LG
Life's Good

LG HVAC SOLUTION

MULTI V™ IV Tropical

MULTI V IV Development Philosophy

'Vitalizing every environment' is the ultimate goal of LG Air Conditioning and Energy Solution company. It is a vision to provide great vitality to everyone, everywhere on the globe – from consumers' private residences to commercial buildings and shared communal spaces. Under this unified goal, the company is committed to providing highly innovative heating, ventilation and air conditioning (HVAC) solutions, offering building users completely pleasant environments while using less energy.

In the last few years, LG has focused on the development of variable refrigerant flow (VRF) technologies, the latest series of advanced air conditioning solutions. Standing at the forefront of realizing LG's aspirational philosophy is the development of the MULTI V IV: A product which extends the VRF model, ensuring startling operational efficiency in cooling as well as heating for high-rise buildings, while defying comparison to any conventional HVACs.
As many manufacturers have now incorporated VRF technologies into their products, the likelihood of further innovating on this platform has been perceived as being fairly low. However, thanks to LG's high level of expertise and dedication, the company has been able to achieve a technological breakthrough on its latest VRF system – the MULTI V IV, namely the drastic reduction in the cause of 'hidden energy loss', which is a big factor in the ineffective performance of HVAC.

In the development process of the MULTI V IV, LG has undertaken close observation, testing, analysis and extensive R&D, in order to create an industry-first technology aimed at improving operational efficiency. It is the latest innovation in LG's long experience in air conditioning which dates back to 1968 and another success for the company's dedicated R&D capacity. With HVAC innovation at the core of the product, the MULTI V IV represents a symbol of LG's unprecedented achievement, driven by the 'Vitalizing every environment' development philosophy.

'The True Leader of 4', MULTI V IV

In order for the MULTI V IV to achieve unbeatable seasonal efficiency, LG has made ceaseless efforts, driving breakthrough VRF technological advancements that make the MULTI V IV differentiated from its predecessor, the MULTI V III. Finally, LG has helped to raise the standard of VRF technologies by developing the true fourth generation VRF system, rather than merely upgrading several numerical indicators or offering generic functions.

Thus, LG is dedicated to the 'four key elements' that determine operational efficiency, which includes compressor, heat exchanger, oil and refrigerant technology. These four elements play key roles to maximize the energy efficiency of its VRF solutions. However, they also generated some of hidden loss in conventional models.
As the result of heavy investment and extensive R&D to remove all forms of hidden loss, company's own technologies, including High Pressure Oil Return (HiPOR™), Active Refrigerant Control, Smart Oil Return and the Variable Heat Exchanger Circuit have been developed for the MULTI V IV, contributing to raise seasonal efficiency.

LG is proud to introduce customers worldwide to its latest air conditioning solution, MULTI V IV. This groundbreaking product represents the embodiment of the company's consistent commitment to excellence and technological innovation.

MULTI V™ IV Tropical

OUTDOOR UNIT LINE UP

MULTI V™ IV Tropical HEAT PUMP

8, 10HP

12, 14, 16HP

18, 20HP

22, 24, 26HP

28, 30, 32HP

34HP

36, 38HP

40, 42, 44, 46, 48HP

OUTDOOR UNITS

MULTI V™ IV Tropical

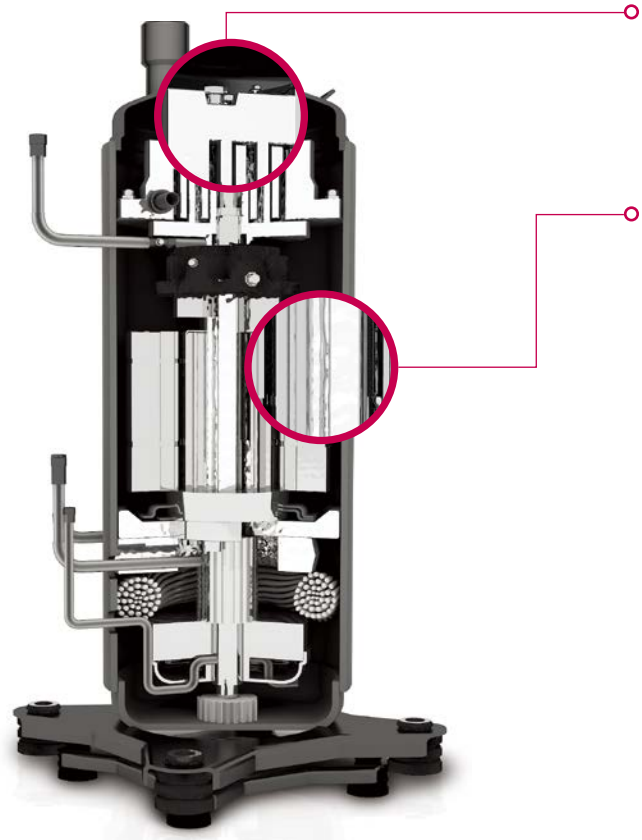
MULTI V series offers outstanding energy savings, easy installation and connection to many different types of indoor units, making it easy to design.

EXCEPTIONAL EFFICIENCY

World's first class, rated and part load efficiency

LG's 4th Generation Inverter Compressor

The new High-Side Shell (HSS) scroll inverter compressor and BLDC concentration motor coil optimizes part load efficiency, with the 50% reduction in weight and increase in high-frequency operation of 120Hz to 150Hz.

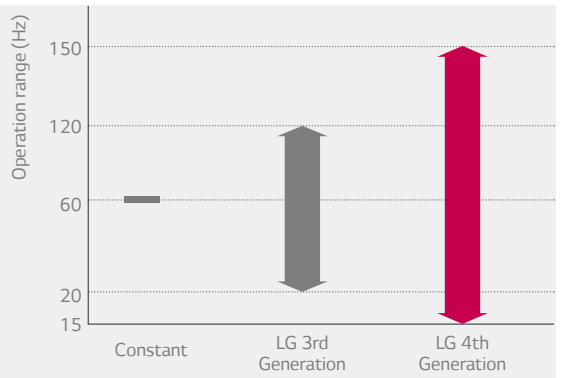


Vapor Injection

- Maximize heating capacity via two-stage compression
- Provide powerful heating in low temperature conditions
- Improve energy efficiency and heating performance

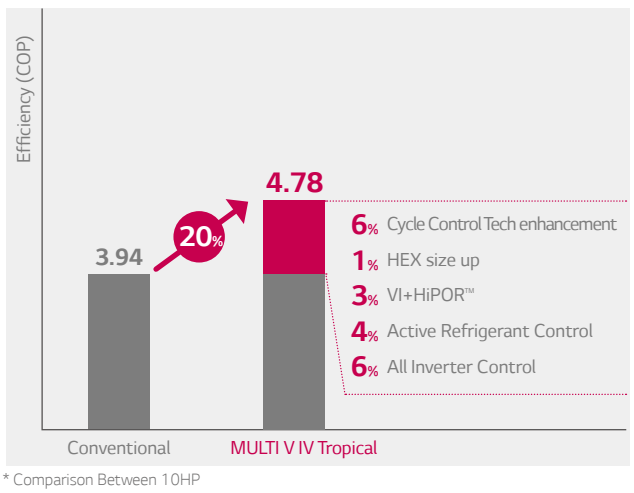
Extended Compressor Speed 150Hz

- Rapid operation response
- Capable of reaching required temperature quickly
- Increase part load efficiency



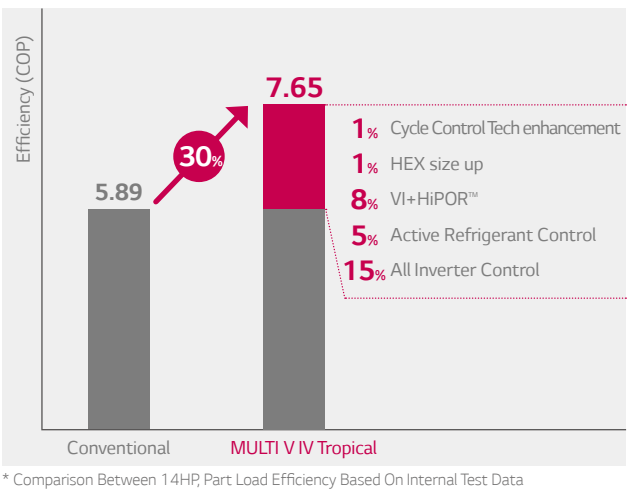
World's First Class, Rated and Part Load Efficiency

Rated Efficiency



* Comparison Between 10HP

Integrated Part Load Efficiency



* Comparison Between 14HP, Part Load Efficiency Based On Internal Test Data

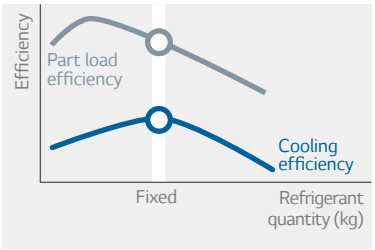
Active Refrigerant Control

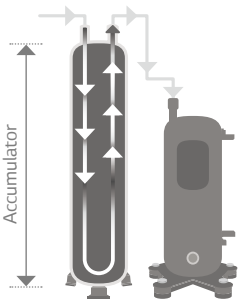
Active Refrigerant Control automatically controls the level of refrigerant amount to maximize efficiency.

Conventional

Regardless of operation mode, fixed amount of refrigerant is provided to the compressor, which limits optimal efficiency of each modes

Compromising efficiency for each operation

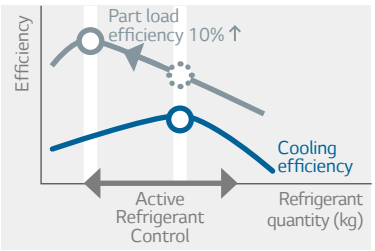


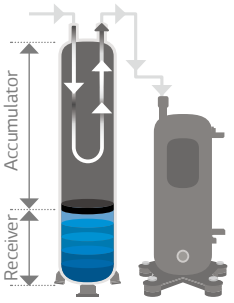


MULTI V IV

Active Refrigerant Control automatically monitors and adjusts the volume of circulating refrigerant during each cycle. This precise, five-step control leads to an improvement in energy efficiency

Maximizing efficiency for all operations

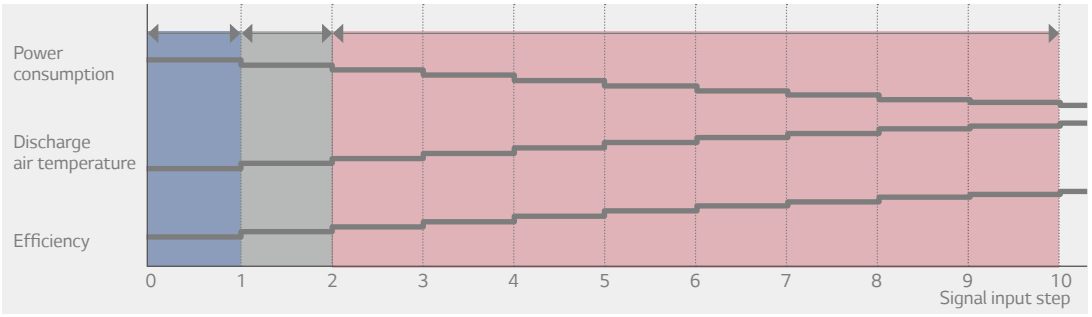




Flexible Capacity Control

It is possible for the user to control heating & cooling performance and save energy through outdoor capacity control.
- 5 Basic steps capacity control
- 10 steps control is possible with IO(Input & Output) module (option)
- Up to 40% input power reduction through energy saving operation

Demand control with IO module (In cooling mode)



* Reduction rate varies upon site conditions
** It will be available at the end of 2013
*** IO module also provides silent operation during night time, IDU/ODU alarm operation, error alarm and low ambient control

OUTSTANDING PERFORMANCE

Always ahead of the competition and on the leading edge of innovation
with powerful heating and unsurpassed cooling performance

HiPOR™ (High Pressure Oil Return)

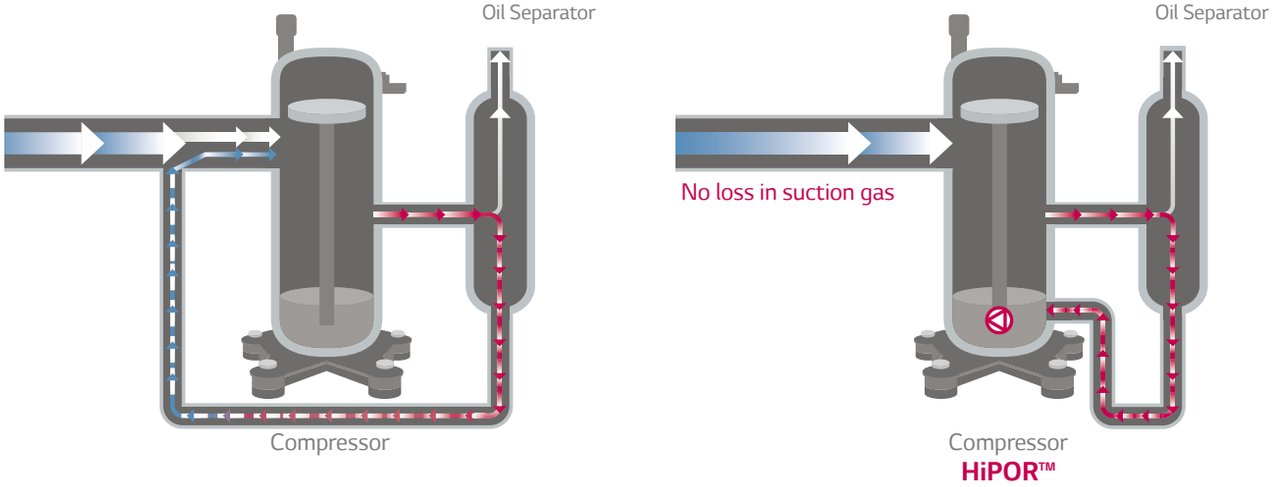
HiPOR™ technology enables oil to return directly into the compressor, instead of returning through the refrigerant suction pipe, to minimize energy losses.

Conventional

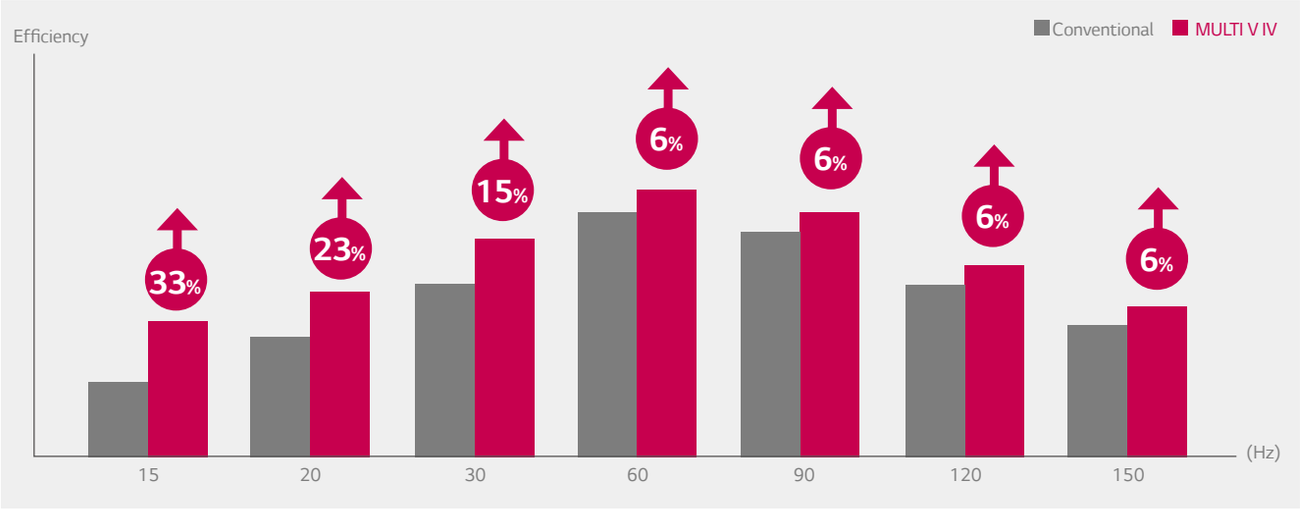
Loss of low pressure refrigerant to
the extent of the oil volume returned by the refrigerant pipe

MULTI V IV

Maximizing reliability and efficiency of the compressor by reducing high pressure refrigerant loss



Efficiency Comparison

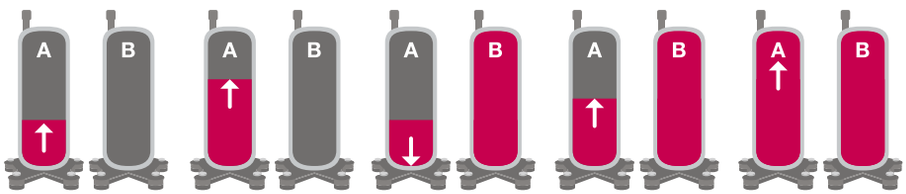


* Rating condition (Tc=54.4°C,Te=7.2°C)

Fast Heating and Cooling via Advanced Inverter

In conventional models, inverter compressor and on/off compressor operate one by one, which taking far longer to reach maximum capacity. Thanks to LG's all inverter compressor system and high performance cycle design, MULTI V IV delivers fast cooling or heating by operating two compressors simultaneously.

Conventional



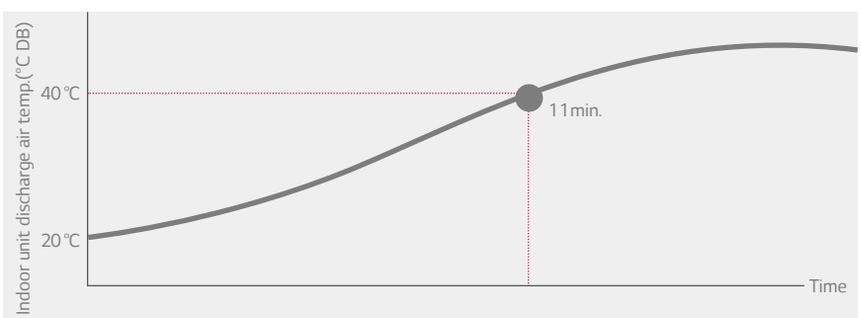
1st Stage
A : Start
B : Off

2nd Stage
A : Speed↑
B : Off

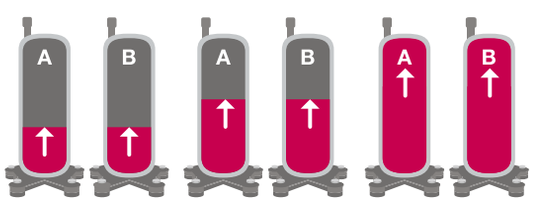
3rd Stage
A : Speed↓
B : On

4th Stage
A : Speed↑
B : On

5th Stage
A : Full Speed
B : On



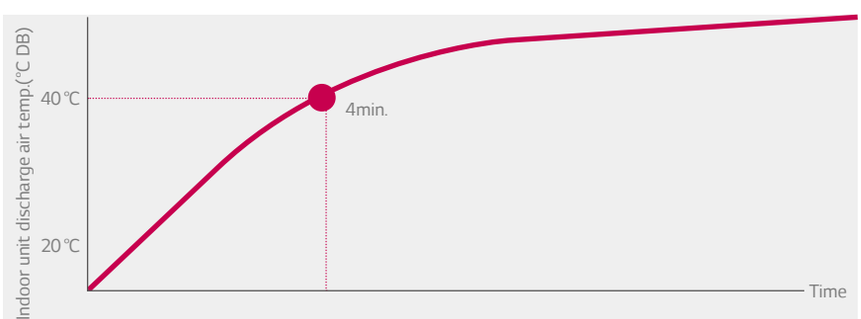
MULTI V IV



1st Stage
A : Start
B : Start

2nd Stage
A : Speed↑
B : Speed↑

3rd Stage
A : Full Speed
B : Full Speed



* Condition : Standard heating mode (Ambient air temp. 7°C, Indoor temp. 20°C)

OUTSTANDING PERFORMANCE

Always ahead of the competition and on the leading edge of innovation with powerful heating and unsurpassed cooling performance

Fan with Less Noise and Higher Air Volume

Cannon fan is applied with optimized shape of shroud, increasing air volume by 50CMM and decreasing noise level down to 4dB(A) compared to the previous value.

Cannon Fan

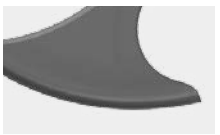
Minimized vortex and exfoliation provides
high air volume, low noise level and high efficiency

8, 10HP

12, 14, 16HP

❶ **Sinusoidal leading edge**
Low noise level with sinusoidal chord distribution (4dB(A) decreased)

❷ **Grooved suction surface**
Exfoliation of surface



❸ **Tip vortex suppressor**
Winglet technology applied for efficiency

Auto Dust Removal

MULTI V IV Tropical can remove dust on heat exchanger of outdoor unit.

- Dust remove on heat exchanger of outdoor unit
- Outdoor unit fan is backlashing
- Operating hours : in 5 minutes

Outdoor unit stop
for a long time

Auto Dust Removal

Normal operation

DESIGN WITHOUT LIMITS

Easy design with the most convenient features

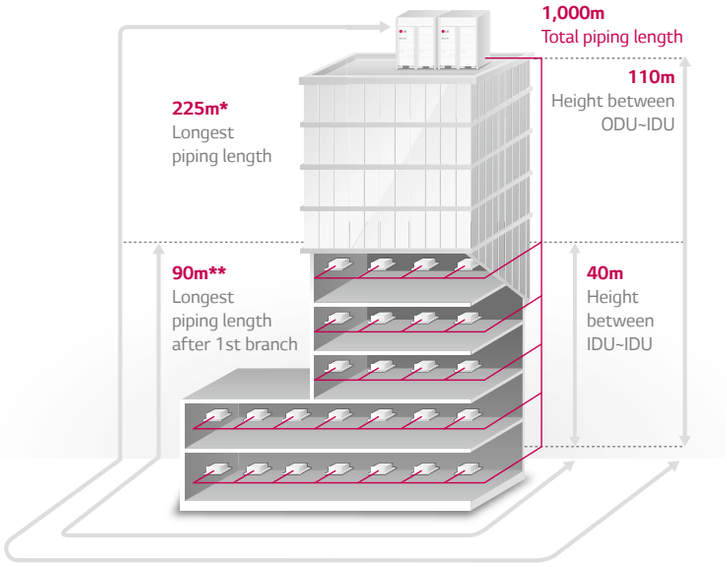
Expanded Piping Capabilities

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

Total piping length	1,000m
Actual longest piping length** (Equivalent*)	200m** (225m*)
Longest piping length after 1st branch (Conditional application)	40m (90m**)
Height between ODU~IDU	110m
Height between IDU~IDU	40m
Height between ODU~ODU	5m

ODU : Outdoor unit
I D U : Indoor unit

* Equivalent
** Conditional application

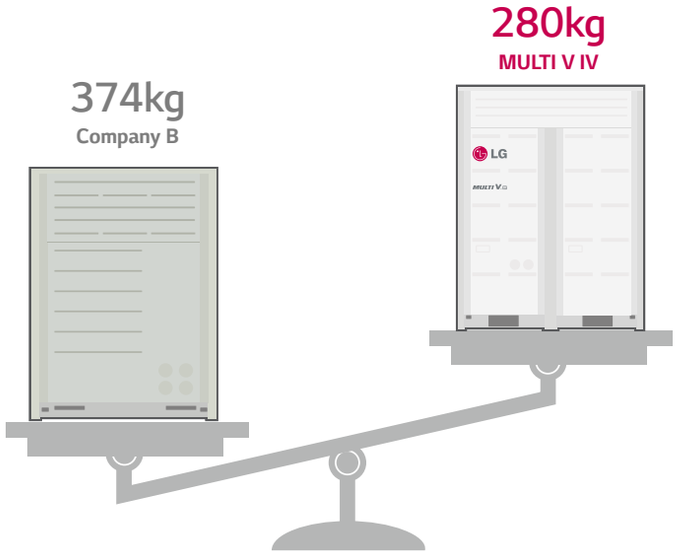


Light Weight Outdoor Units

25% lighter weight than major competitors

- Less pressure on the roof
- Easier installation

* 16HP Continuous heating model comparison

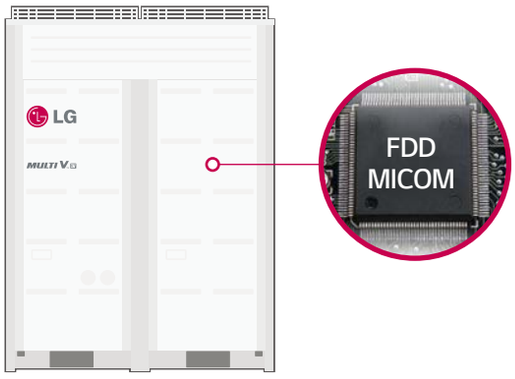


CYCLE &SERVICE OPTIMIZATION

Self-diagnostic maintenance solution, offering smart and reliable functionality

Upgraded FDD (Fault Detection & Diagnosis)

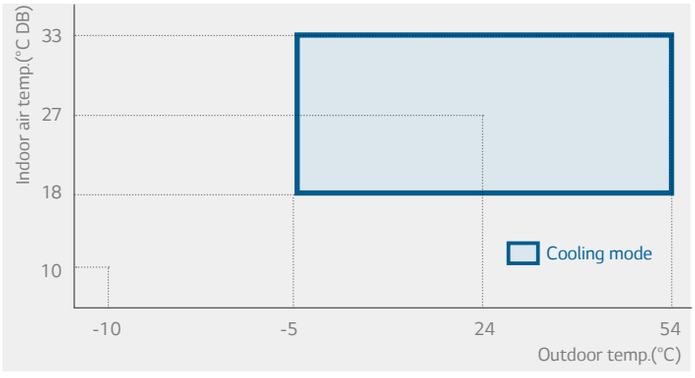
Newly upgraded FDD elements provide the optimal solution for user reliability and easy maintenance.



- Start up time reduction (60min → 45min)
- Available to use LGMV (LG Monitoring View) through a smartphone
- Piping & wiring error check-up
- Auto start-up mode / report
- Black box function
- Simultaneous diagnosis
- Auto refrigerant quantity evaluation and charge
- Cooling refrigerant quantity decision

New Refrigerant Quantity Decision Feature

LG MULTI V IV is the first VRF that has a Cooling mode start up function which permits whole year start up as well as refrigerant quantity evaluation

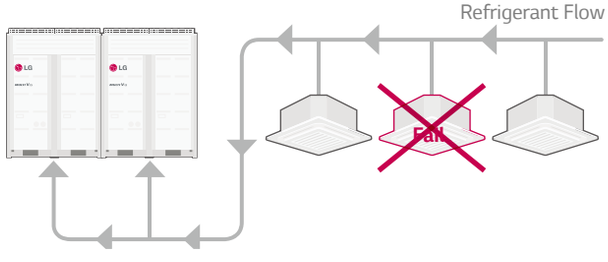


* Refrigerant quantity evaluation during cooling Operation

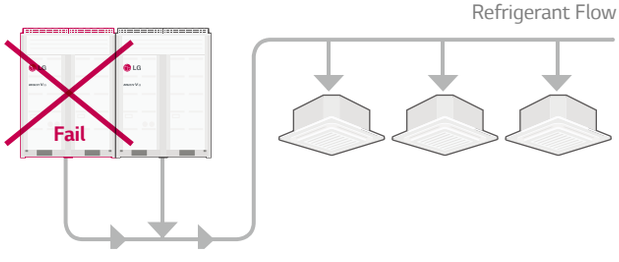
Auto Refrigerant Collection

In case of an indoor or outdoor unit replacement for service, refrigerant from the malfunctioning unit is transferred to the outdoor unit by pumping down or to an indoor unit by pumping out for easy service.

Pump down

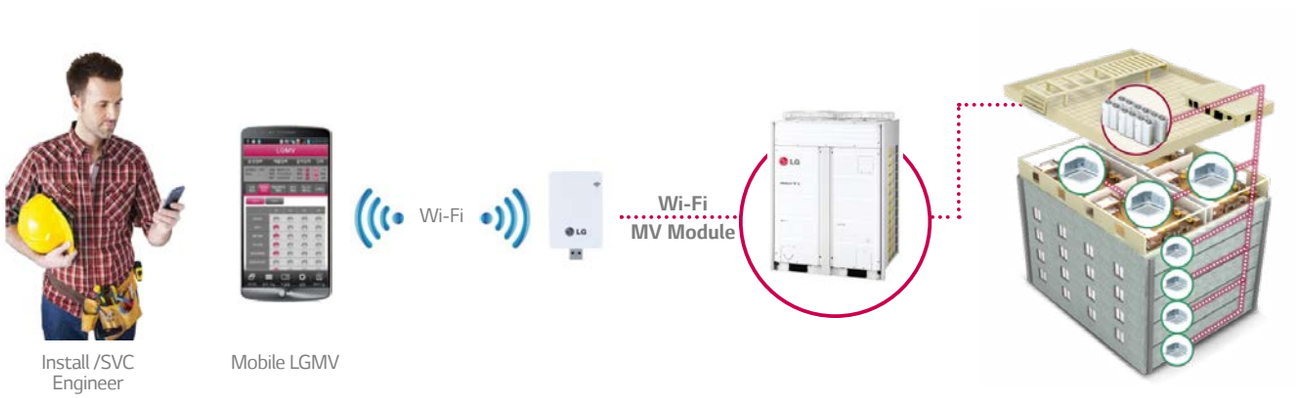


Pump out



Smartphone Monitoring & Control

Mobile LGMV helps users to monitor the MULTI V IV system cycle using Wi-Fi MV Module.
Technicians can check LGMV data 10m away from MULTI V IV outdoor with smartphone



Connection type : Wi-Fi
To use Mobile LGMV Application, exclusive Wi-Fi MV Module is required

Smart Phone Specification

App. Name	OS	Recommended Specification	Resolution	Wireless communication effective distancd
Mobile LGMV	iOS (iPad only)	AppiOS 8.0/8.1	2048 x 1536 (optimization), 1024 x 768	• Effective distance : 10m(Open area) • The effective distance may be reduced by the communication environment
	Android	Android 4.4 (Android 3.x, Honeycomb not supported)	480 x 800, 720 x 1280, 768 x 1280, 768 x 1024, 1080 x 1920	

• Need to get the wireless standard in each country (Internet Bridge requires additional charges)

HP			8	10
Model Name	Combination unit		ARUN080LTH4	ARUN100LTH4
	Independent unit		ARUN080LTH4	ARUN100LTH4
Capacity (Rated) [1]	*Cooling	RT	6.4	8.0
		kW	22.4	28.0
		Btu/h	76,400	95,900
	**Cooling	RT	5.4	7.1
		kW	19.0	25.0
		Btu/h	64,900	85,300
	Heating	RT	7.2	9.0
		kW	25.2	31.5
		Btu/h	85,300	107,500
Input (Rated) [1]	*Cooling	kW	4.75	5.86
	**Cooling	kW	5.40	7.98
	Heating	kW	4.98	5.97
COP [1]	*Cooling	kW / kW	4.72	4.78
	**Cooling	kW / kW	3.52	3.13
	Heating	kW / kW	5.06	5.28
Power Factor	Rated	-	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	43.8	62.1
	Number of Revolution	rev/min	3,600	3,600
	Motor Output x Number	W x No.	4,200 × 1	5,300 × 1
	Starting Method		Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan
	Motor Output x Number	W	750 × 1	750 × 1
	Air Flow Rate	m^3/min	210	210
		ft^3/min	7,400	7,400
	Drive		DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 9.52(3/8)	Ø 9.52(3/8)
	Gas	mm (inch)	Ø 19.05(3/4)	Ø 22.2(7/8)
Dimensions (W x H x D)		mm	(920×1,680×760)	(920×1,680×760)
		inch	(36-7/32 × 66-5/32 × 29-29/32)	(36-7/32 × 66-5/32 × 29-29/32)
Net Weight		kg	195	201
		lbs	430	433
Sound Press Level	Cooling	dB(A)	58.5	59.0
	Heating	dB(A)	59.0	59.5
Sound Power Level		dB(A)	78.0	79.0
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	6.5	6.5
		lbs	14.3	14.3
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50
		V, Ø, Hz	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			13	16

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			12	14	16
Model Name	Combination unit		ARUN120LTH4	ARUN140LTH4	ARUN160LTH4
	Independent unit		ARUN120LTH4	ARUN140LTH4	ARUN160LTH4
Capacity (Rated) [1]	*Cooling	RT	9.6	11.1	12.7
		kW	33.6	39.2	44.8
		Btu/h	114,700	133,800	152,900
	**Cooling	RT	8.1	10.0	11.5
		kW	28.5	35.3	40.3
		Btu/h	97,200	120,400	137,600
	Heating	RT	10.7	12.5	14.2
		kW	37.8	43.9	50.0
		Btu/h	128,000	149,800	170,600
Input (Rated) [1]	*Cooling	kW	7.91	8.79	10.38
	**Cooling	kW	9.41	11.36	13.45
	Heating	kW	7.96	9.35	10.92
COP [1]	*Cooling	kW / kW	4.25	4.46	4.32
	**Cooling	kW / kW	3.03	3.11	3.00
	Heating	kW / kW	4.75	4.70	4.58
Power Factor	Rated	-	0.92	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	62.1	43.8 × 2	43.8 × 2
	Number of Revolution	rev/min	3,600	3,600 × 2	3,600 × 2
	Motor Output x Number	W x No.	5,300 × 1	4,200 × 2	4,200 × 2
	Starting Method		Inverter	Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan	Propeller fan
	Motor Output x Number	W	600 × 2	600 × 2	600 × 2
	Air Flow Rate	m^3/min	290	290	290
		ft^3/min	10,200	10,200	10,200
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 12.7(1/2)	Ø 12.7(1/2)	Ø 12.7(1/2)
	Gas	mm (inch)	Ø 28.58(1-1/8)	Ø 28.58(1-1/8)	Ø 28.58(1-1/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760)	(1,240 x 1,680 x 760)	(1,240 x 1,680 x 760)
		inch	(48-13/16 × 66-5/32 × 29-29/32)	(48-13/16 × 66-5/32 × 29-29/32)	(48-13/16 × 66-5/32 × 29-29/32)
Net Weight		kg	235	270	280
		lbs	518	595	617
Sound Press Level	Cooling	dB(A)	59.0	59.5	59.5
	Heating	dB(A)	59.5	60.0	60.0
Sound Power Level		dB(A)	79.0	79.5	79.5
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	8.5	8.5	10.0
		lbs	18.7	18.7	22.0
	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
		V, Ø, Hz	400, 3, 60	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			20	23	26

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			18	20
Model Name	Combination unit		ARUN180LTH4	ARUN200LTH4
	Independent unit		ARUN100LTH4	ARUN100LTH4
			ARUN080LTH4	ARUN100LTH4
Capacity (Rated) [1]	*Cooling	RT	14.4	16.0
		kW	50.4	56.0
		Btu/h	172,300	191,800
	**Cooling	RT	12.5	14.2
		kW	44.0	50.0
		Btu/h	150,200	170,600
	Heating	RT	16.2	18.0
		kW	56.7	63.0
		Btu/h	192,800	215,000
Input (Rated) [1]	*Cooling	kW	10.61	11.72
	**Cooling	kW	13.38	15.96
	Heating	kW	10.95	11.94
COP [1]	*Cooling	kW / kW	4.75	4.78
	**Cooling	kW / kW	3.29	3.13
	Heating	kW / kW	5.18	5.28
Power Factor	Rated	-	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(62.1) + (43.8)	(62.1) x 2
	Number of Revolution	rev/min	(3,600) + (3,600)	(3,600) x 2
	Motor Output x Number	W x No.	(5,300 x 1) + (4,200 x 1)	(5,300 x 1) x 2
	Starting Method		Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan
	Motor Output x Number	W	(750 x 1) x 2	(750 x 1) x 2
	Air Flow Rate	m^3/min	(210) x 2	(210) x 2
		ft^3/min	(7,400) x 2	(7,400) x 2
	Drive		DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 15.88(5/8)	Ø 15.88(5/8)
	Gas	mm (inch)	Ø 28.58(1-1/8)	Ø 28.58(1-1/8)
Dimensions (W x H x D)		mm	(920×1,680×760) x 2	(920×1,680×760) x 2
		inch	(36-7/32 × 66-5/32 × 29-29/32) x 2	(36-7/32 × 66-5/32 × 29-29/32) x 2
Net Weight		kg	(201) + (195)	(201) x 2
		lbs	(433) + (430)	(433) x 2
Sound Press Level	Cooling	dB(A)	61.8	62.0
	Heating	dB(A)	62.3	62.5
Sound Power Level		dB(A)	81.5	82.0
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	(6.5) x 2	(6.5) x 2
		lbs	(14.3) x 2	(14.3) x 2
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50
		V, Ø, Hz	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			29	32

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			22	24	26
Model Name	Combination unit		ARUN220LTH4	ARUN240LTH4	ARUN260LTH4
	Independent unit		ARUN120LTH4	ARUN140LTH4	ARUN160LTH4
			ARUN100LTH4	ARUN100LTH4	ARUN100LTH4
Capacity (Rated) [1]	*Cooling	RT	17.6	19.1	20.7
		kW	61.6	67.2	72.8
		Btu/h	210,600	229,700	248,800
	**Cooling	RT	15.2	17.1	18.6
		kW	53.5	60.3	65.3
		Btu/h	182,500	205,700	222,900
	Heating	RT	19.7	21.5	23.2
		kW	69.3	75.4	81.5
		Btu/h	235,500	257,300	278,100
Input (Rated) [1]	*Cooling	kW	13.77	14.65	16.24
	**Cooling	kW	17.39	19.34	21.43
	Heating	kW	13.93	15.32	16.89
COP [1]	*Cooling	kW / kW	4.47	4.59	4.48
	**Cooling	kW / kW	3.08	3.12	3.05
	Heating	kW / kW	4.97	4.92	4.83
Power Factor	Rated	-	0.92	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(62.1) x 2	(43.8 x 2) + (62.1)	(43.8 x 2) + (62.1)
	Number of Revolution	rev/min	(3,600) x 2	(3,600 x 2) + (3,600)	(3,600 x 2) + (3,600)
	Motor Output x Number	W x No.	(5,300 x 1) x 2	(4,200 x 2) + (5,300 x 1)	(4,200 x 2) + (5,300 x 1)
	Starting Method		Inverter	Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan	Propeller fan
	Motor Output x Number	W	(750 x 1) + (600 x 2)	(750 x 1) + (600 x 2)	(750 x 1) + (600 x 2)
	Air Flow Rate	m^3/min	(210) + (290)	(210) + (290)	(210) + (290)
		ft^3/min	(7,400) + (10,200)	(7,400) + (10,200)	(7,400) + (10,200)
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 15.88(5/8)	Ø 15.88(5/8)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 28.58(1-1/8)	Ø 34.9(1-3/8)	Ø 34.9(1-3/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) + (920×1,680×760)	(1,240 x 1,680 x 760) + (920×1,680×760)	(1,240 x 1,680 x 760) + (920×1,680×760)
		inch	(48-13/16 × 66-5/32× 29-29/32) + (36-7/32 × 66-5/32 × 29-29/32)	(48-13/16 × 66-5/32× 29-29/32) + (36-7/32 × 66-5/32 × 29-29/32)	(48-13/16 × 66-5/32× 29-29/32) + (36-7/32 × 66-5/32 × 29-29/32)
Net Weight		kg	(235) + (201)	(270) + (201)	(280) + (201)
		lbs	(518) + (433)	(595) + (433)	(617) + (433)
Sound Press Level	Cooling	dB(A)	62.0	62.3	62.3
	Heating	dB(A)	62.5	62.8	62.8
Sound Power Level		dB(A)	82.0	82.3	82.3
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	(8.5) + (6.5)	(8.5) + (6.5)	(10.0) + (6.5)
		lbs	(18.7) + (14.3)	(18.7) + (14.3)	(22.0) + (14.3)
	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
		V, Ø, Hz	400, 3, 60	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			35	39	42

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			28	30	32
Model Name	Combination unit		ARUN280LTH4	ARUN300LTH4	ARUN320LTH4
	Independent unit		ARUN160LTH4	ARUN160LTH4	ARUN160LTH4
			ARUN120LTH4	ARUN140LTH4	ARUN160LTH4
Capacity (Rated) [1]	*Cooling	RT	22.3	23.8	25.4
		kW	78.4	84.0	89.6
		Btu/h	267,600	286,700	305,800
	**Cooling	RT	19.6	21.5	23.0
		kW	68.8	75.6	80.6
		Btu/h	234,800	258,000	275,200
	Heating	RT	24.9	26.7	28.4
		kW	87.8	93.9	100.0
		Btu/h	298,600	320,400	341,200
Input (Rated) [1]	*Cooling	kW	18.29	19.17	20.76
	**Cooling	kW	22.86	24.81	26.90
	Heating	kW	18.88	20.27	21.84
COP [1]	*Cooling	kW / kW	4.29	4.38	4.32
	**Cooling	kW / kW	3.01	3.05	3.00
	Heating	kW / kW	4.65	4.63	4.58
Power Factor	Rated	-	0.92	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) + (62.1)	(43.8 x 2) x 2	(43.8 x 2) x 2
	Number of Revolution	rev/min	(3,600 x 2) + (3,600)	(3,600 x 2) x 2	(3,600 x 2) x 2
	Motor Output x Number	W x No.	(4,200 x 2) + (5,300 x 1)	(4,200 x 2) x 2	(4,200 x 2) x 2
	Starting Method		Inverter	Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan	Propeller fan
	Motor Output x Number	W	(600 x 2) x 2	(600 x 2) x 2	(600 x 2) x 2
	Air Flow Rate	m^3/min	(290) x 2	(290) x 2	(290) x 2
		ft^3/min	(10,200) x 2	(10,200) x 2	(10,200) x 2
	Drive		DC INVERTER	DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)	Ø 19.05(3/4)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 34.9(1-3/8)	Ø 34.9(1-3/8)	Ø 34.9(1-3/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) x 2	(1,240 x 1,680 x 760) x 2	(1,240 x 1,680 x 760) x 2
		inch	(48-13/16 × 66-5/32 × 29-29/32) x 2	(48-13/16 × 66-5/32 × 29-29/32) x 2	(48-13/16 × 66-5/32 × 29-29/32) x 2
Net Weight		kg	(280) + (235)	(280) + (270)	(280) x 2
		lbs	(617) + (518)	(617) + (595)	(617) x 2
Sound Press Level	Cooling	dB(A)	62.3	62.5	62.5
	Heating	dB(A)	62.8	63.0	63.0
Sound Power Level		dB(A)	82.3	82.5	82.5
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A	R410A
	Precharged Amount	kg	(10.0) + (8.5)	(10.0) + (8.5)	(10.0) x 2
		lbs	(22.0) + (18.7)	(22.0) + (18.7)	(22.0) x 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
		V, Ø, Hz	400, 3, 60	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			45	49	52

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			34
Model Name	Combination unit		ARUN340LTH4
	Independent unit		ARUN140LTH4
			ARUN100LTH4
			ARUN100LTH4
Capacity (Rated) [1]	*Cooling	RT	27.1
		kW	95.2
		Btu/h	325,600
	**Cooling	RT	24.2
		kW	85.3
		Btu/h	291,000
	Heating	RT	30.5
		kW	106.9
		Btu/h	364,800
Input (Rated) [1]	*Cooling	kW	20.51
	**Cooling	kW	27.32
	Heating	kW	21.29
COP [1]	*Cooling	kW / kW	4.64
	**Cooling	kW / kW	3.12
	Heating	kW / kW	5.02
Power Factor	Rated	-	0.92
Casing Color			Warm Gray / Morning Gray
Heat Exchanger			Gold fin
Compressor	Type		Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) + (62.1) x 2
	Number of Revolution	rev/min	(3,600 x 2) + (3,600) x 2
	Motor Output x Number	W x No.	(4,200 x 2) + (5,300 x 1) x 2
	Starting Method		Inverter
	Oil Type		FVC68D(PVE)
Fan	Type		Propeller fan
	Motor Output x Number	W	(750 x 1) x 2 + (600 x 2)
	Air Flow Rate	m^3/min	(210) x 2 + (290)
		ft^3/min	(7,400) x 2 + (10,200)
	Drive		DC INVERTER
	Discharge	Side / Top	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 34.9(1-3/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) + (920×1,680×760) x 2
		inch	(48-13/16 × 66-5/32 × 29-29/32) + (36-7/32 × 66-5/32 × 29-29/32) x 2
Net Weight		kg	(270) + (201) x 2
		lbs	(595) + (433) x 2
Sound Press Level	Cooling	dB(A)	63.9
	Heating	dB(A)	64.4
Sound Power Level		dB(A)	83.9
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch
	Comperssor/ Fan	-	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection, Over-current protection
Communication Cable		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A
	Precharged Amount	kg	(8.5) + (6.5) x 2
		lbs	(18.7) + (14.3) x 2
	Control		Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50
		V, Ø, Hz	400, 3, 60
Number of maxmum connectable indoor units [2]			55

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			36	38
Model Name	Combination unit		ARUN360LTH4	ARUN380LTH4
	Independent unit		ARUN140LTH4	ARUN160LTH4
			ARUN120LTH4	ARUN120LTH4
			ARUN100LTH4	ARUN100LTH4
Capacity (Rated) [1]	*Cooling	RT	28.7	30.3
		kW	100.8	106.4
		Btu/h	344,400	363,500
	**Cooling	RT	25.2	26.7
		kW	88.8	93.8
		Btu/h	302,900	320,100
	Heating	RT	32.2	33.9
		kW	113.2	119.3
		Btu/h	385,300	406,100
Input (Rated) [1]	*Cooling	kW	22.56	24.15
	**Cooling	kW	28.75	30.84
	Heating	kW	23.28	24.85
COP [1]	*Cooling	kW / kW	4.47	4.41
	**Cooling	kW / kW	3.09	3.04
	Heating	kW / kW	4.86	4.80
Power Factor	Rated	-	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) + (62.1) x 2	(43.8 x 2) + (62.1) x 2
	Number of Revolution	rev/min	(3,600 x 2) + (3,600) x 2	(3,600 x 2) + (3,600) x 2
	Motor Output x Number	W x No.	(4,200 x 2) + (5,300 x 1) x 2	(4,200 x 2) + (5,300 x 1) x 2
	Starting Method		Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan
	Motor Output x Number	W	(750 x 1) + (600 x 2) x 2	(750 x 1) + (600 x 2) x 2
	Air Flow Rate	m^3/min	(210) + (290) x 2	(210) + (290) x 2
		ft^3/min	(7,400) + (10,200) x 2	(7,400) + (10,200) x 2
	Drive		DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 41.3(1-5/8)	Ø 41.3(1-5/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) x 2 + (920×1,680×760)	(1,240 x 1,680 x 760) x 2 + (920×1,680×760)
		inch	(48-13/16 × 66-5/32 × 29-29/32) x 2 + (36-7/32 × 66-5/32 × 29-29/32)	(48-13/16 × 66-5/32 × 29-29/32) x 2 + (36-7/32 × 66-5/32 × 29-29/32)
Net Weight		kg	(270) + (235) + (201)	(280) + (235) + (201)
		lbs	(595) + (518) + (433)	(617) + (518) + (433)
Sound Press Level	Cooling	dB(A)	63.9	63.9
	Heating	dB(A)	64.4	64.4
Sound Power Level		dB(A)	83.9	83.9
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	(8.5) x 2 + (6.5)	(10.0) + (8.5) + (6.5)
		lbs	(18.7) x 2 + (14.3)	(22.0) + (18.7) + (14.3)
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50
		V, Ø, Hz	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			58	61

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			40	42
Model Name	Combination unit		ARUN400LTH4	ARUN420LTH4
	Independent unit		ARUN160LTH4	ARUN160LTH4
			ARUN120LTH4	ARUN140LTH4
			ARUN120LTH4	ARUN120LTH4
Capacity (Rated) [1]	*Cooling	RT	31.9	33.4
		kW	112.0	117.6
		Btu/h	382,300	401,400
	**Cooling	RT	27.7	29.6
		kW	97.3	104.1
		Btu/h	332,000	355,200
	Heating	RT	35.6	37.4
		kW	125.6	131.7
		Btu/h	426,600	448,400
Input (Rated) [1]	*Cooling	kW	26.20	27.08
	**Cooling	kW	32.26	34.22
	Heating	kW	26.84	28.23
COP [1]	*Cooling	kW / kW	4.27	4.34
	**Cooling	kW / kW	3.02	3.04
	Heating	kW / kW	4.68	4.67
Power Factor	Rated	-	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) + (62.1) x 2	(43.8 x 2) x 2 + (62.1)
	Number of Revolution	rev/min	(3,600 x 2) + (3,600) x 2	(3,600 x 2) x 2 + (3,600)
	Motor Output x Number	W x No.	(4,200 x 2) + (5,300 x 1) x 2	(4,200 x 2) x 2 + (5,300 x 1)
	Starting Method		Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan
	Motor Output x Number	W	(600 x 2) x 3	(600 x 2) x 3
	Air Flow Rate	m^3/min	(290) x 3	(290) x 3
		ft^3/min	(10,200) x 3	(10,200) x 3
	Drive		DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 41.3(1-5/8)	Ø 41.3(1-5/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) x 3	(1,240 x 1,680 x 760) x 3
		inch	(48-13/16 × 66-5/32 × 29-29/32) x 3	(48-13/16 × 66-5/32 × 29-29/32) x 3
Net Weight		kg	(280) + (235) x 2	(280) + (270) + (235)
		lbs	(617) + (518) x 2	(617) + (595) + (518)
Sound Press Level	Cooling	dB(A)	63.9	64.1
	Heating	dB(A)	64.4	64.6
Sound Power Level		dB(A)	83.9	84.1
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	(10.0) + (8.5) x 2	(10.0) + (8.5) x 2
		lbs	(22.0) + (18.7) x 2	(22.0) + (18.7) x 2
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50
		V, Ø, Hz	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			64	64

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			44	46
Model Name	Combination unit		ARUN440LTH4	ARUN460LTH4
	Independent unit		ARUN160LTH4	ARUN160LTH4
			ARUN160LTH4	ARUN160LTH4
			ARUN120LTH4	ARUN140LTH4
Capacity (Rated) [1]	*Cooling	RT	35.0	36.5
		kW	123.2	128.8
		Btu/h	420,500	439,600
	**Cooling	RT	31.1	33.0
		kW	109.1	115.9
		Btu/h	372,400	395,600
	Heating	RT	39.1	40.9
		kW	137.8	143.9
		Btu/h	469,200	491,000
Input (Rated) [1]	*Cooling	kW	28.67	29.55
	**Cooling	kW	36.31	38.26
	Heating	kW	29.80	31.19
COP [1]	*Cooling	kW / kW	4.30	4.36
	**Cooling	kW / kW	3.01	3.03
	Heating	kW / kW	4.62	4.61
Power Factor	Rated	-	0.92	0.92
Casing Color			Warm Gray / Morning Gray	Warm Gray / Morning Gray
Heat Exchanger			Gold fin	Gold fin
Compressor	Type		Hermetically Sealed Scroll	Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) x 2 + (62.1)	(43.8 x 2) x 3
	Number of Revolution	rev/min	(3,600 x 2) x 2 + (3,600)	(3,600 x 2) x 3
	Motor Output x Number	W x No.	(4,200 x 2) x 2 + (5,300 x 1)	(4,200 x 2) x 3
	Starting Method		Inverter	Inverter
	Oil Type		FVC68D(PVE)	FVC68D(PVE)
Fan	Type		Propeller fan	Propeller fan
	Motor Output x Number	W	(600 x 2) x 3	(600 x 2) x 3
	Air Flow Rate	m^3/min	(290) x 3	(290) x 3
		ft^3/min	(10,200) x 3	(10,200) x 3
	Drive		DC INVERTER	DC INVERTER
	Discharge	Side / Top	TOP	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 41.3(1-5/8)	Ø 41.3(1-5/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) x 3	(1,240 x 1,680 x 760) x 3
		inch	(48-13/16 × 66-5/32 × 29-29/32) x 3	(48-13/16 × 66-5/32 × 29-29/32) x 3
Net Weight		kg	(280) x 2 + (235)	(280) x 2 + (270)
		lbs	(617) x 2 + (518)	(617) x 2 + (595)
Sound Press Level	Cooling	dB(A)	64.1	64.3
	Heating	dB(A)	64.6	64.8
Sound Power Level		dB(A)	84.1	84.3
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch	High pressure sensor, High pressure switch
	Comperssor/ 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		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A	R410A
	Precharged Amount	kg	(10.0) x 2 + (8.5)	(10.0) x 2 + (8.5)
		lbs	(22.0) x 2 + (18.7)	(22.0) x 2 + (18.7)
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50	380-415, 3, 50
		V, Ø, Hz	400, 3, 60	400, 3, 60
Number of maxmum connectable indoor units [2]			64	64

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
5. Sound Level Values are measured at Anechoic chamber. Therefore, these values
   can be increased owing to ambient conditions during operation
6. Power factor could vary less than ±1% according to the operating conditions.

HP			48
Model Name	Combination unit		ARUN480LTH4
	Independent unit		ARUN160LTH4
			ARUN160LTH4
			ARUN160LTH4
Capacity (Rated) [1]	*Cooling	RT	38.1
		kW	134.4
		Btu/h	458,700
	**Cooling	RT	34.5
		kW	120.9
		Btu/h	412,800
	Heating	RT	42.6
		kW	150.0
		Btu/h	511,800
Input (Rated) [1]	*Cooling	kW	31.14
	**Cooling	kW	40.35
	Heating	kW	32.76
COP [1]	*Cooling	kW / kW	4.32
	**Cooling	kW / kW	3.00
	Heating	kW / kW	4.58
Power Factor	Rated	-	0.92
Casing Color			Warm Gray / Morning Gray
Heat Exchanger			Gold fin
Compressor	Type		Hermetically Sealed Scroll
	Piston Displacement	cm^3/rev	(43.8 x 2) x 3
	Number of Revolution	rev/min	(3,600 x 2) x 3
	Motor Output x Number	W x No.	(4,200 x 2) x 3
	Starting Method		Inverter
	Oil Type		FVC68D(PVE)
Fan	Type		Propeller fan
	Motor Output x Number	W	(600 x 2) x 3
	Air Flow Rate	m^3/min	(290) x 3
		ft^3/min	(10,200) x 3
	Drive		DC INVERTER
	Discharge	Side / Top	TOP
Piping Connections	Liquid	mm (inch)	Ø 19.05(3/4)
	Gas	mm (inch)	Ø 41.3(1-5/8)
Dimensions (W x H x D)		mm	(1,240 x 1,680 x 760) x 3
		inch	(48-13/16 x 66-5/32 x 29-29/32) x 3
Net Weight		kg	(280) x 3
		lbs	(617) x 3
Sound Press Level	Cooling	dB(A)	64.3
	Heating	dB(A)	64.8
Sound Power Level		dB(A)	84.3
Protection Devices	High pressure protection	-	High pressure sensor, High pressure switch
	Comperssor/ Fan	-	Over-heat protection / Fan driver overload protector
	Inverter	-	Over-heat protection, Over-current protection
Communication Cable		No. x mm^2 (VCTF-SB)	2C × 1.0 ~ 1.5
Refrigerant	Refrigerant name		R410A
	Precharged Amount	kg	(10.0) x 3
		lbs	(22.0) x 3
	Control		Electronic Expansion Valve
Power Supply		V, Ø, Hz	380-415, 3, 50
		V, Ø, Hz	400, 3, 60
Number of maxmum connectable indoor units [2]			64

Notes:

1. Capacities are based on the following conditions:
   - *Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 35°C(95°F) DB/24°C(75.2°F) WB
   - **Cooling : - Indoor Temperature 27°C(80.6°F) DB/19°C(66.2°F) WB
     - Outdoor Temperature 46°C(114.8°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 = 7.5m
   - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
2. The Maximum combination ratio is 130%.
3. Wiring cable size must comply with the applicable local and national codes.
   And "Electric characteristics" chapter should be considered for electrical work and design.
   Especially the power cable and circuit breaker should be selected in accordance with that.
4. Due to our policy of innovation some specifications may be changed without notification.
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Branch Office - Dubai, P.O. Box: 92807, U.A.E
T. : +971 4 258 74 77 F. : +971 4 258 74 78
Branch Office - Abu Dhabi, P.O.Box 133666,U.A.E.
T:+9712-5500127, F:+9712-5500129

website: www.fortune.ae E-mail :fortintl@emirates.net.ae

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