



LG ELECTRONICS VIETNAM

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www.lg.com/vn/business | www.lghvac.vn | www.partner.lge.com



*For continual product development, LG reserves the right to change specifications or designs without notice

*** Note**
This product uses inverter technology, so it can generate harmonics. If local law or the Investor requires harmonic suppression at the construction site, please coordinate with the electrical design unit to take measures to suppress harmonics. Contact your supplier for more detailed information on the electrical characteristics of LG air conditioners.

LG Electronics

Ahead of the Expected
with LG HVAC Solutions

MULTI VTM S

Total Air Solution Provider



<http://www.lg.com/vn/business>
|
<http://partner.lge.com>



OUTDOOR UNITS LINE-UP

Unit : HP / ○ 220V, 1Ø / ● 380V, 3Ø / CO ▲ 220V, 1Ø

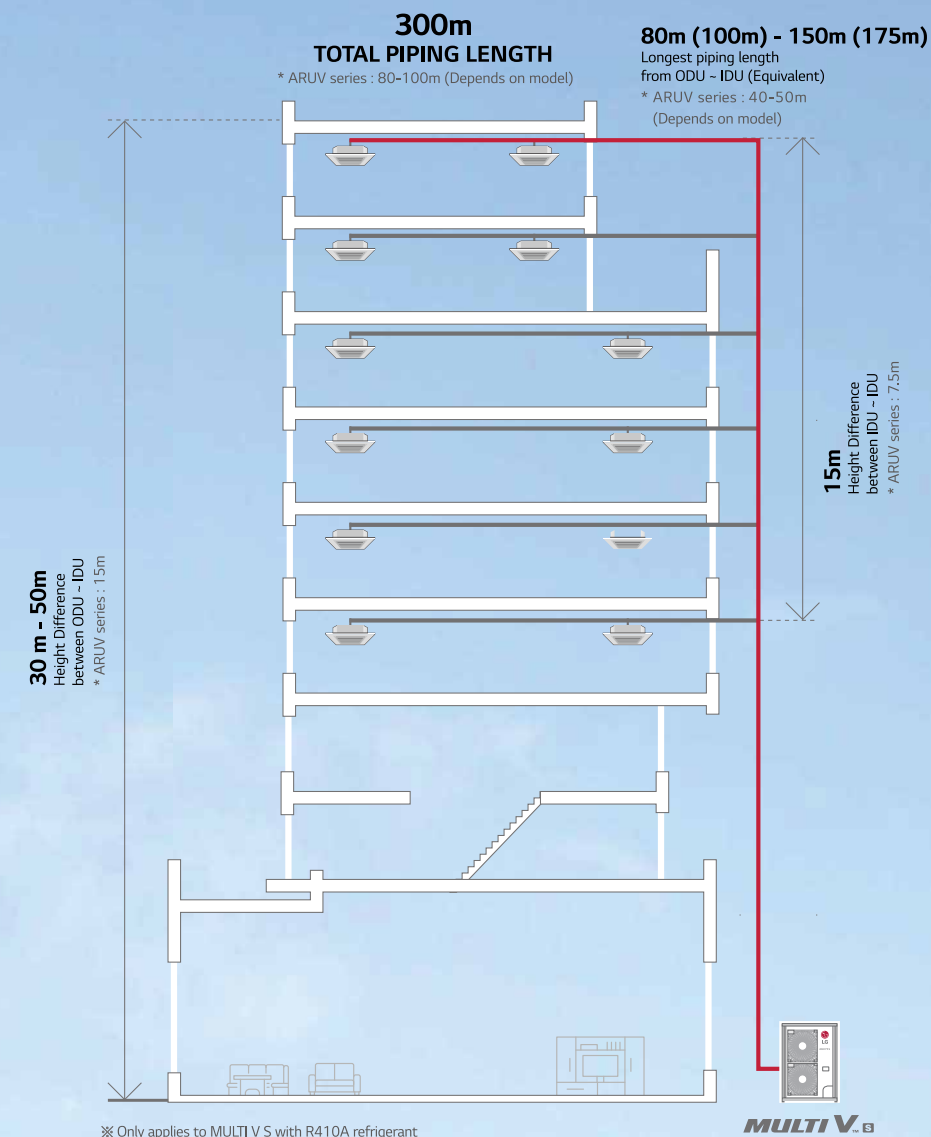
Features	Appearance	3	4	5	6	8	10	12
MULTI V™ S • Space saving • Flexible design applications - Slim, light, and broad range (4 - 12 HP) - Large number of connectable indoor units (Up to 20 Units) • For small / medium building		▲	▲	▲	▲			
			○●	○●	○●			
						●	●	●

MULTI VTM S

- Air cooled VRF Heat pump & Heat Recovery
- 9.2 ~ 33.6kW (Cooling capacity based)
- Both 1Ø, 220 ~ 240V, 50Hz and 3Ø, 380 ~ 415V, 50Hz
- Side discharge outdoor unit
- Includes the industry's first single phase Heat Recovery system

300M
TOTAL PIPING LENGTH

Compact yet
powerful VRF
For premium
residences and
small offices



Energy savings



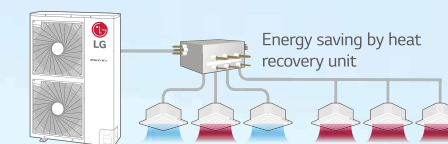
Reliability



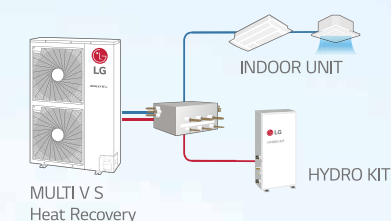
Convenience

How does it work?

Available in Heat Pump and Heat Recovery Configurations



Combination of Cooling, Heating and Hot Water Solution



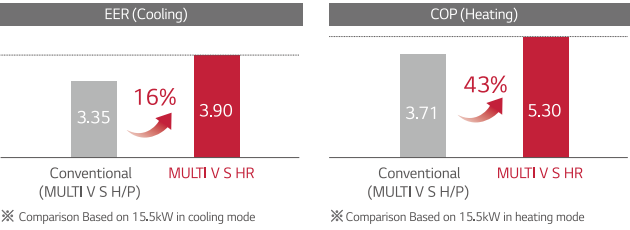
※ Heat Pump and Recovery are separated models.

ENERGY SAVINGS

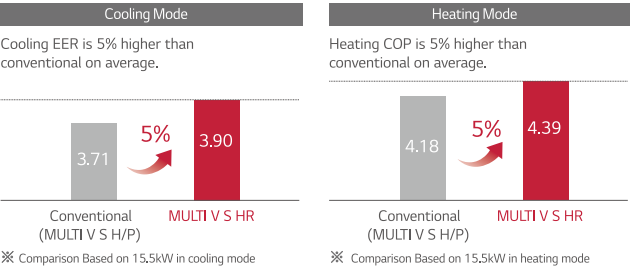
EER / COP / Part Load

Cost savings with energy efficiency

Heat Pump



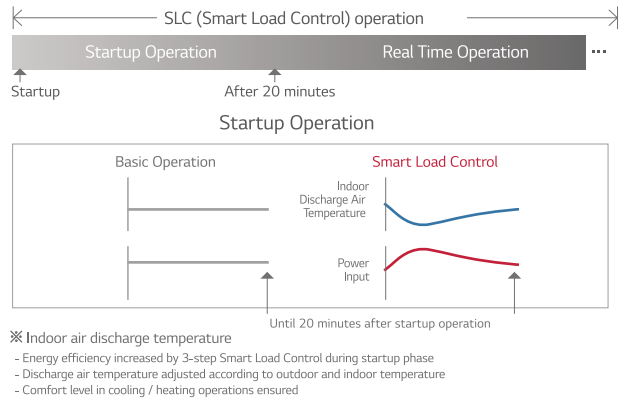
Heat Recovery



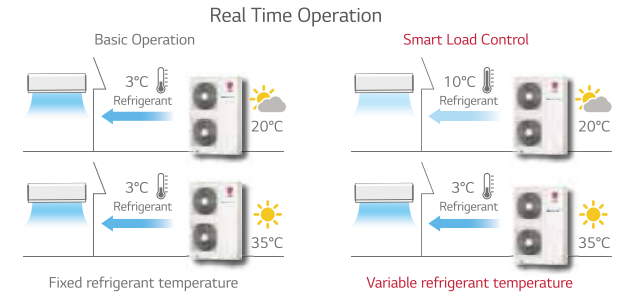
Smart Load Control Applied

Enhanced comfort and up to 23% energy savings with MULTI V load control

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



Max.10% Energy saving



Max. 13% Energy saving

How to set up : By dip switch in outdoor unit (Referred to Product Data Book) Factory default setting is OFF.

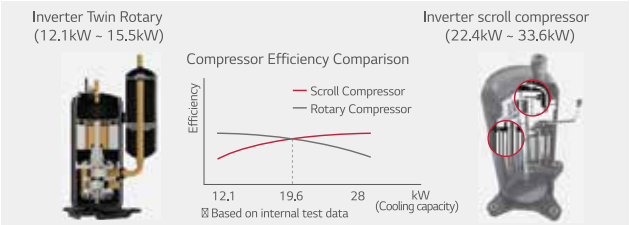
※ ESEER (European seasonal energy efficiency Ratio) conditions based on 15.5kW unit

- Outdoor temperature condition : 35°C (DB) / 30°C (DB) / 25°C (DB) / 20°C (DB)
- Indoor temperature condition : 27°C (DB) / 19°C (WB)

※ Dual sensing (Temperature & humidity) Smart Load Control is possible with Remote controller PTMTB100 (White) /PREMTBB10 (Black)

Inverter Twin Rotary & Inverter Scroll Compressor

Adapted High Efficient Compressor according to Capacity



Inverter Twin Rotary

Concentrated Winding Motor

Oil path area is improved by over 50% by increasing the extra stator cavity. Due to this, caloric value of motor is reduced, improving the cooling function of stator coil.

Twin Rotary Rotor

Upper and lower part rotor offset imbalance in shaft rotor rotation. Vibration and noise is reduced. Max torque load decreased by 45% compared to single rotor.

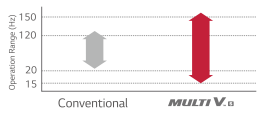
Surface Coating

Surface coating of outstanding abrasion resistance property on vane and crank shaft.

Inverter scroll compressor

Best-in-class Compressor Speed

- Rapid response capability
- Compact core design (Concentrated motor)
- Down to 15Hz : Part load efficiency improvement



6 Bypass Valve

Compressor reliability is maximized with 6 Bypass Valve

- Prevent compressor damage due to excessively compressed refrigerant more efficiently than 4 Bypass valve

Direct Oil Injection

- Eliminate suction refrigerant gas heat loss through direct oil injection into compression chamber (Efficiency increases)
- Increased reliability with regulated oil supply

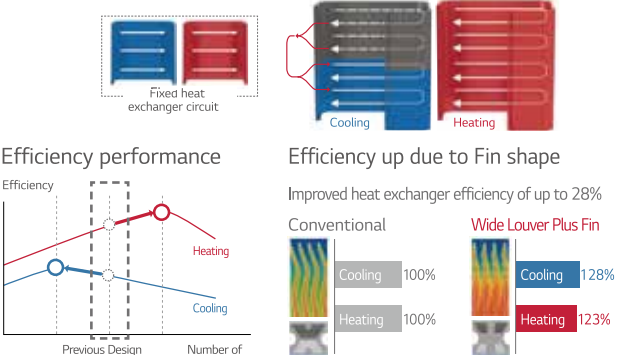
Scroll Profile

- The enhanced reliability by Increased reliability with regulated oil supply.
- Efficiency increases by expanding 96% Bypass area and 17% improved volume ratio by non-uniform scroll thickness

Optimal Heat Exchanger

Maximize Efficiency according to different Heat Exchanger path by cooling and heating

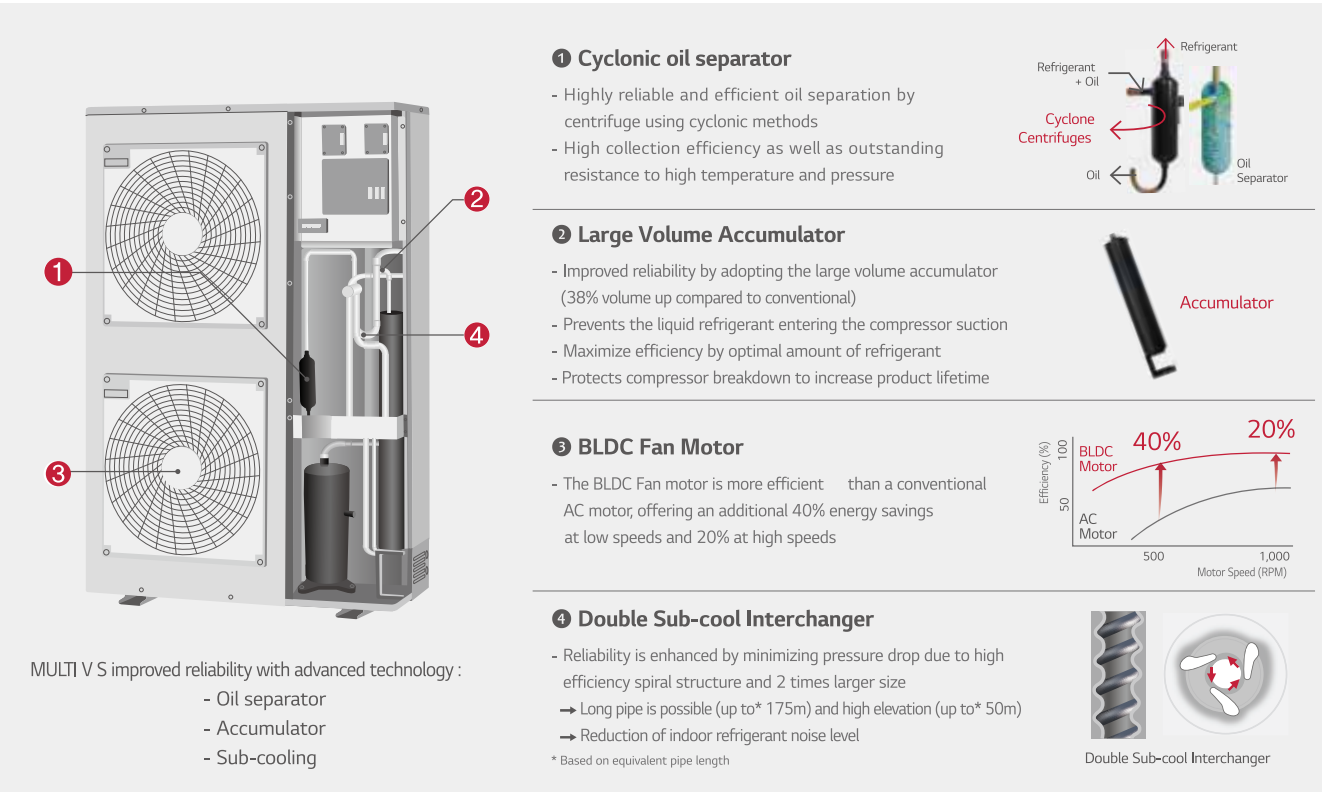
Variable Heat Exchanger Circuit intelligently selects the optimal path for both heating and cooling operations. With this smart path selection technology, an average of 6% increase in the efficiency of both operations has been achieved. The paths number and circuit velocity are adjusted to match temperatures and operation modes in order to maximize efficiency instead of compromising efficiency for each operation when the number and direction of paths are fixed independently of temperature operation mode.



RELIABILITY

Reliable Refrigerant Components

LG technology allows for superior performance and component durability



Smart Control

Pressure control applied for smart, quick and precise response to user's temperature request

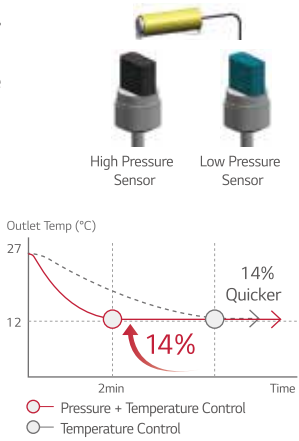
Temperature + Pressure Control

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

Quick Operating Response

Desired temperature can be reached up to 14% faster in cooling mode with pressure control, allowing more accurate control of indoor environment for maximized comfort.

※ Specifications may vary for each model.



Corrosion Resistance Black Fin

Strong Durability against high salinity and heavily polluted air

Ocean Black Fin ensures continued operation of MULTI V S in highly corrosive environments like salt concentration in coastal towns or severe air pollution in industrial cities keeps. This improvement in durability prolongs the product's lifespan and lowers both the operational and maintenance costs.

Corrosion Resistance Proven by Certified Tests

LG Corrosion Resistance solution passed ISO 21207 accelerated corrosion test conducted by an independent test organization and the result has been certified by prestigious global certification organization, TÜV.

Certified protection

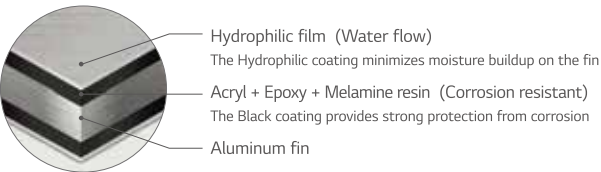


※ Verification of corrosion resistance performance

- Declared by TÜV Rheinland
- Test Method B of ISO21207
- Test condition : Salt contaminated condition + severe industrial / traffic environment (NO₂ / SO₂)

Enhanced Coating Layers

The black coating with enhanced epoxy resin is applied for strong protection from various corrosive external conditions such as salt contamination and air pollution. Moreover, the hydrophilic film keeps water from accumulating on the heat exchanger's fin, minimizing moisture buildup and eventually making it even more corrosion resistant.



IMPROVED USER CONVENIENCE

Sufficient Piping Length

Increased piping length allows for flexible design and installation

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.

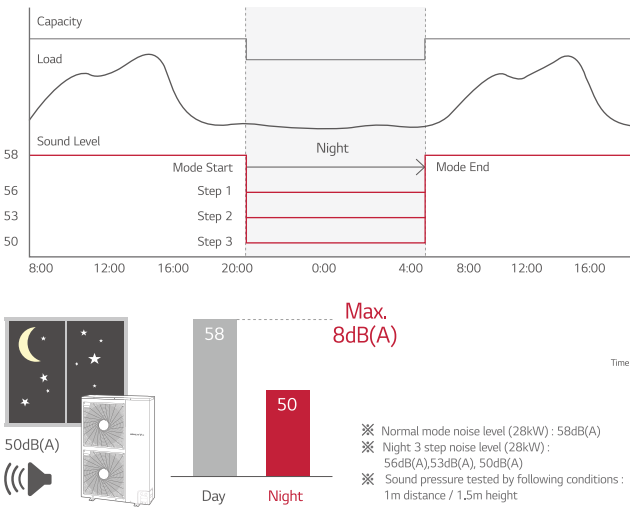
4 Way Piping

- Free design and installation by 4 way piping.

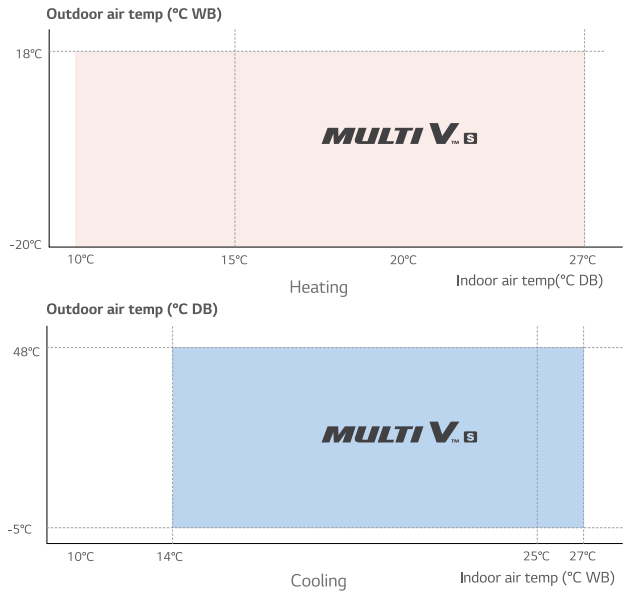
Low Noise Operation

Decreased noise during operation with low noise functionality

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



Wider Operation Range



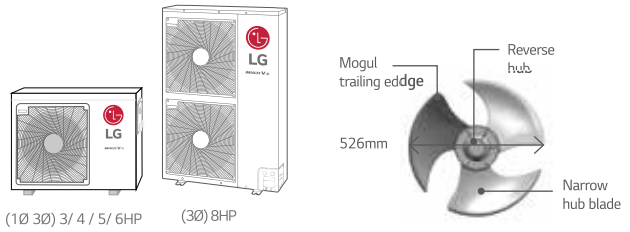
Fan Technology and RPM Control

External static pressure control for outdoor unit fan to adapt more flexibly to various installation conditions of outdoor unit

For enhanced efficiency, new axial fan boasts higher air volume, increased static pressure and decreased noise.

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.

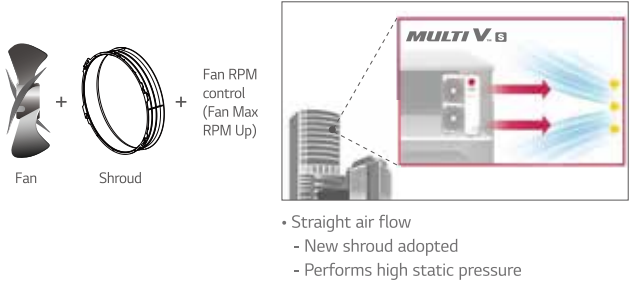


Super cannon fan increases the air volume in 50 CMM and the noise level is decreased by 4dB(A).



Fan RPM control

Flow of air is straight due to fan shroud and Fan RPM control even in high-rise building.

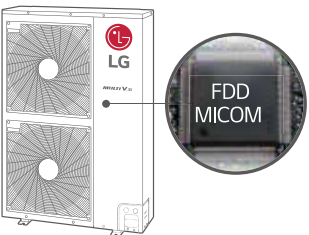


Upgraded Fault Detection and Diagnosis

Easy and convenient maintenance with self-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.

- 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



MULTI V S COOLING ONLY

ARUV030GSD0 / ARUV040GSD0
ARUV050GSD5 / ARUV060GSD5



HP			3	4	5	6
Model Name	Combination Unit		ARUV030GSD0	ARUV040GSD0	ARUV050GSD5	ARUV060GSD5
Capacity (Rated)	Cooling	kW	9.2	11.0	14.5	16.0
		Btu/h	31,400	37,600	49,500	54,600
	Heating	kW	-	-	-	-
		Btu/h	-	-	-	-
Input (Rated)	Cooling	kW	2.10	2.75	3.62	4.50
	Heating	kW	-	-	-	-
Casing Color			Warm Gray	Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Wide Louver Plus	Wide Louver Plus	Wide Louver Plus	Wide Louver Plus
Compressor	Type		Hermetic Motor Compressor	Hermetic Motor Compressor	LG Inverter Scroll	LG Inverter Scroll
	Piston Displacement	cm ³ /rev	24	24	31.6	31.6
	Motor Output x Number	W x No.	2,137 x 1	2,137 x 1	3,198 x 1	3,198 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D (PVE)	FVC68D (PVE)	FW68D	FW68D
	Oil Charge	CC	900	900	1,100	1,100
Fan	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	124.0 x 1	124.0 x 1	198 x 1	198 x 1
	Air Flow Rate (High)	m³/min	60	60	80	80
	Drive		DC INVERTER	DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	Side	Side	Side	Side
Pipe Connections	Liquid	mm (inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
	Gas	mm (inch)	15.88 (5/8)	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 834 x 330	950 x 834 x 330
Net Weight		kg	59	59	67	67
Sound Pressure Level	Cooling	dB(A)	50	50	53	56
	Heating	dB(A)	-	-	-	-
Protection Devices	High pressure protection	-	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch
	Compressor / Fan	-	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection
Communication Cable		mm ² x No. (VCTF-SB)	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C
Refrigerant	Refrigerant name		R410A	R410A	R410A	R410A
	Precharged Amount		1.4	1.4	2.0	2.0
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		Ø, V, Hz	1, 220-240, 50	1, 220-240, 50	1, 220-240, 50	1, 220-240, 50
Number of maximum connectable indoor units			5	6	8	9

Note

- Eurovent Test Condition : Type of indoor unit connected is only Ceiling Concealed Duct.
 - Refer to EUROVENT certification regulation for more detail test conditions.
 - Refer to EUROVENT website for test values connected Ceiling Cassette type indoors.
- Performances 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
- The maximum combination ratio is 160%. (the maximum combination ratio of ARUV*** (Cooling only model) is 130%).
- Wiring cable size must comply with the applicable local and national codes.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.
- Power factor could vary less than ±1% according to the operating conditions.
- This product contains Fluorinated greenhouse gases. (R410A, GWP(Global warming potential) = 2087.5)

MULTI V S HEAT PUMP

ARUN040GSS5 / ARUN050GSS5 / ARUN060GSS5



HP			4	5	6
Model Name	Combination Unit		ARUN040GSS5	ARUN050GSS5	ARUN060GSS5
Capacity (Rated)	Cooling	kW	12.1	14.0	15.5
		Btu/h	41,300	47,800	52,900
	Heating	kW	12.5	16.0	18.0
		Btu/h	42,700	54,600	61,400
Input (Rated)	Cooling	kW	3.06	3.33	3.97
	Heating	kW	2.90	3.48	4.29
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Wide Louver Plus	Wide Louver Plus	Wide Louver Plus
Compressor	Type		LG Inverter Scroll	LG Inverter Scroll	LG Inverter Scroll
	Piston Displacement	cm ³ /rev	31.6	31.6	31.6
	Motor Output x Number	W x No.	3,198 x 1	3,198 x 1	3,198 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FW68D	FW68D	FW68D
	Oil Charge	cc	1,100	1,100	1,100
Fan	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	124 x 1	198 x 1	200 x 1
	Air Flow Rate (High)	m³/min	60	80	80
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	Side	Side	Side
Pipe Connections	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 834 x 330
Net Weight		kg	65	72	72
Sound Pressure Level	Cooling	dB(A)	51	57	57
	Heating	dB(A)	55	60	63
Protection Devices	High pressure protection	-	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch
	Compressor/Fan	-	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection
Communication Cable		mm ² x No. (VCTF-SB)	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	1.8	2.4	2.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		Ø, V, Hz	1, 220-240, 50	1, 220-240, 50	1, 220-240, 50
Number of maximum connectable indoor units			8	10	10

Note

1. Eurovent Test Condition : Type of indoor unit connected is only Ceiling Concealed Duct.
- Refer to EUROVENT certification regulation for more detail test conditions.
- Refer to EUROVENT website for test values connected Ceiling Cassette type indoors.

2. Performances 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

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6. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

7. Power factor could vary less than ±1% according to the operating conditions.

8. This product contains Fluorinated greenhouse gases. (R410A, GWP(Global warming potential) = 2087.5)

MULTI V S HEAT PUMP

ARUN040LSS5 / ARUN050LSS5 / ARUN060LSS5



HP			4	5	6
Model Name	Combination Unit		ARUN040LSS5	ARUN050LSS5	ARUN060LSS5
Capacity (Rated)	Cooling	kW	12.1	14.0	15.5
		Btu/h	41,300	47,800	52,900
	Heating	kW	14.2	16.0	18.0
		Btu/h	48,400	54,600	61,400
Input (Rated)	Cooling	kW	3.43	3.33	3.97
	Heating	kW	2.93	3.48	4.29
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Wide Louver Plus	Wide Louver Plus	Wide Louver Plus
Compressor	Type		LG Inverter Scroll	LG Inverter Scroll	LG Inverter Scroll
	Piston Displacement	cm ³ /rev	31.6	31.6	31.6
	Motor Output x Number	W x No.	3,198 x 1	3,198 x 1	3,198 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FW68D	FW68D	FW68D
	Oil Charge		cc	1,100	1,100
Fan	Type		Axial Flow Fan	Axial Flow Fan	Axial Flow Fan
	Motor Output x Number	W	124 x 1	198 x 1	198 x 1
	Air Flow Rate (High)	m ³ /min	60	80	80
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	Side	Side	Side
Pipe Connections	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
Net Weight			kg	65	72
Sound Pressure Level	Cooling	dB(A)	51	57	57
	Heating	dB(A)	55	60	63
Protection Devices	High pressure protection		-	High pressure sensor / High pressure switch	High pressure sensor / High pressure switch
	Compressor/Fan		-	Over-heat protection / Fan driver overload protector	Over-heat protection / Fan driver overload protector
	Inverter		-	Over-heat protection / Over-current protection	Over-heat protection / Over-current protection
Communication Cable			mm ² x No. (VCTF-SB)	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount		kg	1.8	2.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply			Ø, V, Hz	3, 380-415, 50	3, 380-415, 50
Number of maximum connectable indoor units			8	10	13

Note

1. Eurovent Test Condition : Type of indoor unit connected is only Ceiling Concealed Duct.
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MULTI V S HEAT PUMP

ARUN080LSS0 / ARUN100LSS0 / ARUN120LSS0



HP			8	10	12
Model Name	Combination Unit		ARUN080LSS0	ARUN100LSS0	ARUN120LSS0
Capacity (Rated)	Cooling	kW	22.4	28.0	33.6
		Btu/h	76,400	95,900	114,700
	Heating	kW	25.2	31.5	37.8
		Btu/h	86,000	107,500	129,000
Input (Rated)	Cooling	kW	5.89	7.09	9.08
	Heating	kW	6.0	7.41	9.95
Casing Color			Warm Gray	Warm Gray	Warm Gray
Heat Exchanger			Wide Louver Plus	Wide Louver Plus	Wide Louver Plus
Compressor	Type		LG Inverter Scroll	LG Inverter Scroll	LG Inverter Scroll
	Piston Displacement	cm ³ /rev	43.8	62.1	62.1
	Motor Output x Number	W x No.	4,200 x 1	5,300 x 1	5,300 x 1
	Starting Method		DC Inverter Starting	DC Inverter Starting	DC Inverter Starting
	Oil Type		FVC68D (PVE)	FVC68D (PVE)	FVC68D (PVE)
	Oil Charge	cc	2,400	2,600	2,600
Fan	Type		Properlier Fan	Properlier Fan	Properlier Fan
	Motor Output x Number	W	124 x 2	250 x 2	250 x 2
	Air Flow Rate (High)	m ³ /min	140	190	190
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge		Side	Side	Side
Pipe 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 (1-1/8)
Dimensions (W x H x D)		mm	950 x 1,380 x 330	1,090 x 1,625 x 380	1,090 x 1,625 x 380
Net Weight		kg	115	144	157
Sound Pressure Level	Cooling	dB(A)	57	58	60
	Heating	dB(A)	57	58	60
Protection Devices	High pressure protection		-	-	-
	Compressor/Fan		-	-	-
	Inverter		-	-	-
Communication Cable		mm ² x No. (VCTF-SB)	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C	1.0 ~ 1.5 x 2C
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	3.5	4.5	6.0
	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		Ø, V, Hz	3, 380-415, 50	3, 380-415, 50	3, 380-415, 50
Number of maximum connectable indoor units			13	16	20

Note

1. Eurovent Test Condition : Type of indoor unit connected is only Ceiling Concealed Duct.

- Refer to EUROVENT certification regulation for more detail test conditions.

- Refer to EUROVENT website for test values connected Ceiling Cassette type indoors.

2. Performances 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

3. The maximum combination ratio is 160% (the maximum combination ratio of ARUV*** (Cooling only model) is 130%).

4. Wiring cable size must comply with the applicable local and national codes.

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

6. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Sound power level is measured on the rated condition in the reverberation rooms by ISO 3741 standard. Therefore, these values can be increased owing to ambient conditions during operation.

7. Power factor could vary less than ±1% according to the operating conditions.

8. This product contains Fluorinated greenhouse gases. (R410A, GWP(Global warming potential) = 2087.5)

Electric Characteristics

■ Wiring of Main Power Supply and Equipment Capacity

1. Use a separate power supply for the Outdoor Unit and Indoor Unit.
2. Bear in mind ambient conditions (ambient temperature,direct sunlight, rain liquid,etc.) when proceeding with the wiring and connections
3. The wire size is the minimum value for metal conduit wiring. The power cord size should be 1 rank thicker taking into account the line voltage drops. Make sure the power-supply voltage does not drop more than 10%.
4. Specific wiring requirements should adhere to the wiring regulations of the region.
5. Power supply cords of parts of appliances for outdoor use should not be lighter than polychloroprene sheathed flexible cord (design 60245 IEC57).
6. Don't install an individual switch or electrical outlet to disconnect each of indoor unit separately from the power supply.

⚠ WARNING

- Follow ordinance of local regulation for technical standard related to electrical equipment, wiring regulations and guidance of each electric power company.
- Make sure to use specified wires for connections so that no external force is imparted to terminal connections. If connections are not fixed firmly, it may cause heating or fire.
- Make sure to use the appropriate type of overcurrent protection switch. Note that generated overcurrent may include some amount of direct current.
- All installation site may require attachment of an earth leakage breaker. If no earth leakage breaker is installed, it may cause an electric shock.

⚠ CAUTION

- Do not use anything other than breaker and fuse with correct capacity. Using fuse and wire or copper wire with too large capacity may cause a malfunction of unit or fire.

Electric Characteristics

[Unit : mm]

Cooling only

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
3 HP	50Hz	220-240	Min.:198, Max.:264	21.7	21.3	25		16.4		0.12	0.5
4 HP				21.7	21.3	25		16.3		0.12	0.5
5 HP				22.6	25.1	32		16.0		0.198	0.9
6 HP				26.1	29.0	32		21.1		0.198	0.9

Heatpump

Model	Unit			Power Supply			COMP			OFM	
	Hz	Volts	Voltage-range	MCA	TOCA	MFA	MSC	RLA(Cooling)	RLA(Heating)	kW	FLA
4 HP	50Hz	220-240	Min.:198, Max.:264	23.7	26.1	30		16.3	13.8	0.120	0.5
5 HP				25.0	27.6	30		15.4	16.1	0.198	0.9
6 HP				26.4	29.0	40		18.5	20.1	0.198	0.9
4 HP		380-415	Min.:342, Max.:456	13.1	14.4	20		5.1	4.3	0.120	0.5
5 HP				13.8	15.2	20		4.5	4.8	0.198	0.9
6 HP				14.5	16.1	20		5.6	6.1	0.198	0.9
8 HP				21.3	24.0	30	4.0	8.4	8.6	0.35	1.0
10 HP				26.3	35.0	30	4.5	9.3	9.5	0.50	2.8
12 HP				32.5	35.0	35	4.5	12.0	13.5	0.50	2.8

1. Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phase is 2%.
3. MSC means the Max. current during the starting of compressor.
4. MSC and RLA are measured as the compressor only test condition.
5. OFM are measured as the outdoor unit test condition.
6. TOCA means the total over current value of each outdoor unit.
7. Select the wire size based on the larger value among MCA or TOCA.
8. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].
9. Select the electrical equipment of combination unit according to the electrical characteristics of individual unit.

Symbols
MCA : Minimum Circuit Amperes (A)
TOCA : Total Over Current Amperes (A)
MFA : Maximum Fuse Amperes (A)
MSC : Maximum Starting Current (A)
RLA : Rated Load Amperes (A)
OFM : Outdoor Fan Motor
kW : Fan Motor rated output (kW)
FLA : Full Load Amperes (A)