



## LG HVAC SOLUTION

# MULTI V™ S



**LG Electronics**  
**AE Company, Commercial Air Conditioning**

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# MULTI V™ S

## About LG VRF Technology

Variable Refrigerant Flow is a technology introduced as a system to minimize efficiency losses and provide sustainable energy benefits. LG VRF systems are engineered to save on the cost of ducts, distribution fans, water pumps and water piping. VRF systems have a lower life cycle cost of any system on the market today.

## Why LG VRF?

The benefits are numerous; modern style, mirror units for interior designers, less piping for installers and energy efficiency for owners. LG has low sound levels, so units are quiet and can be installed where sound is an issue. LG manufactured inverter compressor optimizes system energy efficiency.

## Inverter Technology

With a compressor optimized around the latest inverter technology, the LG Multi V S system precisely matches the load. This helps prevent constant cycling and results in tight temperature control, superior dehumidification, and optimized efficiency. Occupants stay comfortable while reducing utility costs.

## Multi V S Technology

This product line is LG's premiere VRF system. Multi V S is designed to provide the owner the benefits of VRF - lower operational costs, minimal or no duct work to install, tenant comfort with individual zoning, efficiency superior to other technologies — while maintaining architectural integrity. The benefit of zoning for heating or cooling is that it provides a level of comfort for all occupants.

## PRODUCT LINE-UP

HP	2.5	3	4	5	6	8	10	12
1-Phase 220V Cooling Only	 ARUV025GSD0	 ARUV030GSD0	 ARUV040GSD0	 ARUV050GSD0	 ARUV060GSD0			
1-Phase 220V Heat Pump			 ARUN040GSS0	 ARUN050GSS0	 ARUN060GSS0			
3-Phase 380V Heat Pump			 ARUV040LSS0	 ARUV050LSS0	 ARUV060LSS0	 ARUV080LSS0	 ARUV100LSS0	 ARUV120LSS0



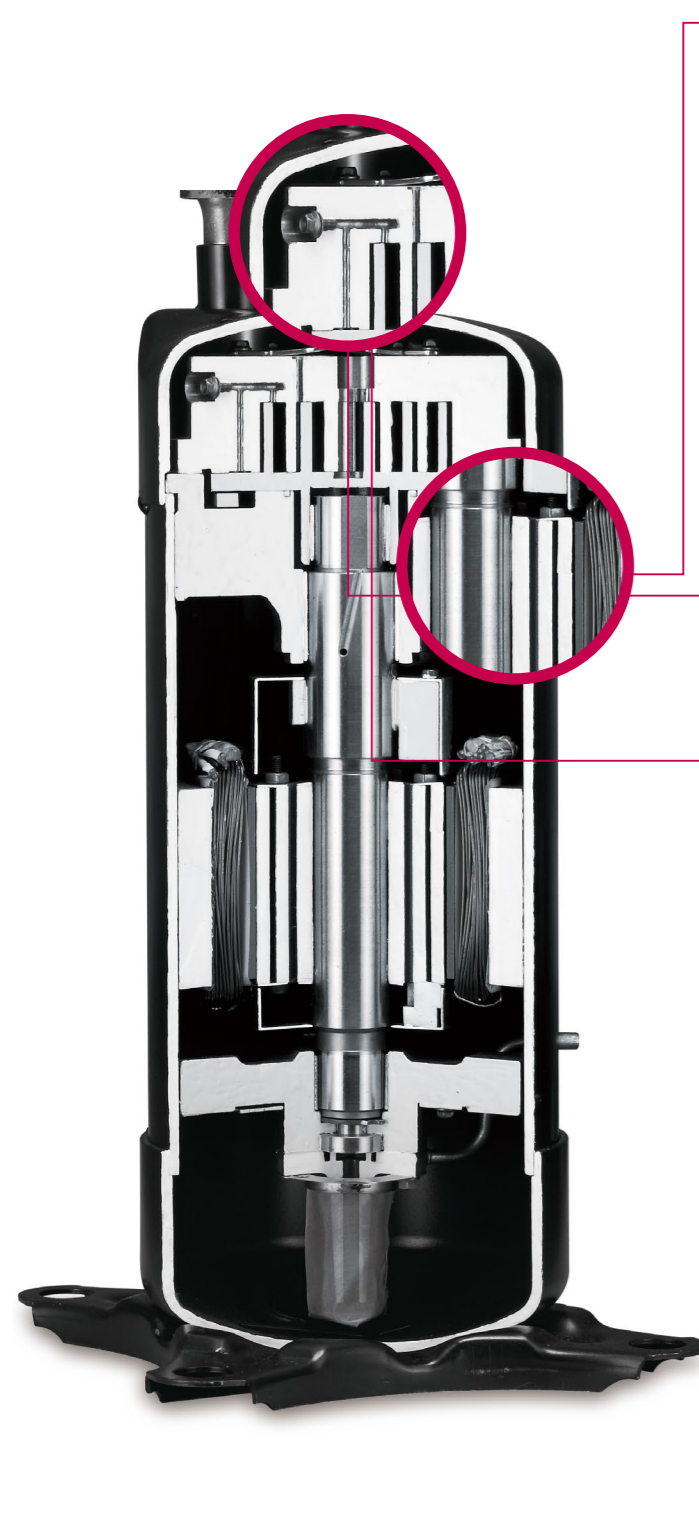


# EXCEPTIONAL EFFICIENCY

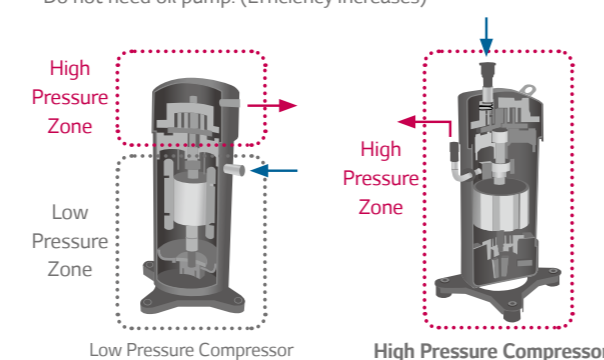
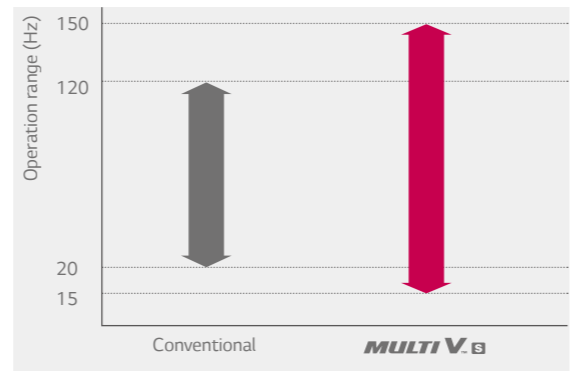
## LG's 4th Generation Inverter Compressor

Multi V S has high efficiency inverter scroll compressor with frequency range 15Hz~150Hz.

\* 8~12HP Heat pump models

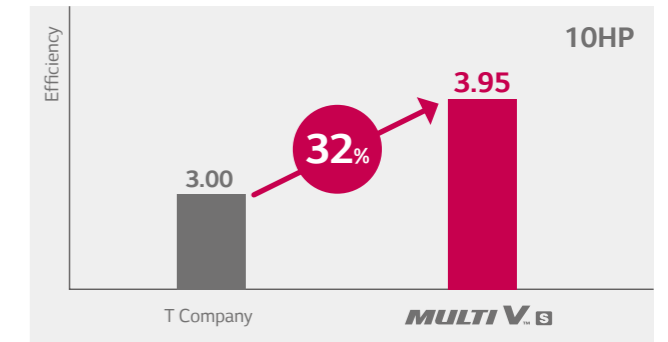
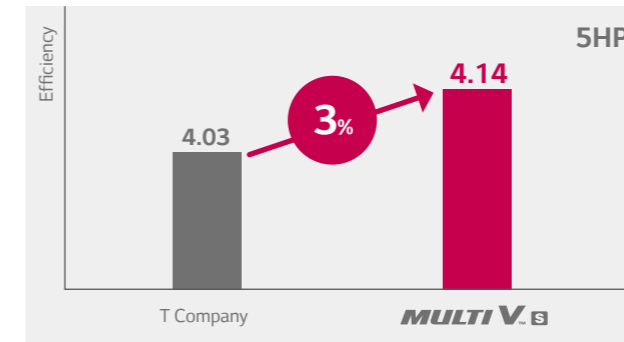


- World Best Compressor Speed 150Hz**
  - Rapid response capability
  - Compact core design (concentrated motor)
  - Down to 15Hz : part load efficiency improvement
- Inverter Scroll Compressor**
  - Inverter SCROLL compressor of high efficiency
  - Low vibration / Low noise
- 6 By-pass Valve**
  - Compressor reliability is maximized with 6 By-pass Valve
  - Prevent compressor damage due to excessively compressed refrigerant more efficiently than 4 by-pass valve
- High Pressure Compressor**
  - Viscosity of oil is secured due to high temperature and pressure.
  - Do not need oil pump. (Efficiency Increases)

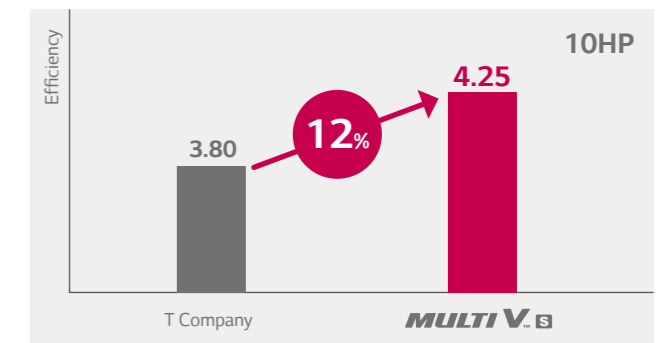
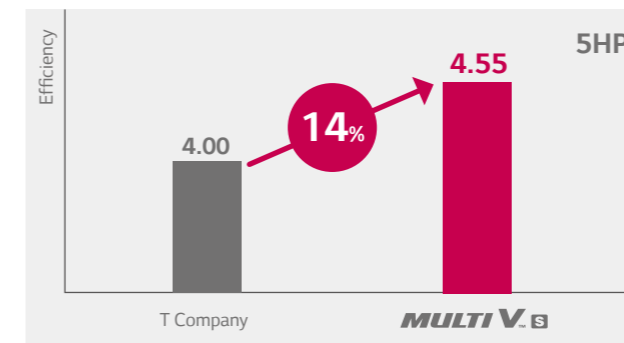



## High Efficiency

### Cooling EER



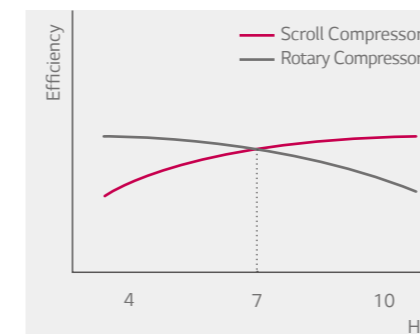
### Heating COP



## Reliable Inverter Compressor

Multi V S Inverter compressors are highly efficient and reliable for all commercial & residential applications.

### Compressor Efficiency Comparison



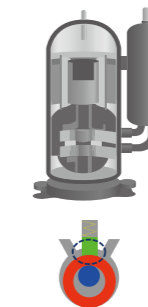
\* Based on internal test data

### T Company

Only suitable for small capacity below 7 HP



Only Rotary



### MULTI V S

High reliability and efficiency at all capacity

- 2.5 ~ 6HP : Rotary Compressor
- 8 ~ 12HP : Scroll Compressor



Rotary



Scroll



# EXCEPTIONAL EFFICIENCY

## Smart Load Control

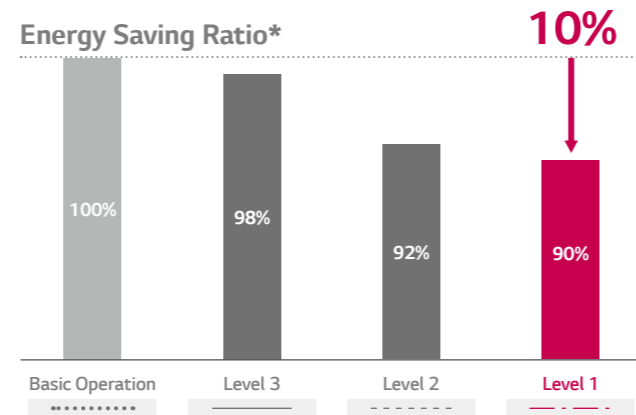
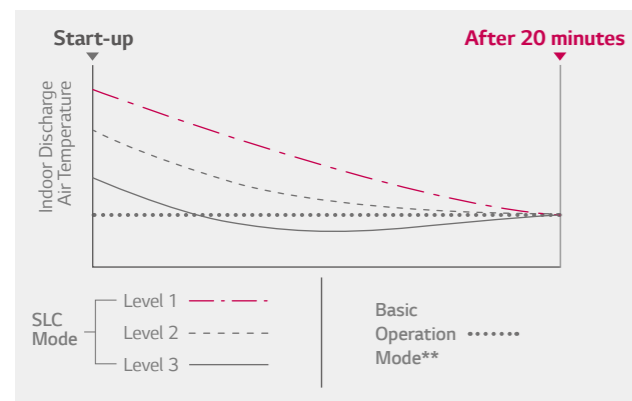
To save energy, Multi V S changes indoor discharge air temperature continuously according to load.

\* 4-12HP Heat pump models



### Start-up Operation

Operates for 20 minutes after Start-up. 3 levels of SLC operation can be set to save energy. (if not, can run in Basic Operation mode)

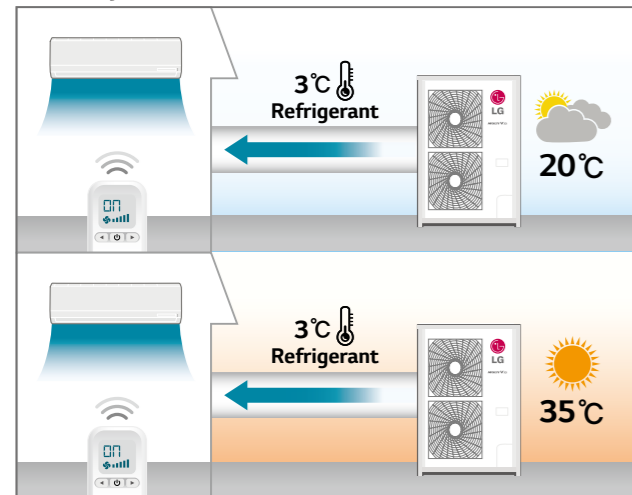


\*Energy Saving Ratio : Ratio of energy saved, compared to 100% power consumption for 30 minutes (LG internal test result)  
 \*\*Basic Operation Mode : Indoor discharge air temperature is constant regardless of variable heat load, so operating efficiency is not relatively high

### Auto-reactive Operation

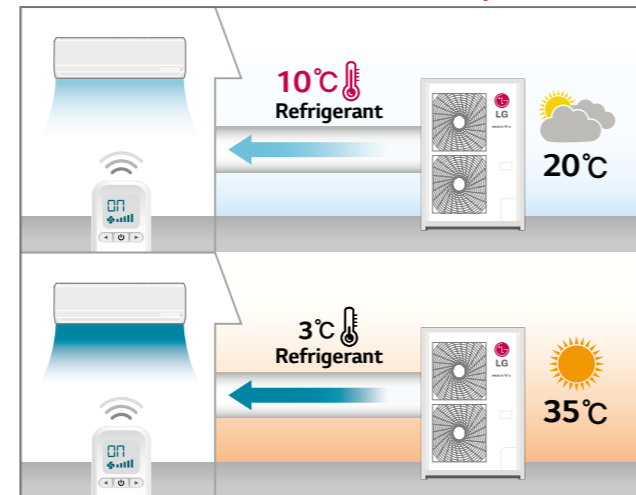
Automatically changes discharge air temperature according to the simultaneous loads. (OAT, IAT & Target temp.)

#### Basic Operation



- Variable : Indoor Air Temperature

#### Smart Load Control (Auto-reactive Operation)



- Variable : Indoor Air Temperature, Setting Temperature / Outdoor Air Temperature  
 - Accurate operation control considering various circumstances.

➡ **Maximum Energy Saving 13%**

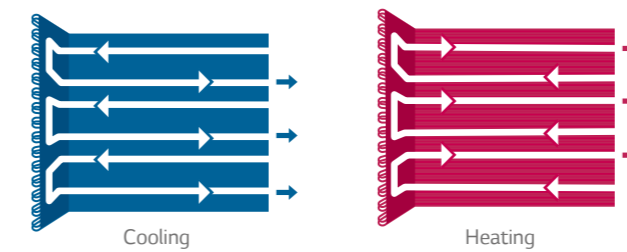
## Optimal Heat Exchanger Circuit

Variable Heat Exchanger Circuit is the world first technology which intelligently selects the optimal path for both heating and cooling (Efficiency up to 5%).

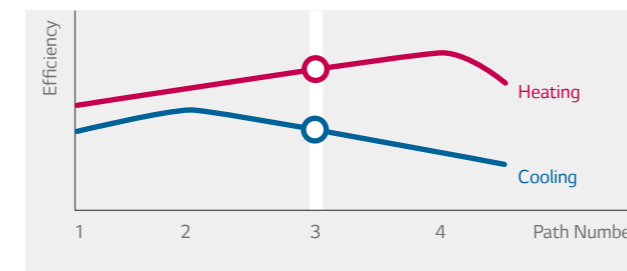
\* 4-12HP Heat pump models

### Conventional

The number and direction of path are fixed independent of temperature and operation mode. A fixed path limits efficiency.

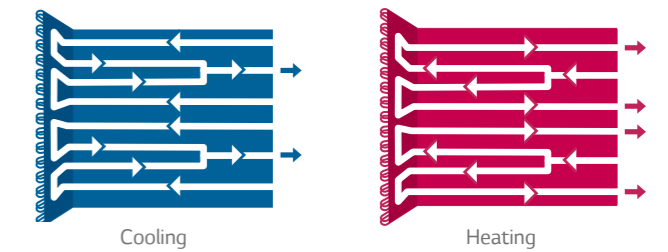


### Compromising efficiency for each operation

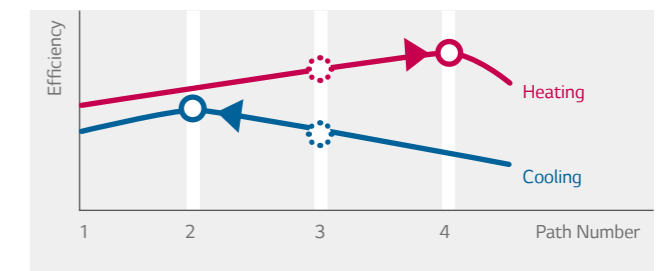


### MULTI V S

Variable Heat Exchanger Circuit adjusts the path number to match temperatures and operation modes, thereby contributing to an increase in energy efficiency.

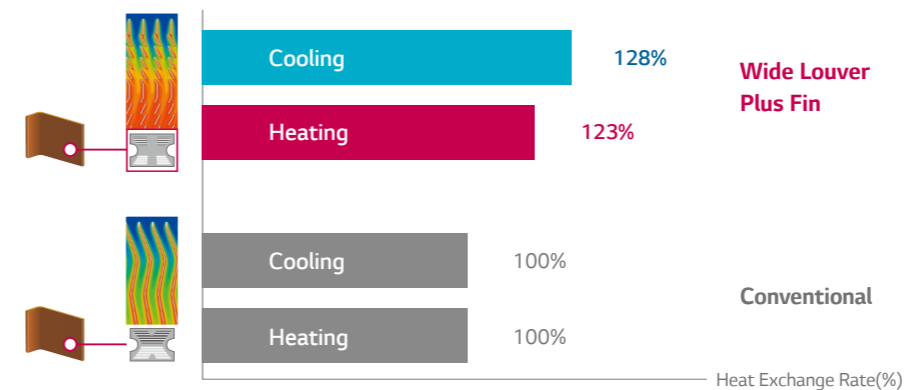


### Maximizing efficiency for all operations

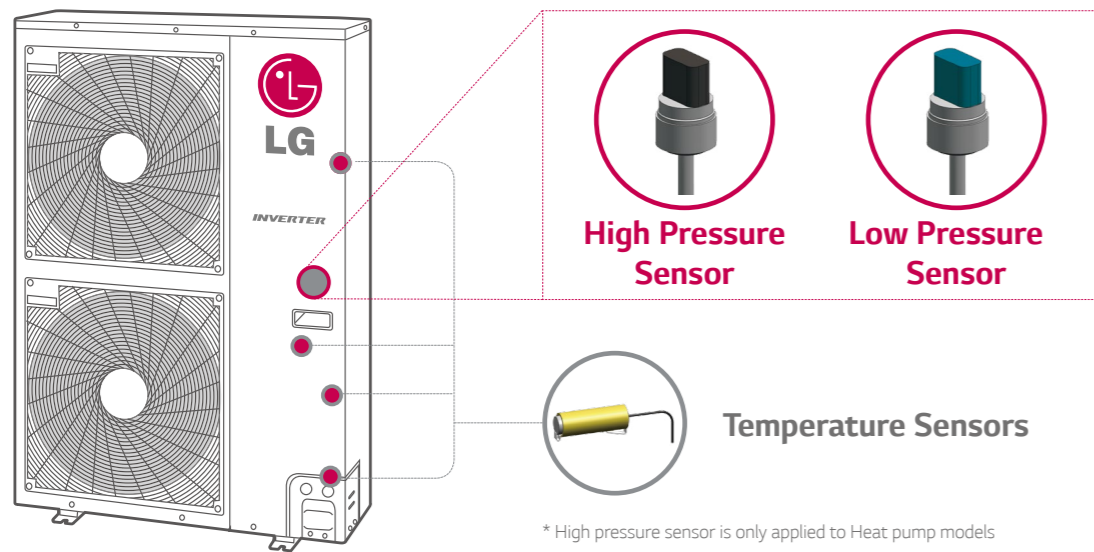


## Heat Exchanger with Wide Louver Plus Fin

Improved heat exchanger efficiency of up to 28%

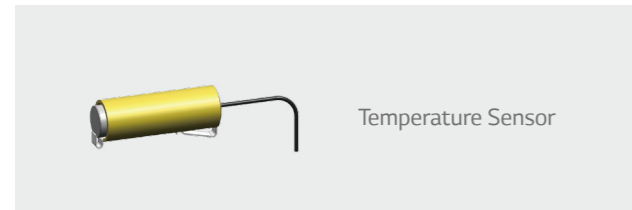


# HIGH OPERATION RELIABILITY



## High Reliability with Pressure Control

### Conventional Temperature Control



Calculates target pressure according to indoor/outdoor temperature, desired temperature and piping length.

### Temperature + Pressure Control

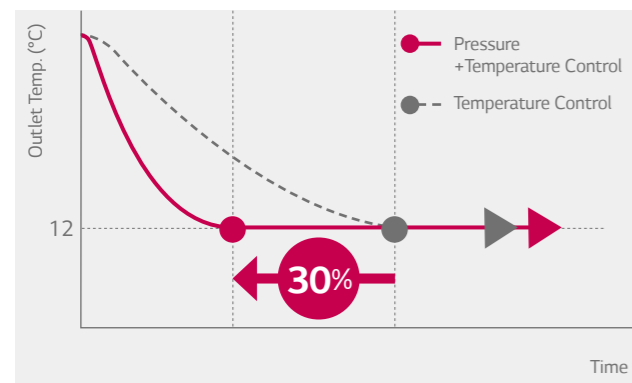


Senses and controls pressure directly using pressure sensor for faster and more exact response to load variation

\* High pressure sensor is only applied to Heat pump models

## Quick Operating Response

Pressure control takes up to 30% less time in cooling mode, to reach the desired temperature.



**30% Quicker**

The indoor environment can be made more comfortable, faster and more accurately.

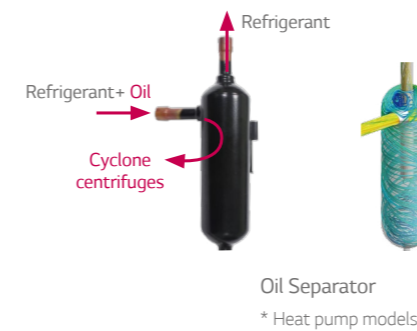
\*Based on internal test data

## High Reliability of Refrigerant Cycle

Multi V S improved reliability through an excellent technique of Oil separator / Accumulator / Sub-cooling.

### 1. Cyclone Centrifuges Oil Separator

- Highly reliable and efficient oil separation by centrifugal separation using cyclone methods
- High collection efficiency as well as outstanding resistance to high temperature and pressure



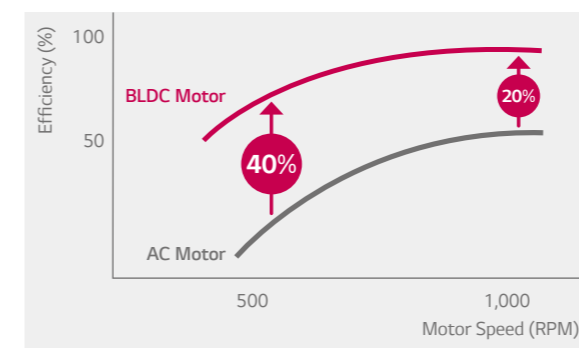
### 2. Large Volume Accumulator

- Improved reliability by adopting the large volume accumulator (138% volume up compared to conventional)
- Prevents the liquid refrigerant entering the compressor suction



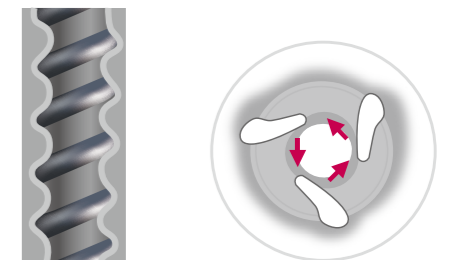
### 3. BLDC Fan Motor

- The BLDC Fan motor is more efficient than a conventional AC motor, offering an additional 40% energy savings at low speeds and 20% at high speeds.



### 4. Double Sub-cool Interchanger

- Reliability is enhanced by minimizing pressure drop due to high efficiency spiral structure and 2 times larger size
- > Long pipe is possible (up to 175 m) and high elevation (up to 50 m)
- > Reduction of indoor refrigerant noise level



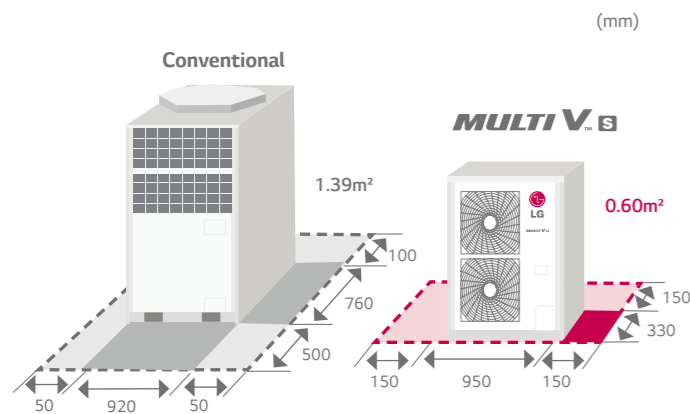
Double Sub-cool Interchanger

# DESIGN WITHOUT LIMIT

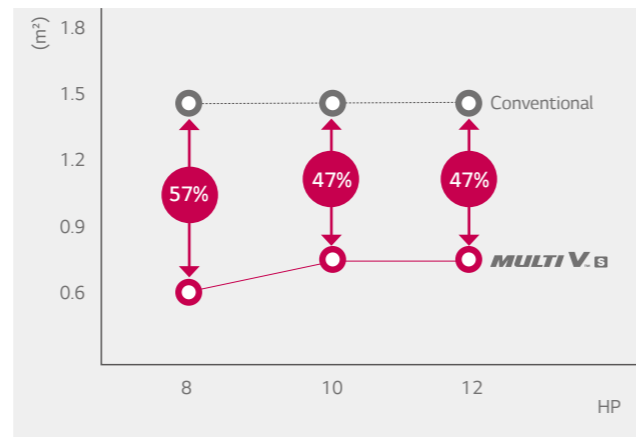
## Compact Design

MULTI V S provides the optimal solution for small offices and shops.

### Footprint Area Comparison Including Service Area



\* 8HP model comparison

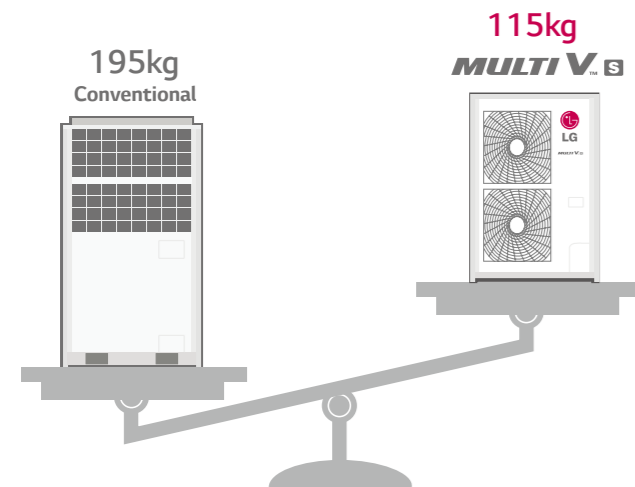


Footprint Area	HP	4	5	6	8	10	12
MULTI V S		0.60	0.60	0.60	0.60	0.74	0.74
Conventional		-	-	-	1.39	1.39	1.39

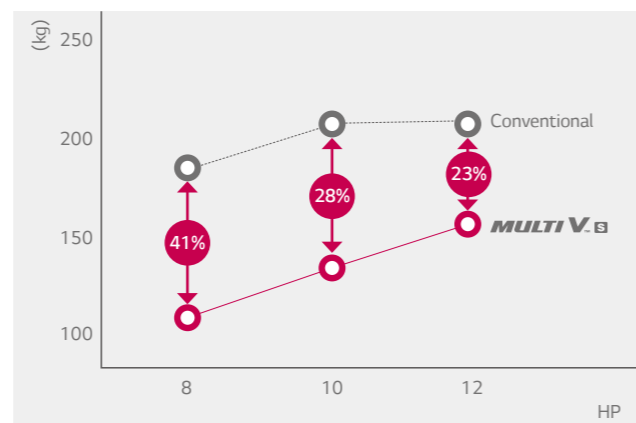
\* Source : Data Book

### 41% Lighter weight than conventional model.

- Less pressure on the roof
- Easier installation



\* 8HP model comparison



Weight	HP	4	5	6	8	10	12
MULTI V S (30)		96	96	96	115	144	155
MULTI V S (10)		69	94	94	-	-	-
Conventional		-	-	-	195	201	201

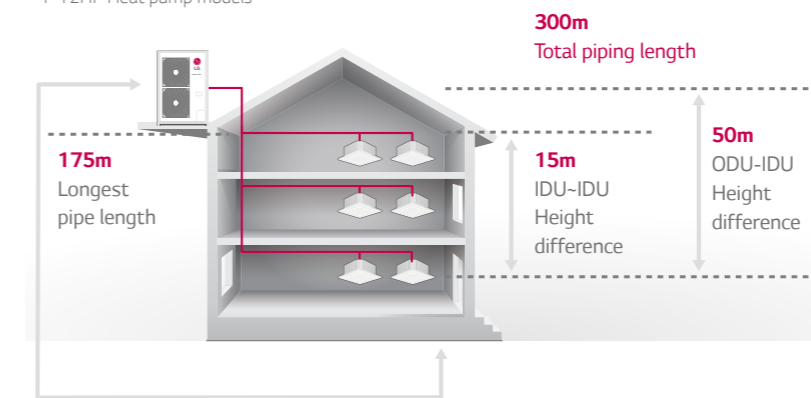
\* Source : Data Book

## Expanded Piping Capabilities

MULTI V S inverter technology and sub cooling control circuit technology allows greater piping length and outstanding elevation differences. A cooling system can be implemented more flexibly in a shop, office and even high-rise building, reducing the designer's work time and providing more efficient design.

### Piping Capabilities

\* 4-12HP Heat pump models

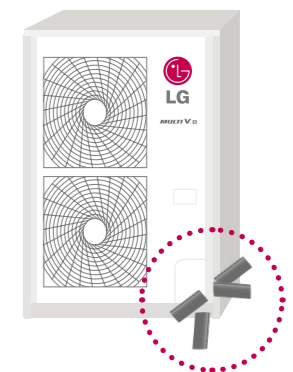


\* For Cooling only models

- 100m Total piping length - 50m Longest piping length
- 15m ODU-IDU height difference - 7.5m IDU-IDU height difference

### 4 Way Piping

- Free design and installation by 4 way piping.

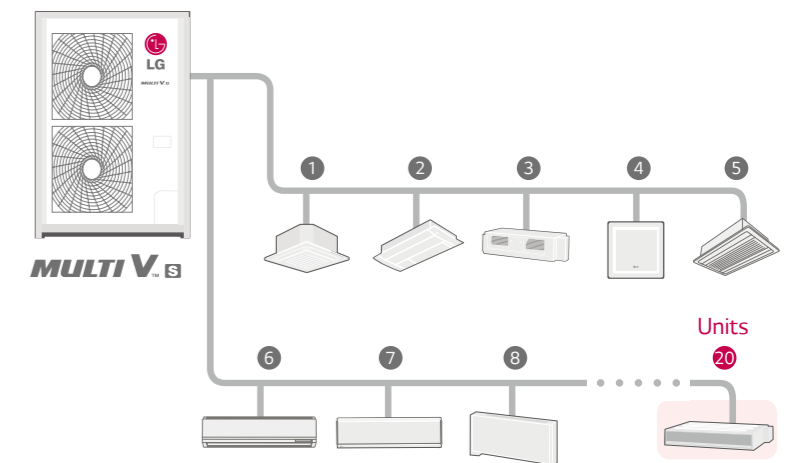


## Max.20 Indoor Units Connectable (Based on 12HP)

Maximum of 20 units can be connected to a single outdoor unit with 130% indoor unit combination. (Based on 12HP)

- Connectable indoor units is up to 20 units maximum.
- Indoor units combination range : 50 ~ 130%

- 4HP : Max. 6 indoor units
- 5HP : Max. 8 indoor units
- 6HP : Max. 9 indoor units
- 8HP : Max. 13 indoor units
- 10HP : Max. 16 indoor units
- 12HP : Max. 20 indoor units



\* Based on 12HP model



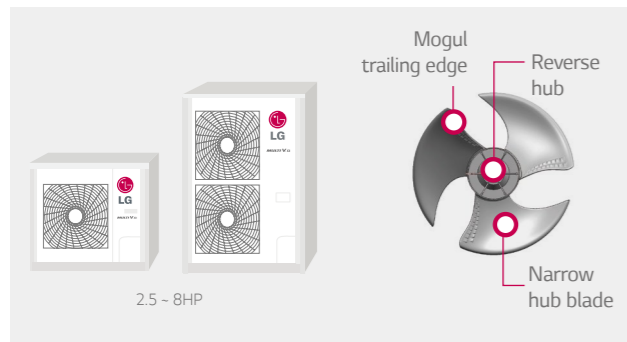
# OUTSTANDING PERFORMANCE

## Fan Technology and E.S.P. Control

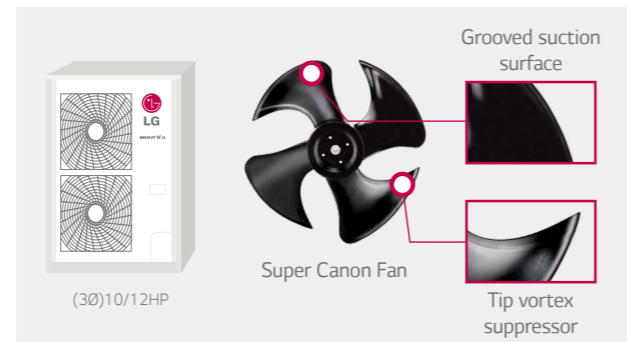
For efficient operation, newly developed fan blows higher air volume and has more high static pressure, also operating noise is decreased.

### Fan Technology

The new axial fan has a mogul trailing edge, narrow hub blade and reverse hub, this provides a high efficiency, low noise, wide fan, as well as improving the air flow rate.



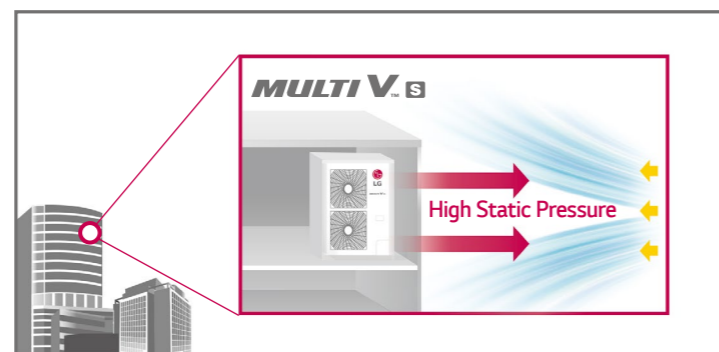
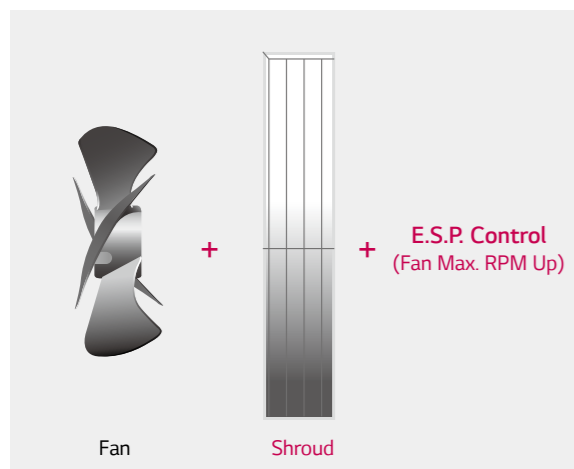
Super cannon fan increases the air volume in 50 CMM and the noise level is decreased by 4 dB(A).



### High E.S.P. Technology

Flow of air has straightness due to fan shroud and E.S.P. control even in high-rise building.

\* 10-12HP Heat pump models



- Straight air flow
- New shroud adopted
- Performs high static pressure

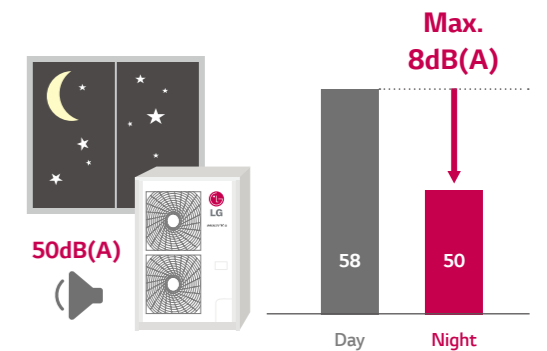
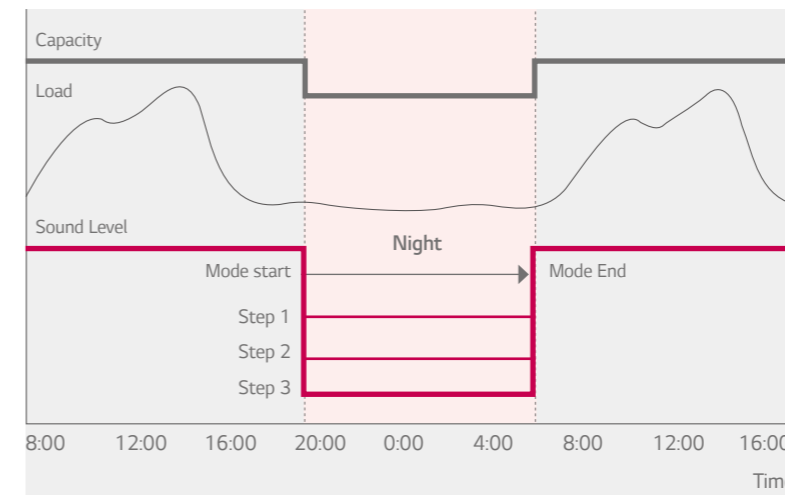
\* E.S.P. : External Static Pressure

## Silence

Low noise operation at night is possible thanks to inverter technology.

### Night Silent Operation

At night mode, noise reduced maximum 14% compared to normal mode.

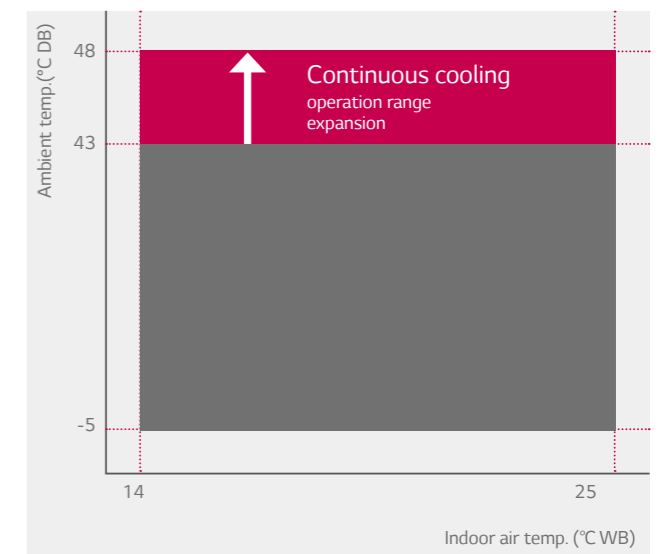


\* Normal mode noise level (10HP) : 58dB(A)  
\* Night 3 step noise level (10HP) : 56dB(A), 53dB(A), 50dB(A)

## Wide Operation Range

Thanks in large part to LG's advanced inverter compressor and unique heat exchanger design, MULTI V S is able to provide reliable operation even when the outside temperature soars to 48°C, exceeding the previous norm limit by 5 degrees.

### Cooling Operation Range

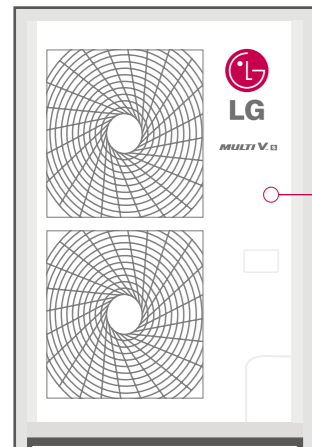


# CYCLE & SERVICE OPTIMIZATION

## Upgraded Fault Detection and Diagnosis

The inclusion of FDD elements - Auto start-up, auto refrigerant check, black box functionality, simultaneous evaluation, and auto refrigerant collection, provides the optimal solution for user reliability and ease of maintenance.

\* Heat pump models



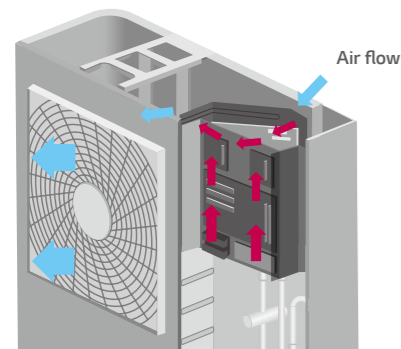
- Auto commissioning Mode
- Auto Refrigerant Collection
- Auto evaluation of refrigerant amount and charging
- Able to access LGMV (LG Monitoring View) by smartphone
- Black box function
- Piping & wiring error check-up

## Self Cooled Control

Multi V S has heat exchanger structure and diagonal shape of control box.(Efficiency up to 3%)

### Control Box Cooling System

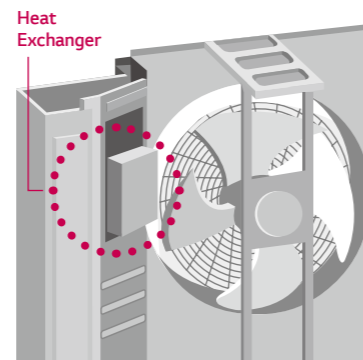
- Feature of control box is diagonal shape, it makes naturally air flowing(directly pulling air back of the fan)
- Reduced heating / cooling efficiency loss



Front view

### Heat Exchanger Technology

- Heat exchanger structure
- Optimal air flow by aluminum heat exchanger on control box.



Rear view

## Smartphone Control

With mobile application it is convenient to manage various indoor units.

\* Heat pump models

### Wireless Control (Optional)

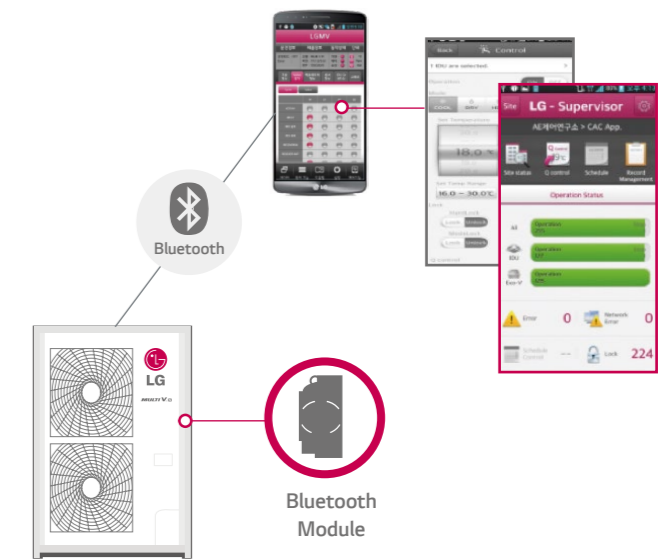
Easy control & monitoring through internet



\* In order to use this application, please do legal review (gathering private information) and get the wireless standard in each country. (Internet Bridge requires additional charges)

### Smartphone based LGMV (Optional)

Cycle monitoring and control



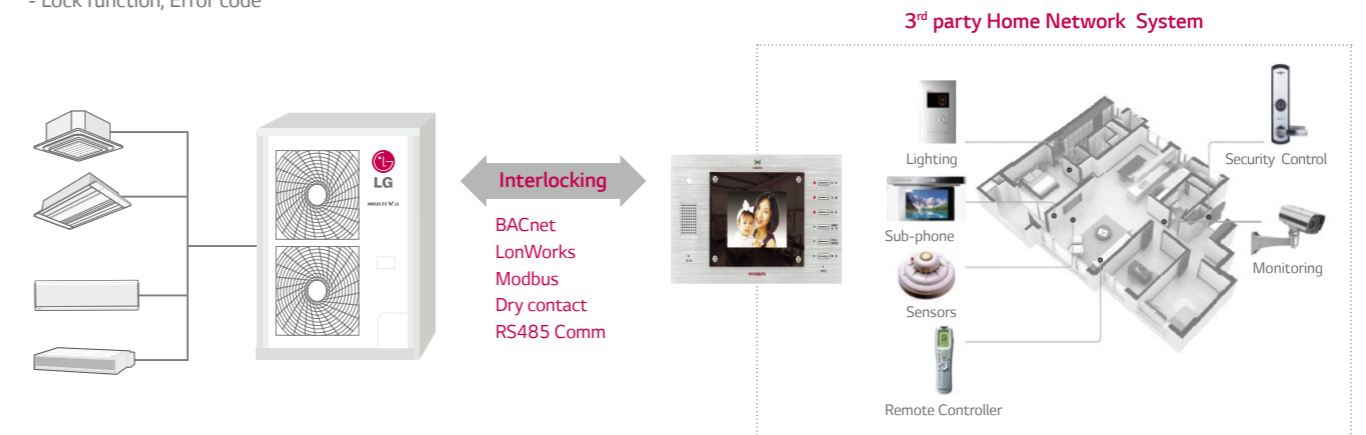
## Interlocking with Home Network System

Interlocking with home network system enables various application.

Depending on building size and usage, various communication method can be given.

### Compatibility to Home Network System

- Basic control (On/Off, Mode, Setting Temp, Fan speed)
- Lock function, Error code





## Cooling Only



HP			2.5	3
Model Name			ARUV025GSD0	ARUV030GSD0
Capacity (Rated)	Cooling	kW	7.2	9.2
		kcal/h	6,191	7,911
		Btu/h	24,600	31,400
Input (Rated)	Cooling	kW	1.80	2.10
	Cooling	COP	4.00	4.38
Casing Color			Warm Gray	Warm Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor
	Piston Displacement	cm <sup>3</sup> /rev	18	24
	Number of Revolution	rev/min	6,000	6,600
	Motor Output x Number	W x No.	1,500 x 1	2,137 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
	Oil Charge	cc	670	900
Fan	Type		Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	85.4 x 1	124.0 x 1
	Air Flow Rate(High)	m <sup>3</sup> /min	44	60
		ft <sup>3</sup> /min	1,553	2,118
	Drive		DC INVERTER	DC INVERTER
Piping Connections	Discharge	Side / Top	Side	Side
	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)
	Gas	mm(inch)	15.88(5/8)	15.88(5/8)
Dimensions(W x H x D)		mm	870 x 655 x 320	950 x 834 x 330
Net Weight		kg	45	59
		lbs	99.2	130
Sound Press Level	Cooling	dB(A)	50	50
Sound Power Level		dB(A)	-	-
Protection Devices	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector	
	Inverter	-	Over-heat protection, Over-current protection	
Communication Cable		No.xmm <sup>2</sup> (VCTF-SB)	1.0-1.5 x 2	1.0-1.5 x 2
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	1.0	1.4
		lbs	2.2	3.1
Control			Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	1, 220-240, 50	1, 220-240, 50
Number of maximum connectable indoor units			3	5
Cooling Operation Range (°C, DB)			-5 ~ 48	

Note : Due to our policy of innovation some specifications may be changed without notification.

## Cooling Only



HP			4	5	6
Model Name			ARUV040GSD0	ARUV050GSD0	ARUV060GSD0
Capacity (Rated)	Cooling	kW	11	14.5	17
		kcal/h	9,458	12,470	14,620
		Btu/h	37,600	49,500	58,000
Input (Rated)	Cooling	kW	2.75	3.85	4.00
	Cooling	COP	4.00	3.77	4.25
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor	Hermetic Motor Compressor
	Piston Displacement	cm <sup>3</sup> /rev	24	44.2	44.2
	Number of Revolution	rev/min	6,600	6,000	6,000
	Motor Output x Number	W x No.	2,137 x 1	4,000 x 1	4,000 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
	Oil Charge	cc	900	1,300	1,300
Fan	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	124.0 x 1	124.0 x 1	85.4 x 2
	Air Flow Rate(High)	m <sup>3</sup> /min	60	60	90
		ft <sup>3</sup> /min	2,118	2,118	3,178
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
Piping Connections	Discharge	Side / Top	Side	Side	Side
	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas	mm(inch)	15.88(5/8)	15.88(5/8)	19.05(3/4)
Dimensions(W x H x D)		mm	950 x 834 x 330	950 x 834 x 330	950 x 1,170 x 330
Net Weight		kg	59	66	79
		lbs	130	146	174
Sound Press Level	Cooling	dB(A)	50	51	52
Sound Power Level		dB(A)	-	-	-
Protection Devices	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector		
	Inverter	-	Over-heat protection, Over-current protection		
Communication Cable		No.xmm <sup>2</sup> (VCTF-SB)	1.0-1.5 x 2	1.0-1.5 x 2	1.0-1.5 x 2
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	1.4	1.4	2.3
		lbs	3.1	3.1	5.1
Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	1, 220-240, 50	1, 220-240, 50	1, 220-240, 50
Number of maximum connectable indoor units			6	8	9
Cooling Operation Range (°C, DB)			-5 ~ 48		

Note : Due to our policy of innovation some specifications may be changed without notification.

# Heat Pump



HP			4	5	6
Model Name			ARUN040GSSO	ARUN050GSSO	ARUN060GSSO
Capacity (Rated)	Cooling	kW	12.1	14.0	15.5
		kcal/h	10,400	12,040	13,330
		Btu/h	41,200	47,800	52,900
	Heating	kW	12.5	16.0	18.0
		kcal/h	10,750	13,760	15,480
		Btu/h	42,700	54,600	61,400
Input (Rated)	Cooling	kW	2.95	3.38	3.96
	Heating	kW	2.91	3.52	4.09
COP	Cooling	COP	4.10	4.14	3.91
	Heating	COP	4.30	4.55	4.40
Power Factor	Rated	-			
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor	Hermetic Motor Compressor
	Piston Displacement	cm <sup>3</sup> /rev	44.2	44.2	44.2
	Number of Revolution	rev/min	3,600	3,600	3,600
	Motor Output x Number	W x No.	4,000 x 1	4,000 x 1	4,000 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
	Oil Charge	cc	1,300	1,300	1,300
	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
Fan	Motor Output x Number	W	124 x 1	124 x 2	124 x 2
	Air Flow Rate(High)	m <sup>3</sup> /min	60	110	110
		ft <sup>3</sup> /min	2,119	3,885	3,885
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
Piping Connections	Discharge	Side / Top	Side	Side	Side
	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas	mm(inch)	15.88(5/8)	15.88(5/8)	19.05(3/4)
Dimensions(W x H x D)	mm		950 x 834 x 330	950 x 1380 x 330	950 x 1380 x 330
	inch		37.4 x 32.8 x 13.0	37.4 x 54.3 x 13.0	37.4 x 54.3 x 13.0
Net Weight	kg		69	94	94
	lbs		152	207	207
Sound Press Level	Cooling	dB(A)	50.0	51.0	52.0
	Heating	dB(A)	52.0	53.0	54.0
Sound Power Level		dB(A)	62.0	66.0	67.0
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch		
	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector		
	Inverter	-	Over-heat protection, Over-current protection		
Communication Cable	Noxmm <sup>2</sup> (VCTF-SB)		2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	1.8	3	3
		lbs	4	6.6	6.6
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply	V, Ø, Hz		220, 1, 60	220, 1, 60	220, 1, 60
Number of maximum connectable indoor units			6	8	9
Cooling Operation Range (°C, DB)				-5 ~ 48	
Heating Operation Range (°C, WB)				-20 ~ 18	

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# Heat Pump



HP			4	5	6
Model Name			ARUN040LSSO	ARUN050LSSO	ARUN060LSSO
Capacity (Rated)	Cooling	kW	12.1	14.0	15.5
		kcal/h	10,400	12,040	13,330
		Btu/h	41,200	47,800	52,900
	Heating	kW	12.5	16.0	18.0
		kcal/h	10,750	13,760	15,480
		Btu/h	42,700	54,600	61,400
Input (Rated)	Cooling	kW	2.80	3.38	3.96
	Heating	kW	2.75	3.52	4.09
COP	Cooling	COP	4.31	4.14	3.91
	Heating	COP	4.55	4.55	4.40
Power Factor	Rated	-			
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor	Hermetic Motor Compressor
	Piston Displacement	cm <sup>3</sup> /rev	44.2	44.2	44.2
	Number of Revolution	rev/min	3,600	3,600	3,600
	Motor Output x Number	W x No.	4,000 x 1	4,000 x 1	4,000 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
	Oil Charge	cc	1,300	1,300	1,300
	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
Fan	Motor Output x Number	W	124 x 2	124 x 2	124 x 2
	Air Flow Rate(High)	m <sup>3</sup> /min	110	110	110
		ft <sup>3</sup> /min	3,885	3,885	3,885
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
Piping Connections	Discharge	Side / Top	Side	Side	Side
	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	9.52(3/8)
	Gas	mm(inch)	15.88(5/8)	15.88(5/8)	19.05(3/4)
Dimensions(W x H x D)	mm		950 x 1380 x 330	950 x 1380 x 330	950 x 1380 x 330
	inch		37.4 x 54.3 x 13.0	37.4 x 54.3 x 13.0	37.4 x 54.3 x 13.0
Net Weight	kg		96	96	96
	lbs		212	212	212
Sound Press Level	Cooling	dB(A)	50.0	51.0	52.0
	Heating	dB(A)	52.0	53.0	54.0
Sound Power Level		dB(A)	63.0	66.0	67.0
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch		
	Compressor/ Fan	-	Over-heat protection / Fan driver overload protector		
	Inverter	-	Over-heat protection, Over-current protection		
Communication Cable	Noxmm <sup>2</sup> (VCTF-SB)		2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	3	3	3
		lbs	6.6	6.6	6.6
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply	V, Ø, Hz		380, 3, 60	380, 3, 60	380, 3, 60
Number of maximum connectable indoor units			6	8	9
Cooling Operation Range (°C, DB)				-5 ~ 48	
Heating Operation Range (°C, WB)				-20 ~ 18	

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# Heat Pump



HP			8	10	12
Model Name			ARUN080LSS0	ARUN100LSS0	ARUN120LSS0
Capacity (Rated)	Cooling	kW	22.4	28.0	33.6
		kcal/h	19,300	24,100	28,900
		Btu/h	76,400	95,900	114,700
	Heating	kW	25.2	31.5	37.8
		kcal/h	21,700	27,100	32,500
		Btu/h	86,000	107,500	129,000
Input (Rated)	Cooling	kW	5.89	7.09	9.08
	Heating	kW	6.00	7.41	9.95
COP	Cooling	COP	3.80	3.95	3.70
	Heating	COP	4.20	4.25	3.80
Power Factor	Rated	-	0.90	0.90	0.93
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm³/rev	43.8	62.1	62.1
	Number of Revolution	rev/min	3,600	3,600	3,600
	Motor Output x Number	W x No.	4,200 x 1	5,300 x 1	6,800 x 1
	Starting Method		Direct On Line	Direct On Line	Direct On Line
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
	Oil Charge	cc	1,200	1,400	1,400
	Fan	Type		Propeller fan	Propeller fan
Fan	Motor Output x Number	W	124 x 2	250 x 2	250 x 2
	Air Flow Rate(High)	m³/min	140	190	190
		ft³/min	4,944	6,707	6,710
Piping Connections	Liquid	mm(inch)	9.52(3/8)	9.52(3/8)	12.7(1/2)
	Gas	mm(inch)	19.05(3/4)	22.2(7/8)	28.58(9/8)
Dimensions(W x H x D)	mm		(950 x 1,380 x 330) x 1	(1,090 x 1,625 x 380) x 1	(1,090 x 1,625 x 380) x 1
	inch		(37.4 x 54.3 x 13.0) x 1	(42.9 x 64.0 x 15.0) x 1	(42.9 x 64.0 x 15.0) x 1
Net Weight	kg		115 x 1	144 x 1	157 x 1
	lbs		254 x 1	317 x 1	346 x 1
Sound Press Level	Cooling	dB(A)	59	60	62
	Heating	dB(A)	59	60	62
Sound Power Level		dB(A)	68	69	73
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch		
	Comperssor/ Fan	-	Over-heat protection (S/W) / Fan driver overload protector (S/W)	Over-heat protection / Fan driver overload protector	
	Inverter	-	Over-heat protection (S/W), Over-current protection (H/W, S/W)	Over-heat protection, Over-current protection	
Communication Cable	No.xmm²(VCTF-SB)		2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5	2C x 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	3.5	4.5	6
		lbs	7.7	9.9	13.2
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply	V, Ø, Hz		380-415, 3, 50	380-415, 3, 50	380-415, 3, 50
Number of maximum connectable indoor units			13	16	20
Cooling Operation Range (°C, DB)			-5 ~ 48		
Heating Operation Range (°C, WB)			-20 ~ 18		

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# Heat Pump

Device	Buyer Model	ARUN040GSS0, ARUN050GSS0, ARUN060GSS0 ARUN040LSS0, ARUN050LSS0, ARUN060LSS0 ARUN080LSS0, ARUN100LSS0, ARUN120LSS0	
Central Controller	AC Ez (Simple Controller)	PQCSZ250S0	0
	AC Smart II	PQCSW320A1E	0
	AC Smart Premium	PQCSW421E0A	0
	128 Unit Expansion Kit for AC Smart	PQCSE440U0	0
	Option Kit (SD card type) for AC Smart	PQCSE341A0 / PQCSE342A0	0
	ACP(Advanced Control Platform)	PQCPA11A0E / PQCPB11A0E	0
	AC Manager	PQCSS520A0E	0
	ACP(Advanced Control Platform) Standard	PQCPC22N0	0
	ACP(Advanced Control Platform) Premium	PQCPC22A0	0
	AC Manager Plus	PQCSSA21E0	0
	DO(Digital Output) Kit	PQNF00T0	0
	BNU (Building Network Unit)	LONWORKS Gateway (DC 12V Adapter)	PQNFB16A1 / PLNWKB000
LONWORKS Gateway (AC 24 V)		PLNWKB100	X
BACnet Gateway (DC 12V Adapter)		PQNFB17B0 / PQNFB17C0	0
BACnet Gateway (AC 24 V)		PQNFB17C1	X
Installation	Refrigerant Charging Kit	PRAC1	0
	Variable Water Flow Control Kit	PWFCKN000	X
PDI(power distribution indicator)	PQNUD1S00	0	
PDI(power distribution indicator) Premium	PQNUD1S40	0	
Cool / Heat Selector	PRDSBM	0	
IO Module (ODU Dry Contact)	PVDSMN000	0	
Low Ambient Kit	PRVC*	X	
Cycle Monitoring Device	LG MV	PRCTILO	0
	Mobile LGMV(Bluetooth)	PMVBTQ01	0
Internet Bridge	PWFMD000	0	

# Cooling Only

Device	Buyer Model	ARUV025GSD0, ARUV030GSD0, ARUV040GSD0 ARUV050GSD0, ARUV060GSD0	
Central Controller	AC Ez (Simple Controller)	PQCSZ250S0	0
	AC Smart II	PQCSW320A1E	0
	AC Smart Premium	PQCSW421E0A	0
	PI485	PMNFP14A1	0
Cycle Monitoring Device	LG MV	PRCT-FE1	0

Notes:

- Capacities are based on the following conditions:
  - Cooling Temperature : Indoor 27°C(80.6°F) DB / 19°C(66.2°F) WB  
Outdoor 35°C(95°F) DB / 24°C(75.2°F) WB
  - Heating Temperature : Indoor 20°C(68°F) DB / 15°C(59°F) WB  
Outdoor 7°C(44.6°F) DB / 6°C(42.8°F) WB
  - Piping Length : Interconnected Pipe Length = 5m
  - Difference Limit of Elevation (Outdoor - Indoor Unit) is Zero.
- Wiring cable size must comply with the applicable local and national code.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber.  
Therefore, these values can be increased (maximum 3dB(A)) owing to ambient conditions during operation.



