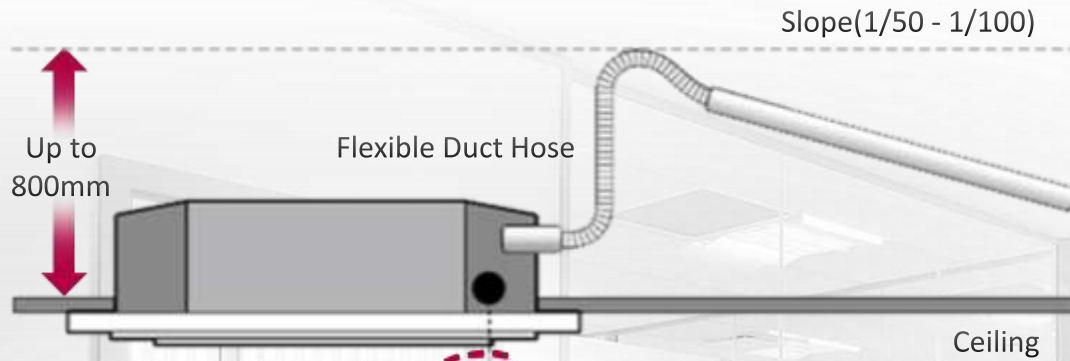




# High head drain pump

4Way Ceiling Cassette

High drain pump prevents damage of products and ceiling by proper draining of dew condensation which is generated from the evaporator of indoor.



**High head drain pump**

Inverter Single Split

# Indoor unit

1Way cassette



# Stylish Design Panel

1Way Cassette

Can make a luxurious living room with LG 1Way cassette



reddot award 2016



PINUP  
DESIGN AWARDS  
2016



GOOD DESIGN  
산업통상자원부 선정

# Comfort Airflow

1Way Cassette

Depending on the installation environment, conditions of use, and the user's location, two vane angles can be controlled in 6 steps from 20° to 70°, depending on the indoor environment and personal preference.

## Automatic 4-way wind direction

The wind is discharged evenly up, down, left and right automatically, so there is no cooling blind spot.

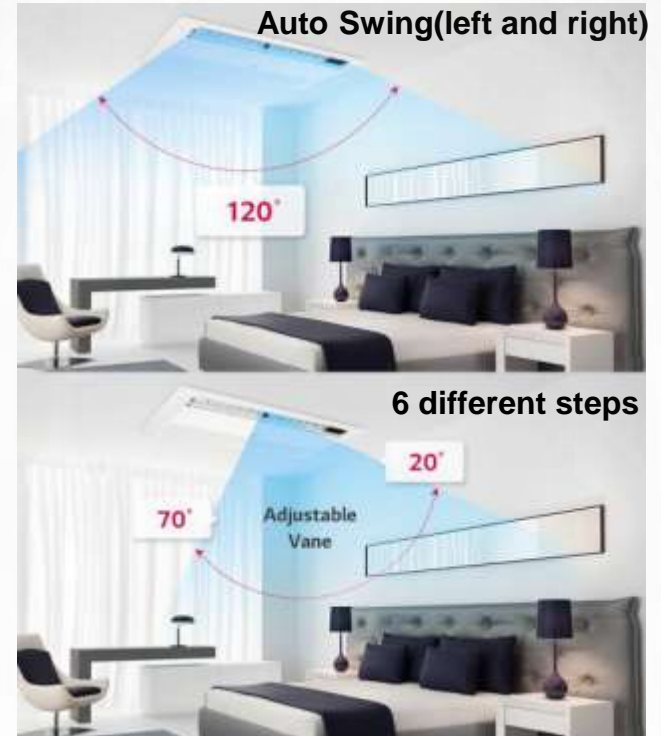


4 Way discharge



No cooling blind spot

## [Wind Direction]







With indirect wind,  
**Comfortable!**

### Comfort indirect wind

Without touching the skin directly, a large space is comfortable!



With direct wind,  
**Cooler!**

### Cool direct wind

Cooler on a hot day.

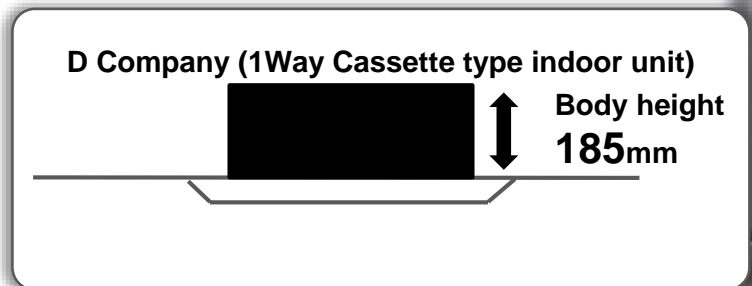
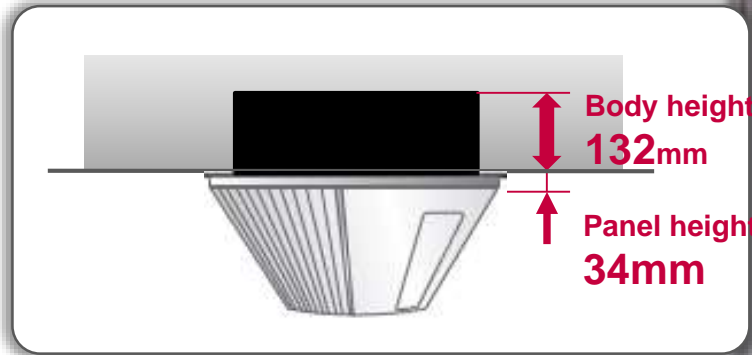
# Compact size

1Way Cassette

Slim & compact design not only saves space but also reduces installation costs.

The height of 1 Way Cassette is 132mm, making it the ideal solution for installation in limited space.

| Cooling Capacity<br>(kBtu/h) | Chassis | Body          |            | Panel (W×H×D, mm) |              |
|------------------------------|---------|---------------|------------|-------------------|--------------|
|                              |         | (W×H×D, mm)   | Weight(kg) | Glossy            | Non-glossy   |
| 12                           | TU      | 860×132×450   | 11.7       | 1,160×34×500      | 1,100×34×500 |
| 18, 24                       | TT      | 1,180×132×450 | 18.1       | 1,480×34×500      | 1,420×34×500 |





# Low noise

1Way Cassette

The optimal design for indoor units reduces noise to 33dB(A) to maintain a quiet and comfortable indoor environment. Due to low noise operation, it is highly preferred for residential applications to provide comfort.



\*Sound pressure level value are measured at Noise Measuring chamber accordance with LG Internal standard

\* 12kBtu/h Single model

Inverter Single Split

# Indoor unit

Round Cassette



# Luxury round design

Round cassette

Can make a luxurious space with a round design considering side view



Luxury Interior



reddot award 2019  
winner

**PINUP**  
DESIGN AWARDS



# Slim and Compact design

Round cassette

Reduce the height of the body by 15% save space and maximize the openness of the interior space.

Other brand



Narrow space!

Nervous!



LG Round Cassette



15% less body height makes room more higher

Wide space

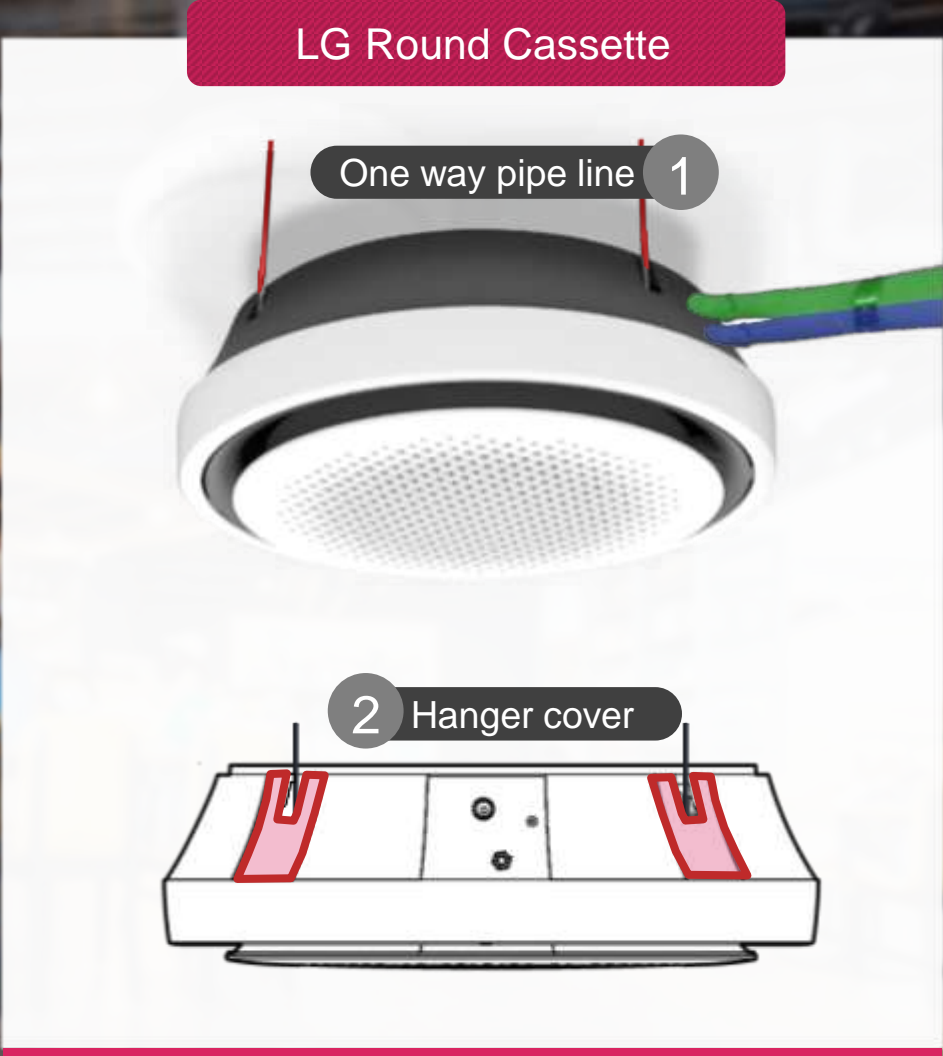
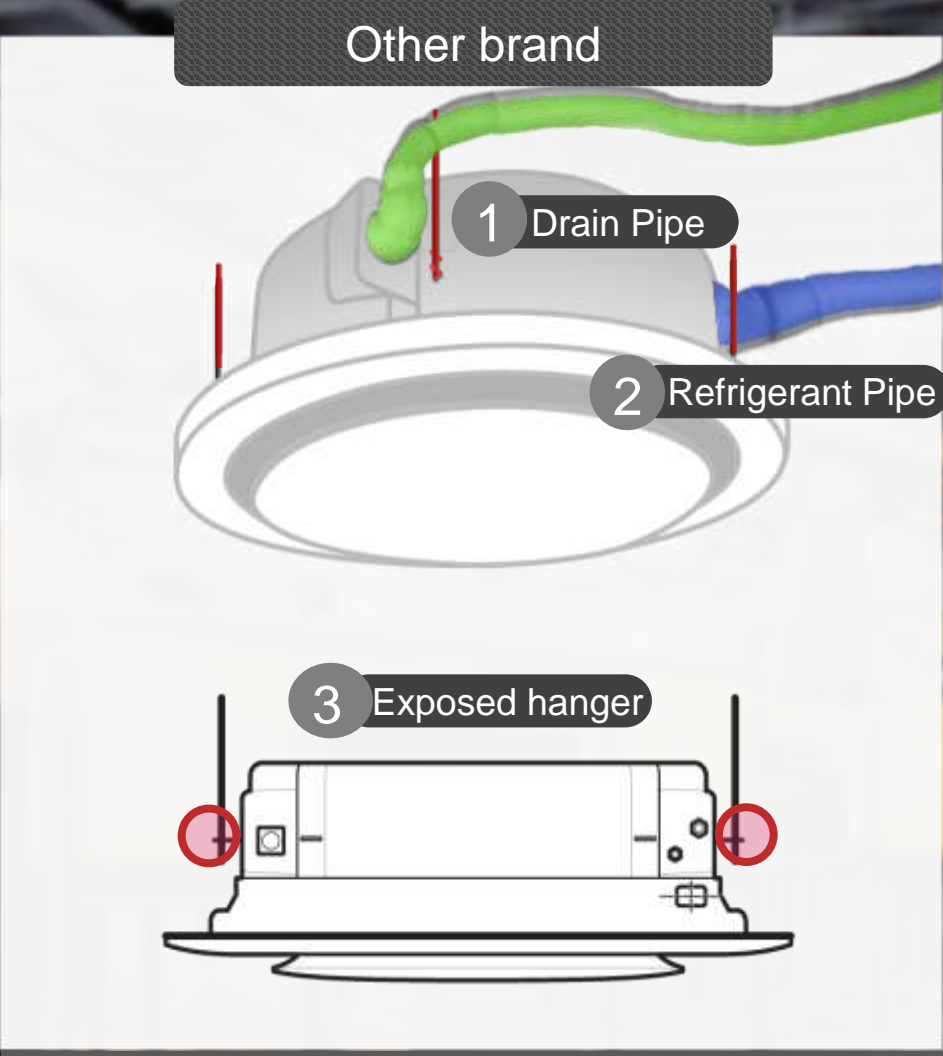
Clean



# Slim and Compact design

Round cassette

Pipes are brought together in one place to minimize exposure. Hanger covers hide installations to add a clean look.





# Round Airflow

---

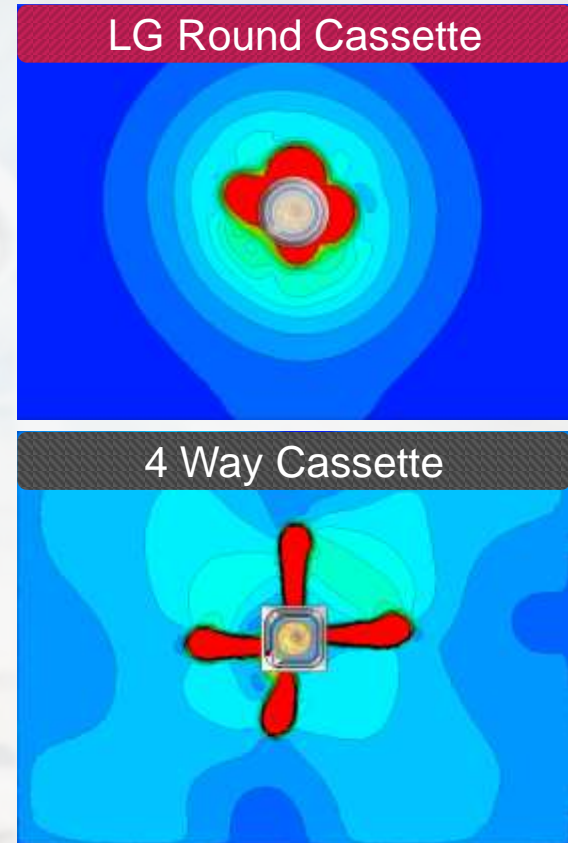
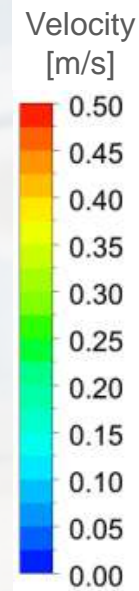
Round cassette

Round air flow for more even air distribution



# Round Airflow

Round air flow for more even air distribution



※ This simulation is based on the conditions below. It may differ depending on the actual usage environment.

- Date: Jul.2021

- Program : ANSYS 2019 R2

- Product : Round Cassette 14.5kW, 4 Way Cassette 14.5 kW

- Condition : Space - 8 x 6 x 7 m(WxDxH), Airflow rate – 32CMM, Airflow velocity of 1.5m height from unit

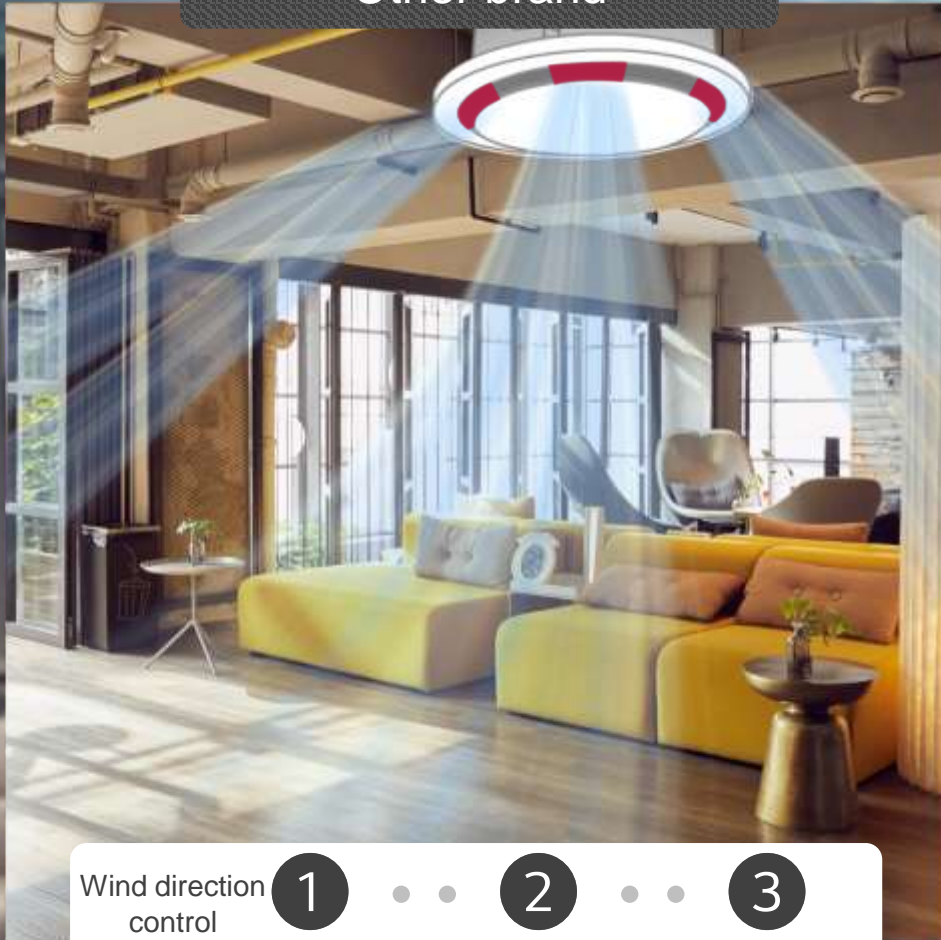


# Visible Airflow

Round cassette

With crystal vein for 6-step precision control, you can send cool air wherever you want.

Other brand



LG Round Cassette



Inverter Single Split

# Indoor unit

Ceiling Suspended



# Stylish Design

Ceiling suspended

LG Ceiling Suspended Unit can make the interior space even more stylish through the V-shaped design and the black vane that have won the International Design Award.



V-Shaped Design



Black Vane





# Longest Air Flow

Ceiling suspended



# Easy Accessible Screw

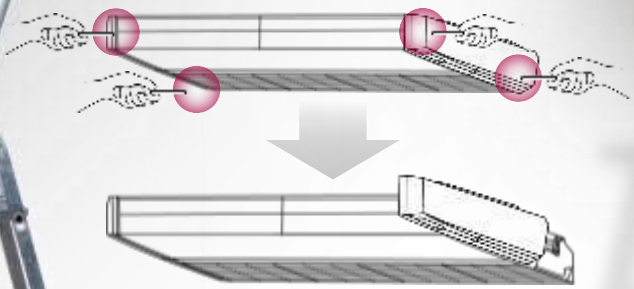
Ceiling suspended

Installation speed and ease is improved by reducing the total number of screws and placing them on the easily accessible front panel.



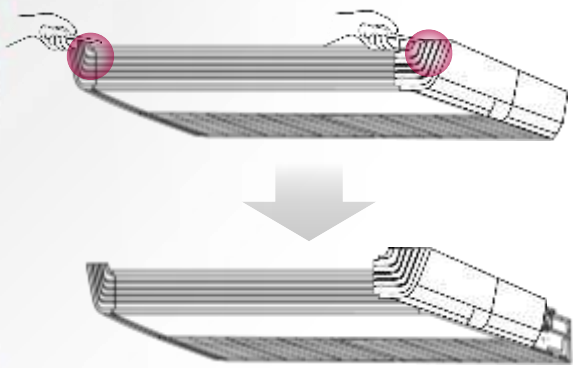
Corner Installation Impossible

Conventional  
4 Screws



Corner Installation Possible

New  
Ceiling suspended  
2 Screws



# Easy Filter Maintenance

Ceiling suspended

The filter can be easily detached from the indoor unit, and the filter can be washed with water and reused again.



Inverter Single Split

# Indoor unit

Floor Standing





# Stylish Design

Floor standing

The new LG floor standing air conditioner is ideal for modern interiors in your office or restaurant.



New



Hidden Display design



Stylish Design



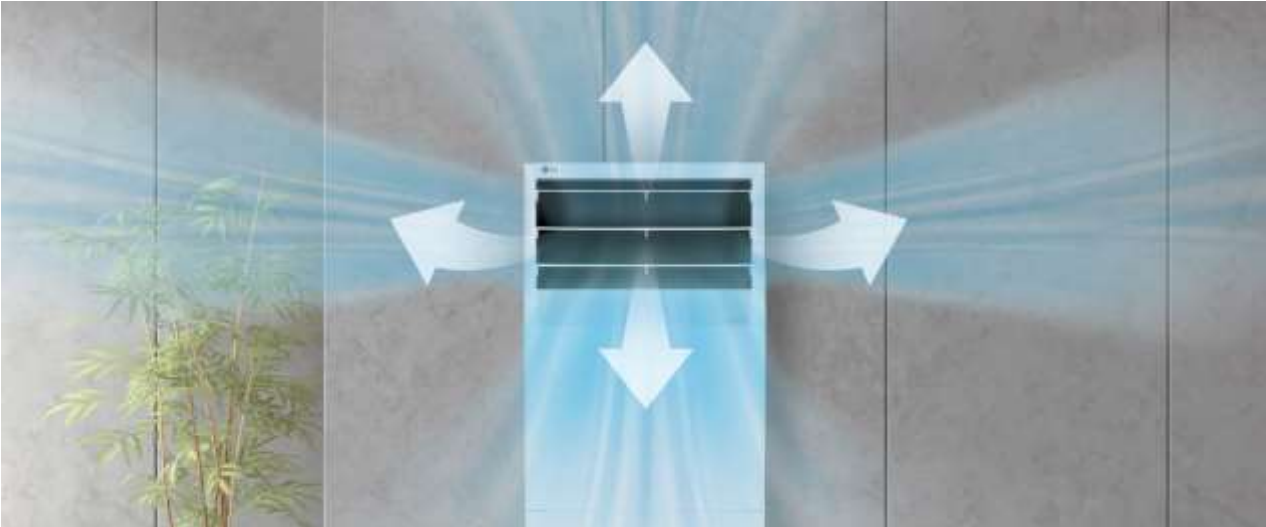
# Powerful Airflow

Floor standing

LG floor standing air conditioner is efficient for using in large areas due to its powerful cooling operation. powerful air speed and volume means the air flow can reach up to 20 m away from the air conditioner.



4WAY AUTO SWING



## Airflow rate



\* 48 kBtu/h Model

# Power Cooling Mode

Floor standing

Power cooling function provides the optimal air flow angle, guaranteeing a faster and higher cooling performance.





Operates 18°C & Super High fan speed

ONE CLICK!

Wireless remote (Included as free)

## Power Cooling Mode

Strong cooling will be conducted in short time.

- 1 Press  button to turn on the indoor.
- 2 Press  button to operate power cooling mode.

- Fan speed automatically changes to 'Super High' stage
- Setting temperature automatically changes to 18°C
- Horizontal Louver fixed at the highest position for even & long distance air distribution

## Max capacity

56,500 Btu/h



LG New R32 Model

\* 54 kBtu/h Model

※ Actual product appearance may differ from the above simulated scene.

Inverter Single Split

# Indoor unit

Ceiling Concealed Duct



# E.S.P. (External Static Pressure) Control

Floor standing

E.S.P. control function can make air volume controlled easily with remote controller. The BLDC motor can control fan speed and air volume regardless of the external static pressure.

Conventional

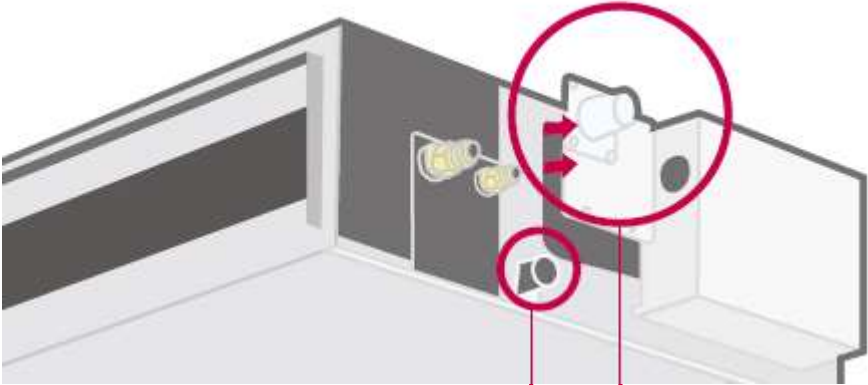
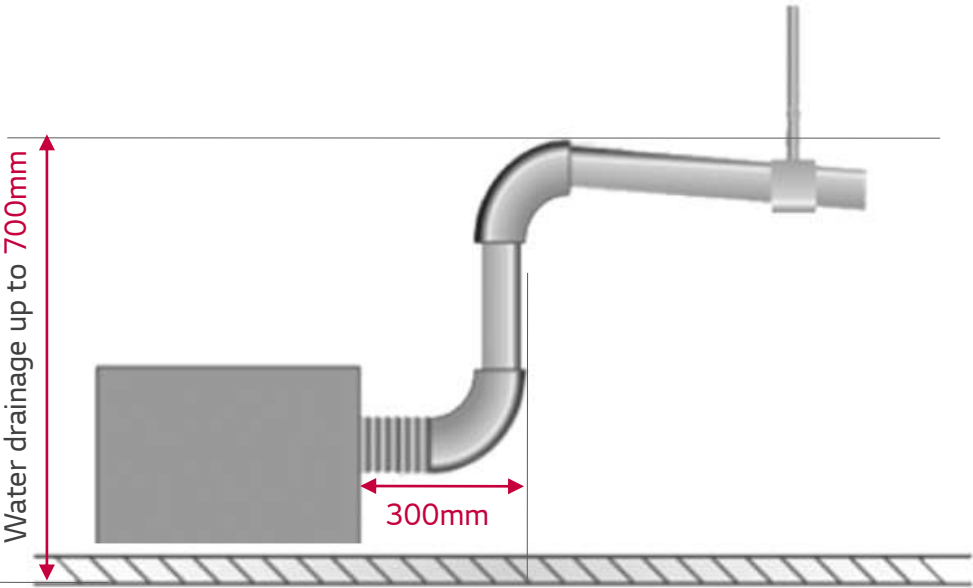
E.S.P. Control



# High Head Drain Pump

Floor standing

High head drain pump automatically drains water up to a height of 700mm of drain-head height. It provides the perfect solution for draining of water.



Available for natural drainage

Detachable drain pump



※ Low-static duct : included



# Two Thermistors Control


Floor standing

The indoor temperature can be checked using the thermistors in the remote controller as well as from the indoor unit. Two thermistors can check the optimum indoor air temperature for a more comfortable environment.



Indoor Unit Thermistor

Compares temperatures sensed from different positions, and automatically selects the optimum temperature for users



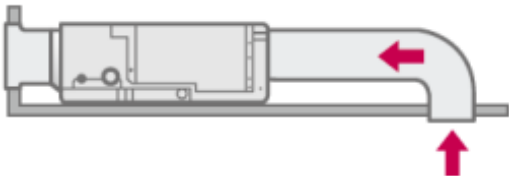
Remote controller Thermistor

# Flexible Installation

Floor standing

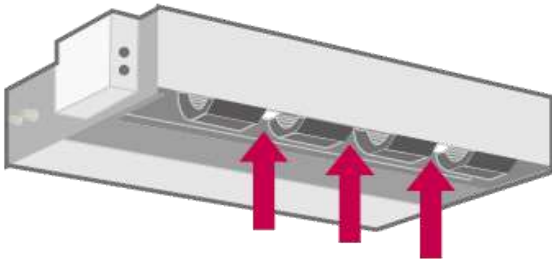
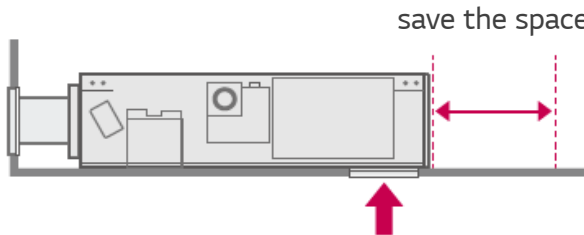
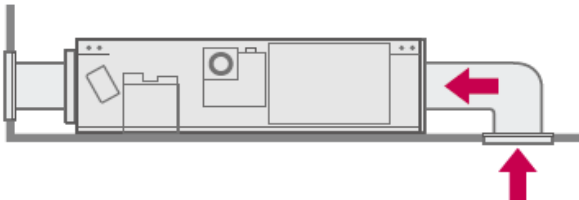
The new low static duct allows the air intake at the rear or bottom under installation condition.

## Conventional



Only one way for air intake

## Smart Duct



Various way for air intake

※ Only Low-static duct

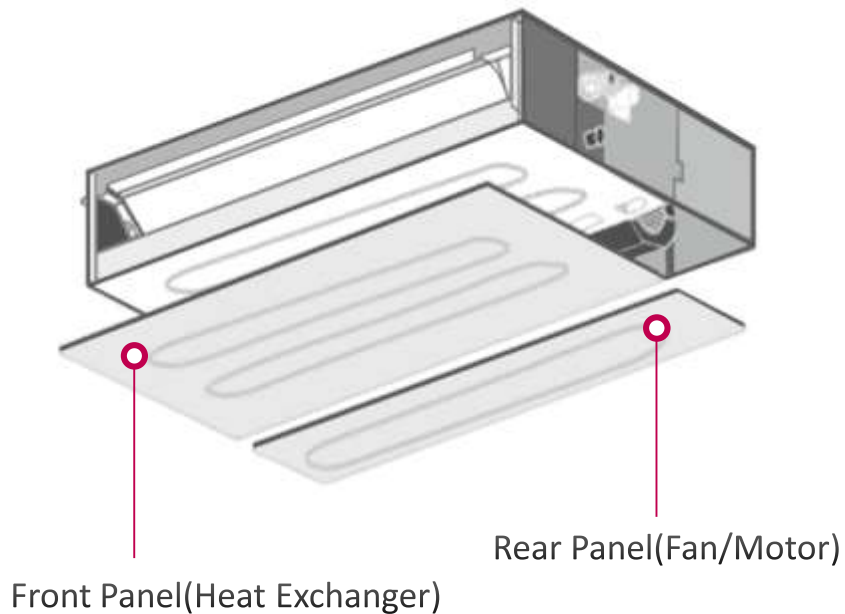
# Easy Service & Maintenance

Floor standing

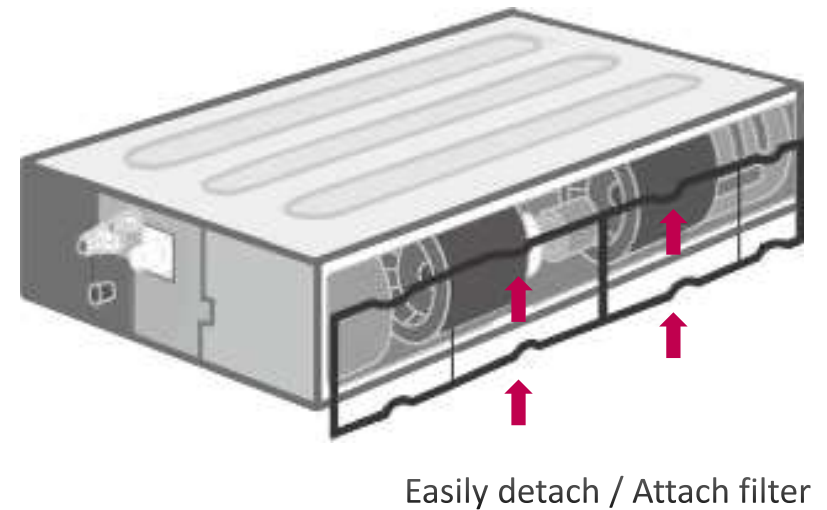
Users don't need to open whole panel for maintenance, since panel is divided into one for heat exchanger and one for fan/motor.

Easily detach and attach the filter even in limited space.

## Selective panel separation



## Easily detachable Filter



# Weekly Program

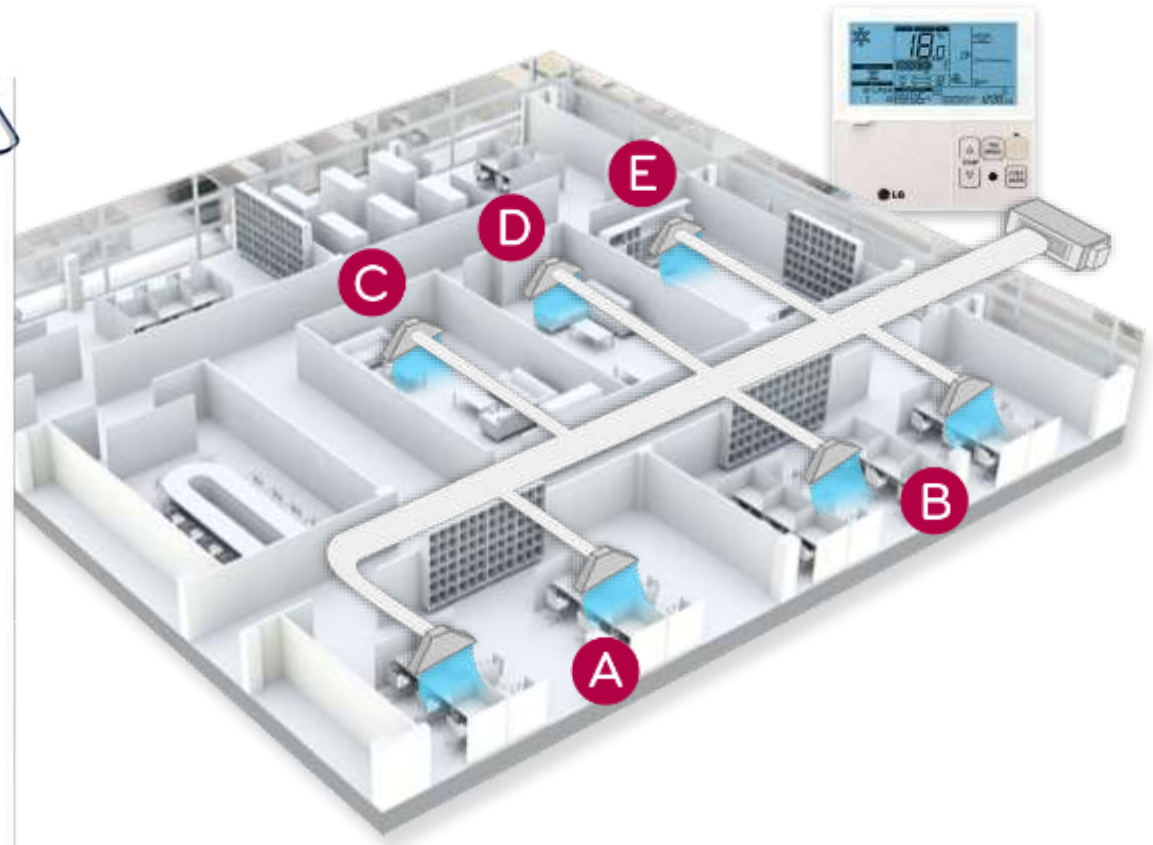
Floor standing

You can set the daily temperature and automatic on/off time for one week.  
It will keep running on that time until cancelled by the user.



week schedule

|           | A | B | C | D | E |
|-----------|---|---|---|---|---|
| Monday    | ✓ |   |   |   |   |
| Tuesday   | ✓ | ✓ |   | ✓ |   |
| Wednesday |   | ✓ |   | ✓ | ✓ |
| Thursday  |   | ✓ | ✓ |   | ✓ |
| Friday    | ✓ |   | ✓ |   |   |
| Saturday  |   | ✓ |   | ✓ | ✓ |
| Sunday    |   |   |   | ✓ |   |



※ Two weekly reservation Max. 14 schedule for a week





# [Specification] Single CAC

## Appendix

| Outdoor Unit Specification |                                |                           | AUUQ12GA0         | AUUQ18GA0         | AUUQ24GA0         | AUUQ36GA0         | AUUQ60GA0         | AUUQ36LA0         | AUUQ60LA0         |
|----------------------------|--------------------------------|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Classification             | Chassis                        | Unit                      | U12A              | U18A              | U24A              | U36A              | U36A              | U36A              | U36A              |
| Power Supply               | #1                             | -                         | 220~240, 1, 50/60 | 220~240, 1, 50/60 | 220~240, 1, 50/60 | 220~240, 1, 50/60 | 220~240, 1, 50/60 | 380~415, 3, 50/60 | 380~415, 3, 50/60 |
|                            | #2                             | -                         | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
|                            | Limit Range of Voltage         | V                         | 187~276           | 187~276           | 187~276           | 187~276           | 187~276           | 342~456           | 342~456           |
| Outdoor Fan                | Type                           | -                         | Axial Fan         | Axial Fan         | Axial Fan         | Axial Fan         | Axial Fan         | Axial Fan         | Axial Fan         |
|                            | Air Flow Rate(Max)             | m <sup>3</sup> /min x No. | 28 x 1            | 50 x 1            | 50 x 1            | 60 x 1            | 60 x 1            | 60 x 1            | 60 x 1            |
|                            | Max. External Static Pressure  | mmAq                      | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Outdoor Fan Motor          | Type                           | -                         | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              |
|                            | Drive                          | -                         | External          | External          | External          | External          | External          | External          | External          |
|                            | OutPut                         | W x No.                   | 43.0 x 1          | 43.0 x 1          | 85.0 x 1          | 124.0 x 1         | 124.0 x 1         | 124.0 x 1         | 124.0 x 1         |
| Compressor                 | Type                           | -                         | Twin Rotary       | Twin Rotary       | Twin Rotary       | Twin Rotary       | Twin Rotary       | Twin Rotary       | Twin Rotary       |
|                            | Model x No.                    | -                         | DST102M x 1       | DAT156M x 1       | DKT208M x 1       | DPT442M x 1       | DPT442M x 1       | DPT442M x 1       | DPT442M x 1       |
|                            | Motor Type                     | -                         | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              | BLDC              |
|                            | Motor Output                   | W x No.                   | 1,050 x 1         | 1,500 x 1         | 1,500 x 1         | 4,000 x 1         | 4,000 x 1         | 4,000 x 1         | 4,000 x 1         |
|                            | Oil Type                       | -                         | FW68D             | FW68D             | FW68D             | FW68D             | FW68D             | FW68D             | FW68D             |
|                            | Oil Charging amount            | cc x No.                  | 280 x 1           | 400 x 1           | 670 x 1           | 1,300 x 1         | 1,300 x 1         | 1,300 x 1         | 1,300 x 1         |
| Heat Exchanger             | Rows x Columns x FPI           | -                         | 2 x 22 x 18       | 2 x 24 x 18       | 2 x 28 x 18       | 2 x 38 x 18       | 3 x 38 x 18       | 2 x 38 x 18       | 3 x 38 x 18       |
|                            | No.                            | -                         | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 |
|                            | Fin Type                       | -                         | Louver            | Louver            | Louver            | Louver            | Louver            | Louver            | Louver            |
|                            | Corrosion Protection (Coating) | -                         | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
|                            | Material (Tube / Fin)          | -                         | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
|                            | Face Area                      | m <sup>2</sup>            | 0.31              | 0.41              | 0.55              | 0.75              | 0.74              | 0.75              | 0.74              |
| Dimensions                 | Net(W x H x D)                 | mm                        | 717 x 483 x 230   | 770 x 545 x 288   | 870 x 650 x 330   | 950 x 834 x 330   | 950 x 834 x 330   | 950 x 834 x 330   | 950 x 834 x 330   |
|                            | Shipping(W x H x D)            | mm                        | 842 x 530 x 322   | -                 | 1046 x 713 x 461  | 1065 x 918 x 461  | 1065 x 918 x 461  | 1065 x 918 x 461  | 1065 x 918 x 461  |
| Weight                     | Net                            | kg                        | 24.2              | 30.9              | 41.5              | 59.5              | 66.9              | 60.8              | 65.1              |
|                            | Shipping                       | kg                        | 25.8              | 33.2              | 46.1              | 67.4              | 75.2              | 68.7              | 73.4              |
| Exterior                   | Color                          | -                         | Warm Gray         | Warm Gray         | Warm Gray         | Warm Gray         | Warm Gray         | Warm Gray         | Warm Gray         |
|                            | RAL (Classic)                  | -                         | RAL 7044          | RAL 7044          | RAL 7044          | RAL 7044          | RAL 7044          | RAL 7044          | RAL 7044          |
| Refrigerant                | Type                           | -                         | R32               | R32               | R32               | R32               | R32               | R32               | R32               |
|                            | Control Type                   | -                         | EEV               | EEV               | EEV               | EEV               | EEV               | EEV               | EEV               |
| Pipe Connecting Socket     | Liquid                         | mm(inch)                  | Φ6.35 (1/4)       | Φ6.35 (1/4)       | Φ9.52 (3/8)       | Φ9.52 (3/8)       | Φ9.52 (3/8)       | Φ9.52 (3/8)       | Φ9.52 (3/8)       |
|                            | Gas                            | mm(inch)                  | Φ9.52 (3/8)       | Φ12.7 (1/2)       | Φ15.88 (5/8)      | Φ15.88 (5/8)      | Φ15.88 (5/8)      | Φ15.88 (5/8)      | Φ15.88 (5/8)      |
|                            | Connection Type(Liquid)        | -                         | Flare             | Flare             | Flare             | Flare             | Flare             | Flare             | Flare             |
|                            | Connection Type(Gas)           | -                         | Flare             | Flare             | Flare             | Flare             | Flare             | Flare             | Flare             |
| Connecting Cable           | Power Supply Cable(H07RN-F)    | mm <sup>2</sup> × cores   | 2.5 x 3C          | 2.5 x 3C          | 2.5 x 3C          | 4.0 x 3C          | 4.0 x 3C          | 2.5 x 5C          | 2.5 x 5C          |



# Appendix. Wide Voltage Range

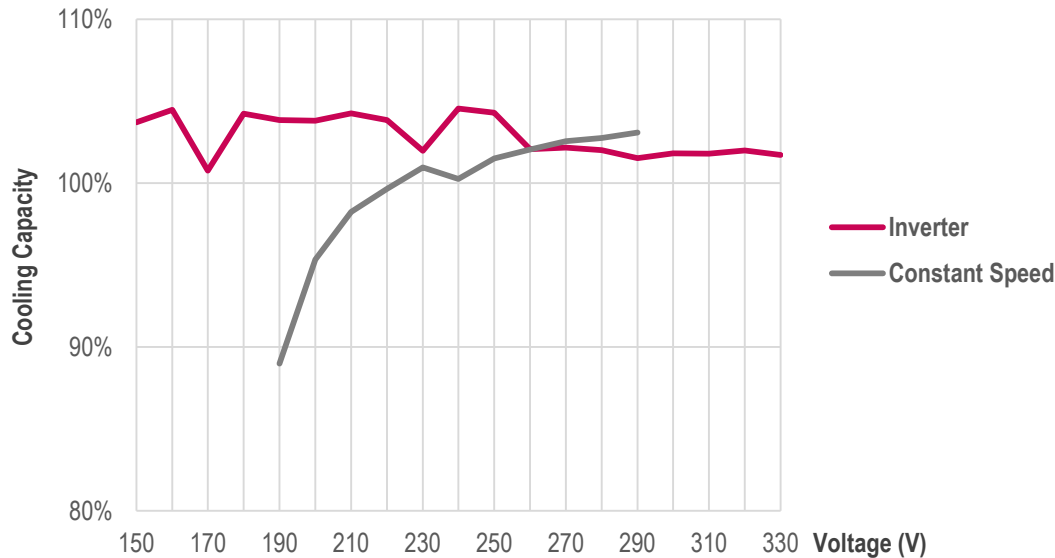
## <Test Purpose>

1. Confirm the stable cooling capacity of the inverter product according to the voltage change when compared to that of the constant speed product.
2. Confirm superiority of the voltage range of the inverter product when compared to that of the constant speed product.

## <Test Condition>

1. Temperature : Indoor\_35°CDB, 24°CWB / Outdoor\_27°CDB, 19°CWB
2. Product
  - Inverter : AT-Q36GMLT0 (Rated Cooling Capacity, 34,100 Btu/h)
  - Constant : FHA-H3600T3 (Rated Cooling Capacity, 36,000 Btu/h)
3. Method
  - Measure the cooling capacity by lowering the voltage by 10V from 230V to 150V.
  - Measure the cooling capacity by increasing the voltage by 10V from 230V to 340V.
  - The test will stop when the product is powered off.
  - In case of the inverter product, the test is conducted based on 100% cooling capacity. (Comp 48Hz / EEV 220 Pulse)

### Cooling Capacity according to Voltages



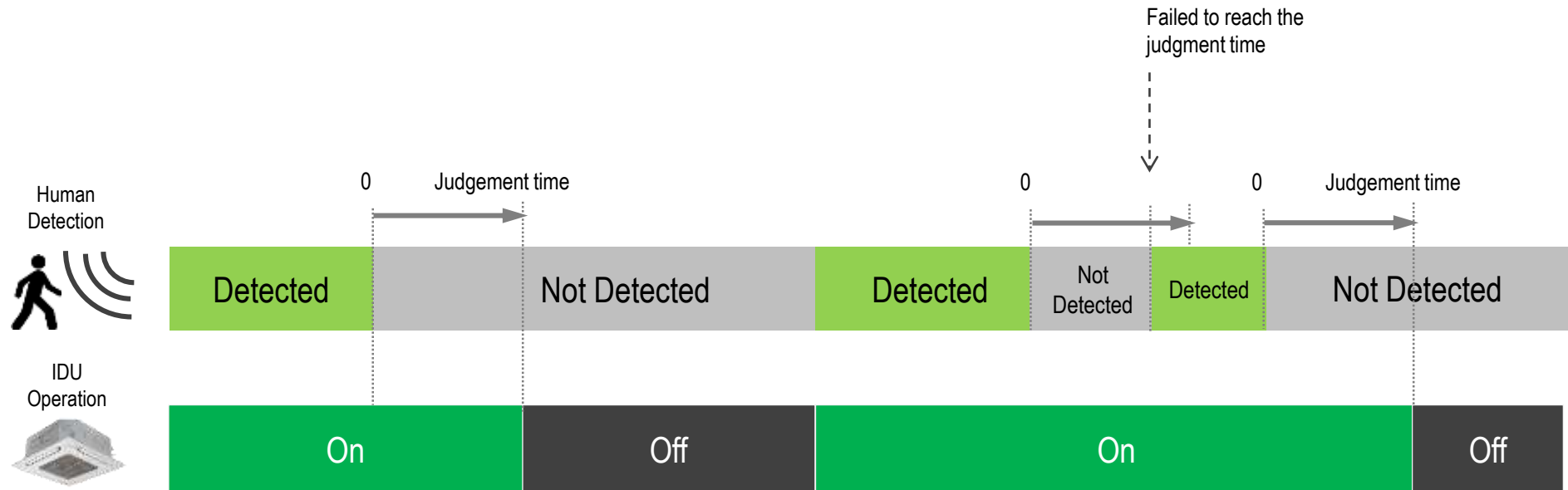
| Voltage | Inverter         |       | Constant Speed   |       |
|---------|------------------|-------|------------------|-------|
|         | Cooling Capacity | Ratio | Cooling Capacity | Ratio |
| 150     | 35,363           | 104%  |                  |       |
| 160     | 35,624           | 104%  |                  |       |
| 170     | 34,357           | 101%  |                  |       |
| 180     | 35,547           | 104%  | Off              |       |
| 190     | 35,410           | 104%  | 32,036           | 89%   |
| 200     | 35,397           | 104%  | 34,323           | 95%   |
| 210     | 35,550           | 104%  | 35,365           | 98%   |
| 220     | 35,414           | 104%  | 35,872           | 100%  |
| 230     | 34,771           | 102%  | 36,346           | 101%  |
| 240     | 35,654           | 105%  | 36,092           | 100%  |
| 250     | 35,565           | 104%  | 36,542           | 102%  |
| 260     | 34,807           | 102%  | 36,741           | 102%  |
| 270     | 34,842           | 102%  | 36,922           | 103%  |
| 280     | 34,787           | 102%  | 36,994           | 103%  |
| 290     | 34,623           | 102%  | 37,111           | 103%  |
| 300     | 34,723           | 102%  | Off              |       |
| 310     | 34,713           | 102%  |                  |       |
| 320     | 34,777           | 102%  |                  |       |
| 330     | 34,684           | 102%  |                  |       |
| 340     | 34,754           | 102%  |                  |       |



# Appendix. Human Detection Function (1)

The detailed explanation of operating logic regarding human detection function

If no one is detected for the 'judgement time', IDU is turned off / If anyone is detected, IDU is turned on



Judgement time : 30 min (default)  
Setting : 5 ~ 90 min

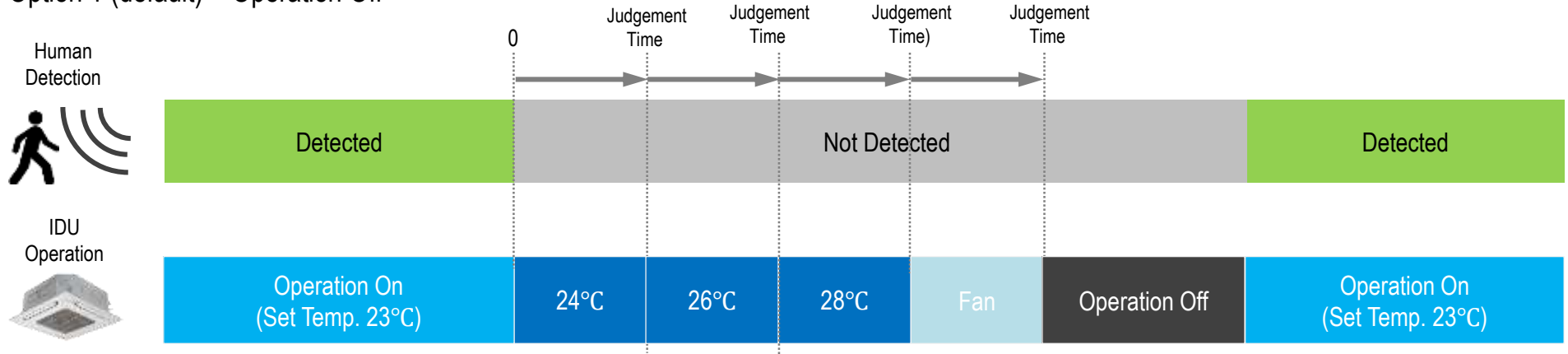


# Appendix. Human Detection Function (2)

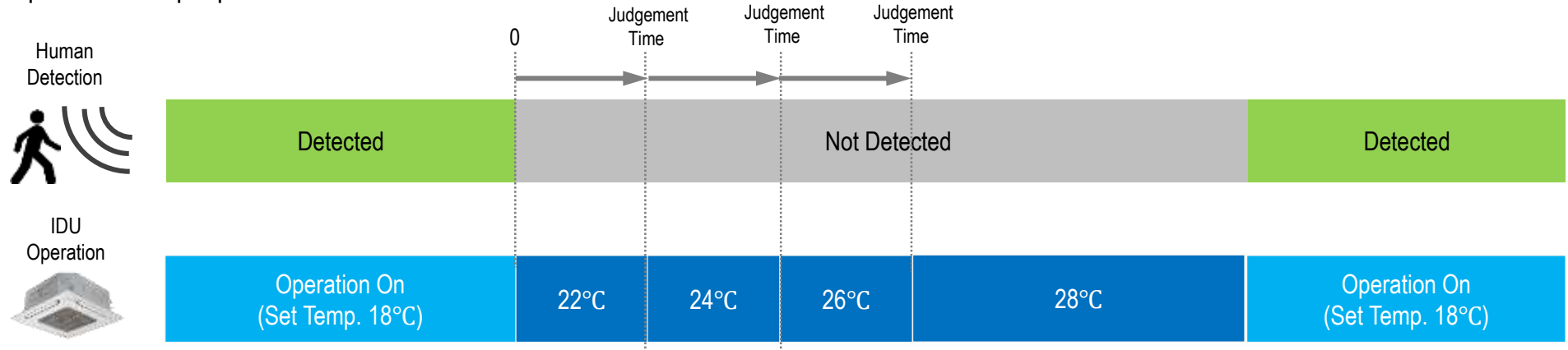
If no one is detected for the 'judgement time', IDU changes setting temperature at every judgement time  
If anyone is detected, IDU changes setting target temperature back to user's set temperature

Cooling

## Option 1 (default) – Operation Off



## Option 2 – Keep Operation





# Appendix. Air Purification Kit Air Cleaning Performance(4Way CST)

## Verification for Ultrafine dust removal



**Verification**  
**Air Purification Kit Air Cleaning Performance**

Reference No.: 60382341 001

TÜV Rheinland verifies that the tested air purification kit, PAH-TAP0MW, for the cassette type indoor unit has removed 99.9 % of ultrafine dusts (size 50 nm and 100 nm) under the proposed operation mode.

Holder : **LG Electronics Inc.**  
**84, Wansan-ro, Seongsan-gu, Changwon-si,**  
**Gyeongsangnam-do, 51554, Rep. of Korea**

Product: **Air Purification Kit**

Identification: **PAH-TxPyMz, PTAHMP0**  
**(x = A or M, y = 0 or P, z = A - Z or Blank)**

Applied Standard: **SPS-KACA002-132 (Indoor air cleaners)**

Date: 2020.06.12   
Sang-Win Kim

TÜV Rheinland Korea Ltd. - Seoul 07298 - Republic of Korea

- Ultrafine dust removal (50 nm, 100 nm) : 99.9% removed

## Verification for Cultivable bacteria and virus removal



**Verification**  
**Air Purification Kit Air Cleaning Performance**

Reference No.: 60375745 001


TÜV Rheinland verifies that the tested air purification kit, PAH-TAP0MW, for the cassette type indoor unit has removed 99.9 % of staphylococcus epidermidis in 60 minutes and 99.4 % of Phi-X174 in 30 minutes under the proposed operation mode.

Holder : **LG Electronics Inc.**  
**84, Wansan-ro, Seongsan-gu, Changwon-si,**  
**Gyeongsangnam-do, 51554, Rep. of Korea**

Product: **Air Purification Kit**

Identification: **PAH-TxPyMz, PTAHMP0**  
**(x = A or M, y = 0 or P, z = A - Z or Blank)**

Applied Standard: **KOUVA AS 02 (Air Sterilizer)**

Date: 2020.06.12   
Sang-Win Kim

TÜV Rheinland Korea Ltd. - Seoul 07298 - Republic of Korea

- Virus (Bacteriophage Phi-X174) : 99.9% removed within 30 minutes  
- Bacteria (Staphylococcus) : 99.9% removed within 60 minutes



# Appendix. Air Purification Kit Air Cleaning Performance(1Way CST)



## Verification for Ultrafine dust removal

  
**Verification**  
**Air Purification Kit Air Cleaning Performance**

Reference No.: 60362905 001

TÜV Rheinland verifies that the tested air purification kit, PAH-TUP0M, for the cassette type indoor unit has removed 99.9 % of ultrafine dusts (size 50 nm and 100 nm) under the proposed operation mode.

Holder : LG Electronics Inc.  
84, Wanam-ro, Seongsan-gu, Changwon-si,  
Gyeongsangnam-do, 51554, Rep. of Korea

Product: Air Purification Kit

Identification: PAH-TUP0M, PTAHTP0

Applied Standard SPS-KACA002-132 (Indoor air cleaners)

Date: 2020.08.27   
Sang-Min Kim

TÜV Rheinland Korea Ltd. - Seoul 07298 - Republic of Korea

- Ultrafine dust removal (50 nm, 100 nm) : 99.9% removed

## Verification for Cultivable bacteria and virus removal

  
**Verification**  
**Air Purification Kit Air Cleaning Performance**

Reference No.: 60362906 001

TÜV Rheinland verifies that the tested air purification kit, PAH-TUP0M, for the cassette type indoor unit has removed 91.2 % of staphylococcus epidermidis in 60 minutes and 95.3 % of Phi-X174 in 30 minutes under the proposed operation mode.

Holder : LG Electronics Inc.  
84, Wanam-ro, Seongsan-gu, Changwon-si,  
Gyeongsangnam-do, 51554, Rep. of Korea

Product: Air Purification Kit

Identification: PAH-TUP0M, PTAHTP0

Applied Standard KOUVA AS 02 (Air Sterilizer)

Date: 2020.08.27   
Sang-Min Kim

TÜV Rheinland Korea Ltd. - Seoul 07298 - Republic of Korea


- Virus (Bacteriophage Phi-X174) : 95.3% removed within 30 minutes  
- Bacteria (Staphylococcus) : 91.2% removed within 60 minutes

# Appendix. Air Purification Kit Air Cleaning Performance(Duct kit)

99.99% sterilization capability against virus parasitized on bacteria in accordance with TUV Rheinland Standard

## Certified Test Report

\*\*Tested by TUV Rheinland Standard

  
TUV Rheinland

**Verification**  
**Sterilization Performance for UVNano Filter Box**

Reference No.: KR21P8ZW-001


TUV Rheinland verifies that the built-in UV LED module in the representative model, PBM13M1UA0, of the UVNano filter box has sterilized 99.99 % of virus, Phi X 174, on its pre-filter under the proposed test condition and combination with the ducted indoor unit, M1 platform, of air conditioning system.

Holder : LG Electronics Inc.  
84, Wanam-ro, Seongsan-gu, Changwon-si,  
Gyeongsangnam-do, 51554, Rep. of Korea


Product: UVNano Filter Box

Identification: PBM13M1Uxy  
( x = A - Z or 0 - 9, y = 0 - 9 )

Applied Standard Proposed test method

Date: 2021.07.29   
Sang-Min Kim

TUV Rheinland Korea Ltd. – Seoul 07298 – Republic of Korea

  
TUV Rheinland

**Verification**  
**Sterilization Performance for UVNano Filter Box**

Reference No.: KR213RKA-001


TUV Rheinland verifies that the built-in UV LED module in the representative model, PBM13M3UA0, of the UVNano filter box has sterilized 99.99 % of virus, Phi X 174, on its pre-filter under the proposed test condition and combination with the ducted indoor unit, M3 platform, of air conditioning system.

Holder : LG Electronics Inc.  
84, Wanam-ro, Seongsan-gu, Changwon-si,  
Gyeongsangnam-do, 51554, Rep. of Korea

Product: UVNano Filter Box

Identification: PBM13M2Uxy, PBM13M3Uxy  
( x = A - Z or 0 - 9, y = 0 - 9 )

Applied Standard Proposed test method

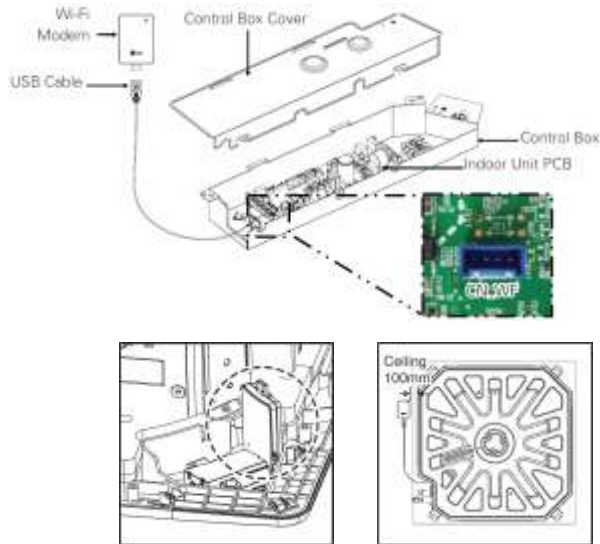
Date: 2021.07.29   
Sang-Min Kim

TUV Rheinland Korea Ltd. – Seoul 07298 – Republic of Korea

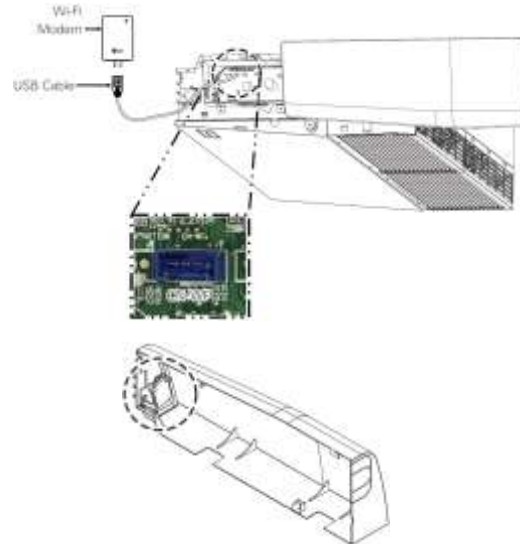
# App. Accessory Installation

## Wi-Fi Modem (PWFMD200)

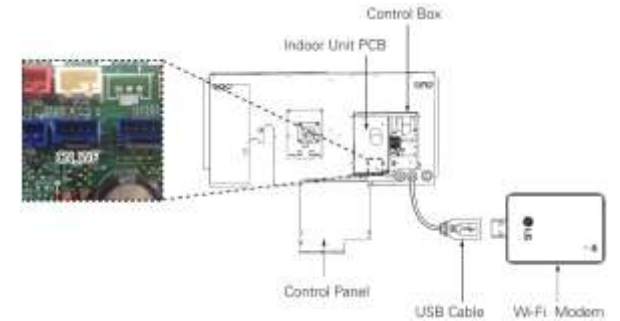
### 4Way Ceiling Cassette



### Ceiling Suspended Unit



### Ceiling Concealed Duct

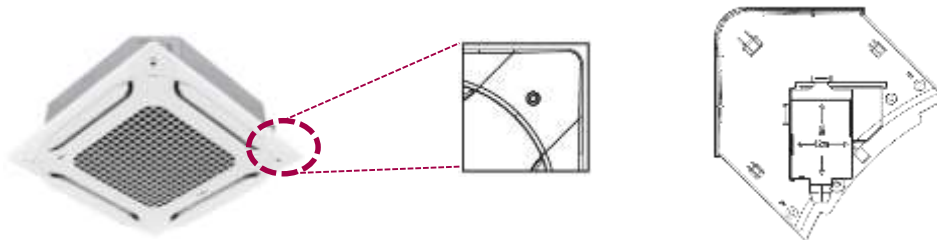


※ Wi-Fi pairing setting is possible with RS3 or RS2 wired remote controller. (PREMTB100 / PREMTB10 / PREMTB001 / PREMTBB01)

※ Wi-Fi default panel (PT-AFGW0, PT-AEGW0), Wi-Fi accessory panel (PT-AAGW0)









## Human detection sensor (PTVSAA0)

### 4Way Ceiling Cassette







# App. Individual Controller

• B&W : Black & White

| Category                   |              | Image   | Model  | Model  | Model  | Contents  |
|----------------------------|--------------|---|--|--|--|---|
| Wired Remote Controller    | Premium      |    | PREMTA000  | PREMTA000A   | PREMTA000B                                       | <ul style="list-style-type: none"> <li>• 5 inch color display</li> <li>• Touch screen</li> <li>• Group control (Max 16 indoor units)</li> <li>• Temp. /Humid. → Humidity sensing</li> </ul>   |
|                            | Standard III |    | PREMTB100 (White)                                  |   | PREMTBB10 (Black)                                | <ul style="list-style-type: none"> <li>• 4.3 inch color display</li> <li>• Touch button</li> <li>• Group control (Max 16 indoor units)</li> <li>• Temp./Humid. → Humidity sensing</li> <li>• 1 digital output available(on/off)</li> </ul>                      |
|                            | Standard II  |    | PREMTB001 (White)                                  |   | PREMTBB01 (Black)                                | <ul style="list-style-type: none"> <li>• 4.3 inch B&amp;W display</li> <li>• Physical button</li> <li>• Group control (Max 16 indoor units)</li> <li>• 2-remote controller control</li> <li>• Temp. sensing</li> <li>• Schedule function</li> </ul>             |
|                            | Simple       |   | PQRCVLOQW (White)<br>PQRCHCA0QW (White, for Hotel) |  | PQRCVLOQ (Black)<br>PQRCHCA0Q (Black, for Hotel) | <ul style="list-style-type: none"> <li>• 2.6 inch B&amp;W display</li> <li>• Physical button</li> <li>• Group control (Max 16 indoor units)</li> <li>• 2-remote controller control</li> <li>• Temp. sensing</li> <li>• For Hotel: except mode change</li> </ul> |
| Wireless Remote Controller |              |  | PQWRHQ0FDB<br>PWLSSB21H                            |  |  | <ul style="list-style-type: none"> <li>• 2 inch B&amp;W display</li> <li>• Physical button</li> <li>• Temp. sensing</li> </ul>  |

# App. Centralized Controller

• B&W : Black & White

| Category                               | Image   | Model  | Contents  |
|--|---|--|---|
| <b>AC Manager 5</b><br>Max 8,192 units | `17    | PACM5A000<br>- Integration for multiple ACP and AC Smart       | <ul style="list-style-type: none"> <li>• PC Access Controller</li> <li>• Supports 32 ACP 5 or AC Smart 5</li> <li>• Supports Chrome(Recommended), Safari, Internet Explorer 11</li> </ul>   |
| <b>ACP 5</b><br>Max 256 units          | `18    | PACP5A000<br>- BACNet IP / Modbus TCP                          | <ul style="list-style-type: none"> <li>• PC Access Controller</li> <li>• DC 12 V Adaptor</li> <li>• RS-485 : 6 channels<br/>                             CH1~4 : indoor Units<br/>                             CH5 : LGAP(AHU) or Modbus(AHU, Chiller, ACS I/O)<br/>                             CH6 : Modbus(AHU, Chiller, ACS I/O)</li> <li>• DI 10EA, DO 4EA(DI1 : Emergency stop Only)</li> </ul> |
| <b>AC Smart 5</b><br>Max 128 units     | `18    | PACS5A000<br>- 10.2 inch Touch LCD<br>- BACNet IP / Modbus TCP | <ul style="list-style-type: none"> <li>• 10.2 inch color display / Touch screen</li> <li>• DC 12 V adaptor</li> <li>• RS-485 : 2 channels<br/>                             CH1 : LGAP(AHU) or Modbus(AHU, Chiller, ACS I/O) or Indoor Unit<br/>                             CH2 : Indoor unit</li> <li>• DI 2EA, DO 2EA</li> </ul>  |
| <b>AC Ez Touch</b><br>Max 32 units     | `16   | PACEZA000<br>-5 inch Touch LCD                                 | <ul style="list-style-type: none"> <li>• 5 inch color Display / Touch screen</li> <li>• DC 12 V adaptor</li> <li>• RS-485 : 1 channel</li> <li>• DI 1EA(Emergency stop Only)</li> </ul>   |
| <b>AC Ez</b><br>Max 32 units           | `11  | PQCSZ250S0   | <ul style="list-style-type: none"> <li>• B&amp;W Display &amp; 18 LED</li> <li>• Button control</li> <li>• DC 12 V</li> <li>• RS-485 : 1 channel</li> </ul>   |