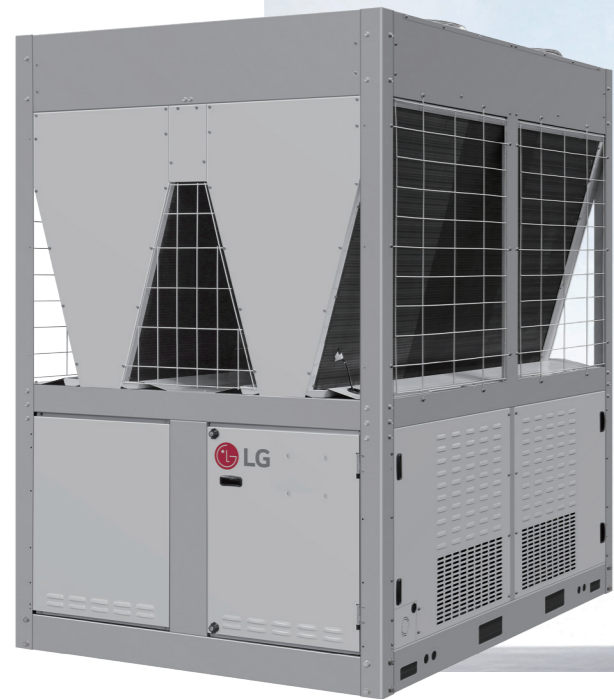


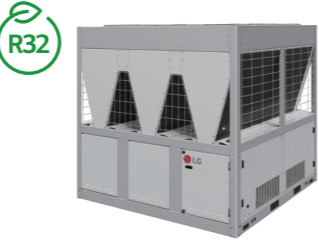





CHILLER 368






INVERTER SCROLL CHILLER


RT	17	20	23	33	40	45	50	60	67	
Model Name	KCHH017LDGC	KCHH020LDGC	KCHH023LDGC	KCHH033LDGC	KCHH040LDGC	KCHH045LDGC	KCHH050LDGC	KCHH060LDGC	KCHH067LDGC	
Capacity (kW)	Cooling	57 (16.2)	65 (18.5)	74 (21.0)	114 (32.4)	130 (37.0)	148 (42.1)	171 (48.6)	195 (55.4)	222 (63.1)
	Heating	60	70	82	120	140	164	180	210	246
Unit	1 Unit			2 Unit			3 Unit			
										
	<p>10 Chillers (up to 2,460* kW) by ACP (Advanced Control Platform) </p> <p>5 Chillers (up to 1,230* kW) by AC Smart </p> <p>5 Chillers (Up to 1,230* kW) by HMI Touch controller </p> <p>Note - Central controller ACP and AC Smart are options, each requiring a separate purchase</p>									
Range of Unit Control										


* Refer to a heating capacity

FCU

	(kW)* (kaBtu/h)	1.8	2.7	3.2	4.1	6	7.2	9	10.5	13
		6k	9k	11k	14k	20k	24k	30k	36k	44k
4 Way Cassette 		●	●	●	●	●	●	●	●	●
Body Size (W x H x D, mm)		570 x 214 x 570			570 x 256 x 570	840 x 204 x 840		840 x 246 x 840		
Front Panel*		PT-QCHWO PT-QAGWO 			PT-AAGWO PT-AFGWO PT-AEGWO 					
Panel Size (W x H x D, mm)		620 x 34 x 620			950 x 35 x 950					





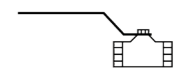









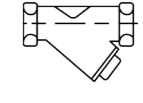









* Panels are available only for FCU

	(kW)* (kaBtu/h)	1.2	1.8	2.5	3.2	3.9	5.5	6.6
		5k	6k	9k	11k	13k	17k	23k
Ceiling Concealed Low Static Duct 		●	●	●	●	●	●	●
Body Size (W x H x D, mm)		700 x 190 x 700		900 x 190 x 700		1,100 x 190 x 700		

	(kW)* (kaBtu/h)	5.6	6.6	9.0	10.0	10.9	12.7	14.0
		19k	23k	31k	34k	37k	37k	43k
Ceiling Concealed Middle Static Duct 		●	●	●	●	●	●	●
Body Size (W x H x D, mm)		900 x 270 x 700		1,250 x 270 x 700		1,250 x 360 x 700		

※ All lineups are for 2 pipes type only.
* Based on Cooling Capacity. Cooling Capacity testing condition : Inlet/Outlet Water Temperature 7°C / 12°C, Indoor Air Temperature 27°CDB / 19°CWB

Accessories & Parts for Water Pipes Connection

Remote Controller	Dry Contact	ETC.	Not Offered by LG and to be Purchased Separately	
			Parts for Water Pipes Connection	Installation Parts
 Premium PREMTA000 (A/B)	 PDRYCB000 (Simple)	 Remote Temperature Sensor PQRSTA0	 Rubber Packing (4EA, OD23 x ID15 x t3.2)	 Ball Valve (2EA, FPT 3/4", 20A)
 Standard III ¹⁾ PREMTB101 (White) PREMTBB11 (Black)	 PDRYCB400 (2 points)	 Wi-Fi Modem PWFMD200	 Flexible Pipe (2EA, FPF 3/4", 350mm/500mm Ordered Specification)	 Nipple (2EA, MPT 3/4", MPF 3/4")
 Standard II PREMTB001 (White) PREMTBB01 (Black)	 PDRYCB320 (for Thermostat)	 Multi-tenant Power Module PINPMB001	 Nipple (2EA, MPT 3/4", MPF 3/4")	 Strainer (1EA, FPF 3/4", #30)
 Simple PQRCVCLQ (W)		 Group Control Wire PZCWRG3	 2 Way Valve (On/Off, 2-wires or 3-wires)	 Water Pipe (2EA, 20A, Copper or Stainless Tube)
 Wireless Remote Controller PWLSSB21H/C (Heat Pump / Cooling Only)		 2-Remo. Control Wire PZCWRC2	 Valve Insulation Material (1EA)	
		 Extension Wire PZCWRC1		
		 Drain Hose ³⁾ (1EA, 5m)		

1) It could not be operated some functions.
2) The dry contact for Modbus is built-in to the FCU as default.
3) Included with installation parts

INVERTER SCROLL CHILLER



ULTIMATE INVERTER COMPRESSOR

As the core technology of the air conditioning system, the Ultimate Inverter Compressor of MULTI V 5 boasts its ultimate efficiency and durability, designed based on the unique technology and innovation of LG HVAC.

All Inverter

Provide high efficiency with low vibration and low noise

Six By-pass Valves

Prevent compressor damage due to excessively compressed refrigerant more efficiently than 4 by-pass valves

01. Vapor Injection

Wide operating range via two-stage compression

02. Enhanced Bearing with PEEK Material

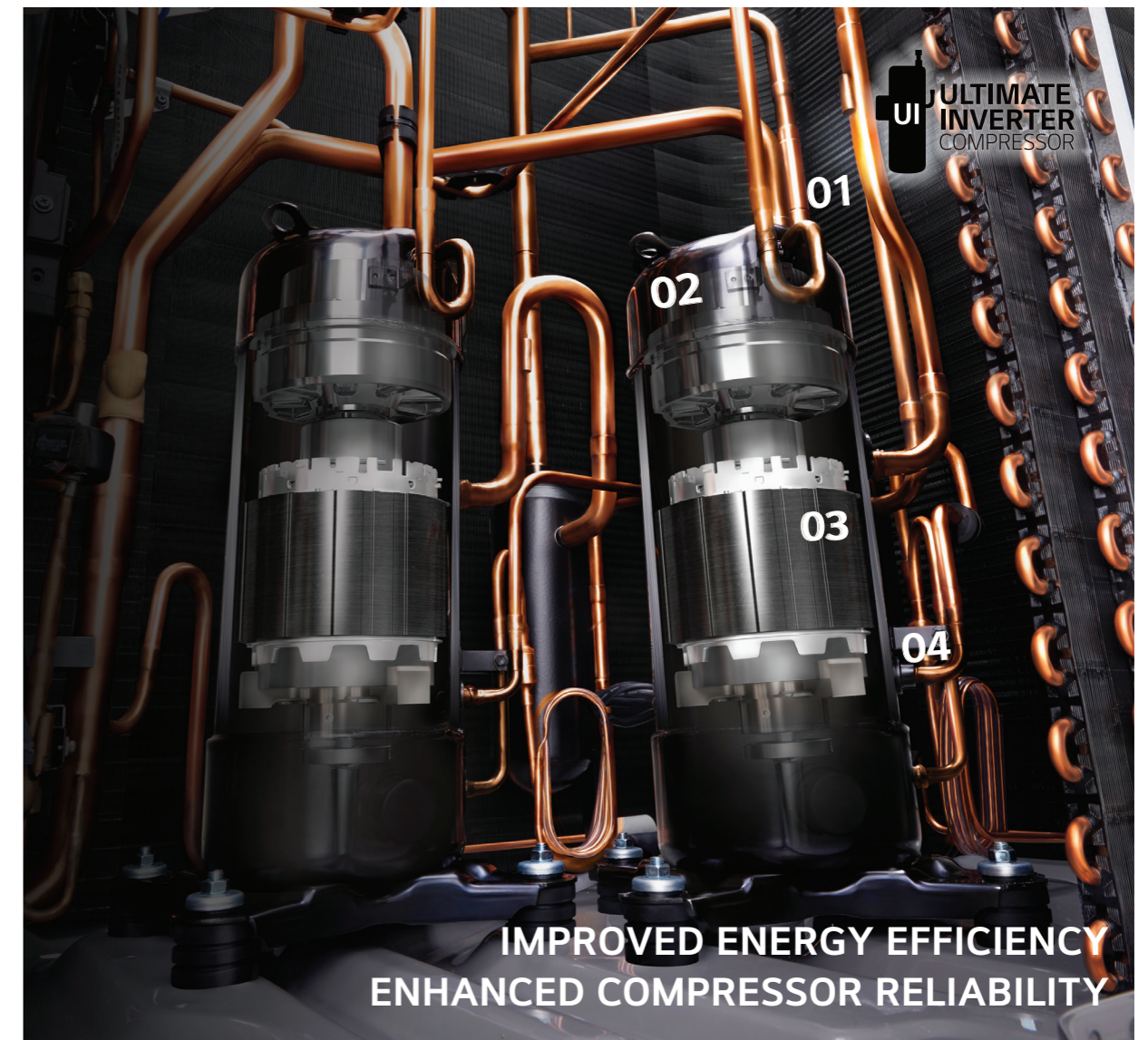
Newly invented system motivated by PEEK (Polyetheretherketone) bearing used for aero engine to increase operation range and durability

03. Wide Operation Range from 30 to 120 Hz

Improved part load efficiency at all operation ranges

04. HiPOR™ (High Pressure Oil Return)

Resolve compressor efficiency loss caused by oil return



Smart Farm



Small Industry (Process Water)



Hotel / Office



All Inverter Scroll Compressor

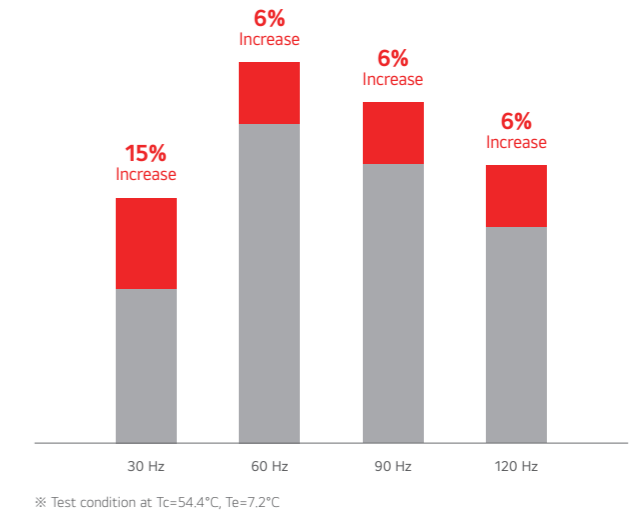
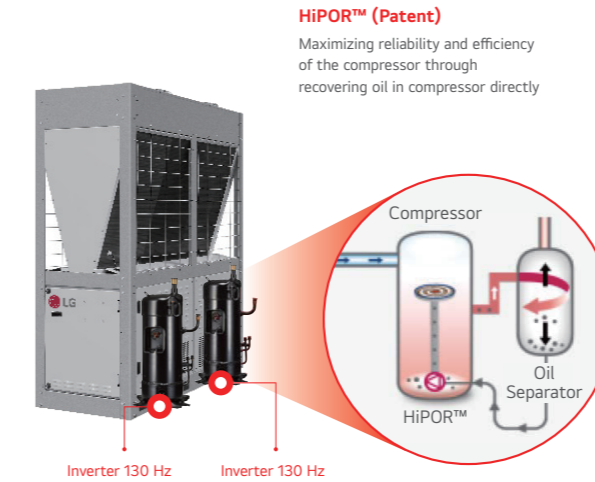
All inverter scroll compressor with HiPOR™ (Patent) is applied to improve full load and part load energy efficiency.

All Inverter System

Wide operation frequency range 30 ~ 130Hz

Compressor Efficiency

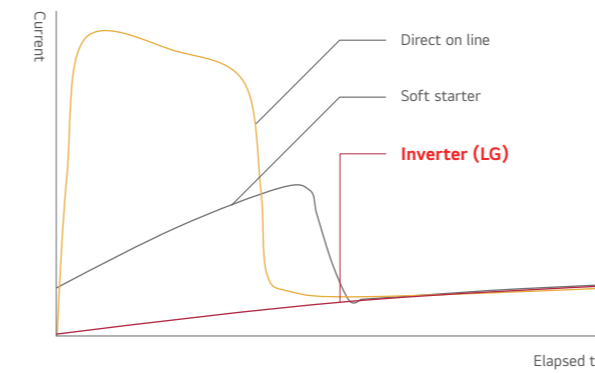
Compressor efficiency by Hz is increased through HiPOR™ application



Inverter Comp. vs Constant Speed Comp.

Inverter compressor is more stable and efficient solution than Constant speed compressor.

Comparison of Starting Type



Inverter's Feature & Benefits

- When starting**
 - Reduce starting torque below full load torque
 - ➔ **Mechanical wear↓**
 - Decrease starting current under FLA
 - ➔ **Less burden to motor**
- When operating**
 - Low electric loss due to high value of the power factor**
 - ➔ **Energy efficient**
 - Low power input in part load
 - ➔ **High SEER**
 - Continuously adjust compressor output according to the load (Compressor 15~125Hz)
 - ➔ **Save energy**

Compressor	Starting type	Starting current (Is / FLA*, %)
Constant speed	Direct on line	About 650%
	Soft starter	200 ~ 350%
Inverter (LG)	Inverter	No inrush current

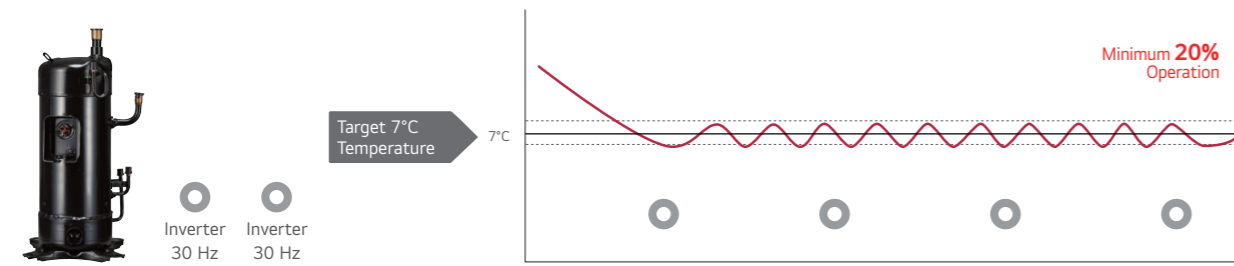
* FLA : Full load ampere

** Power factor : Ratio between active power(kW) and total power(kVA)

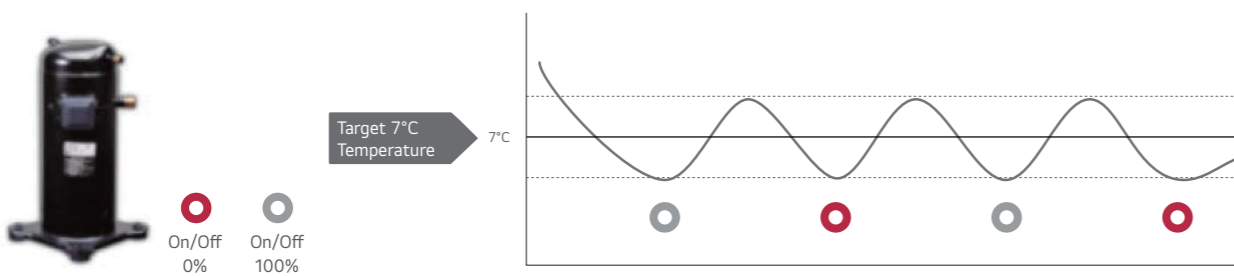
Lower Load Operation

20% part load operation and minimized water outlet temperature haunting with Inverter scroll compressor.

LG Inverter Scroll Compressor



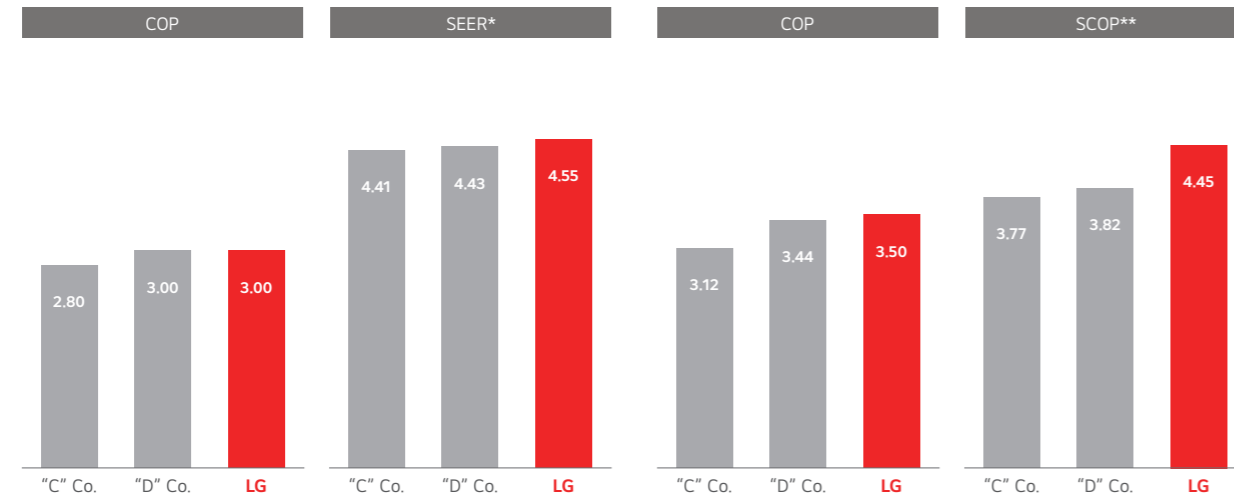
Normal On/Off Multi Compressor System



High Energy Efficiency

All-Inverter compressors with MULTI V technologies improve energy efficiency.

Cooling Efficiency

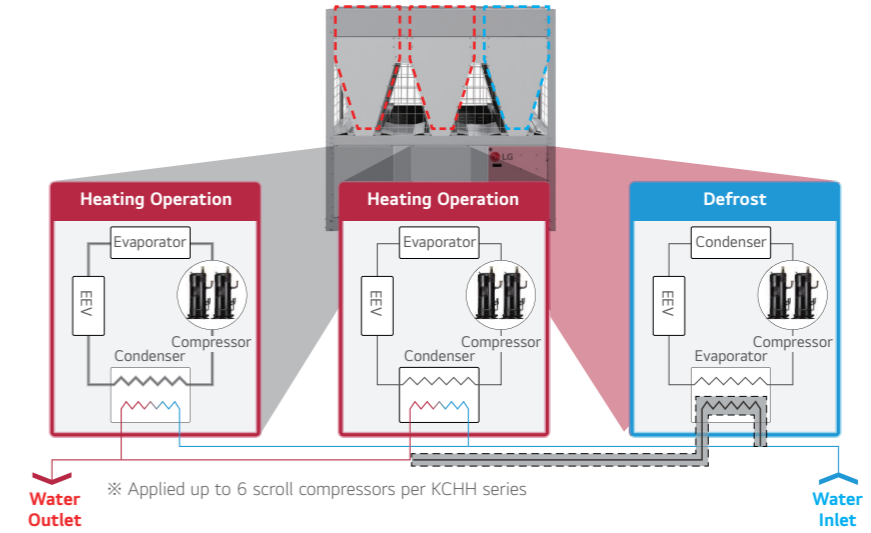


※ KCHH060LDGC model comparison
 * SEER : Seasonal energy efficiency ratio
 ** SCOP : Seasonal coefficient of performance (Average, LT)

Continuous Heating Operation

Continuous heating minimizes the decrease of water outlet temperature during defrosting for multi circuit model.

Multi cycle can defrost each cycle individually to supply hot water continuously multi cycle.

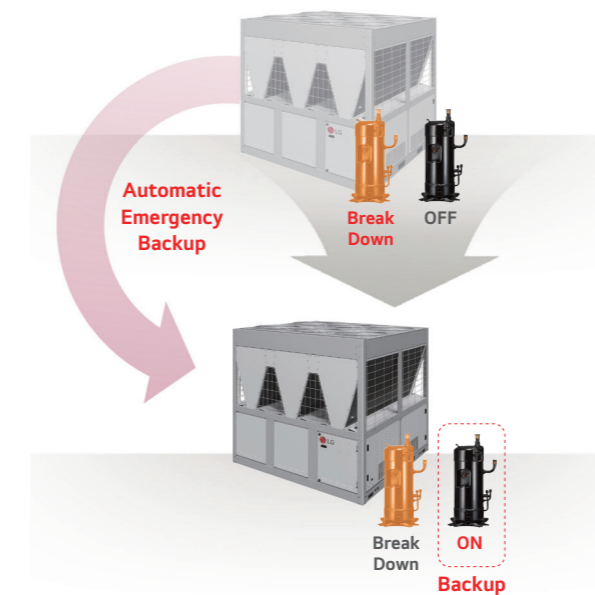


* Applied up to 6 scroll compressors per refrigerator

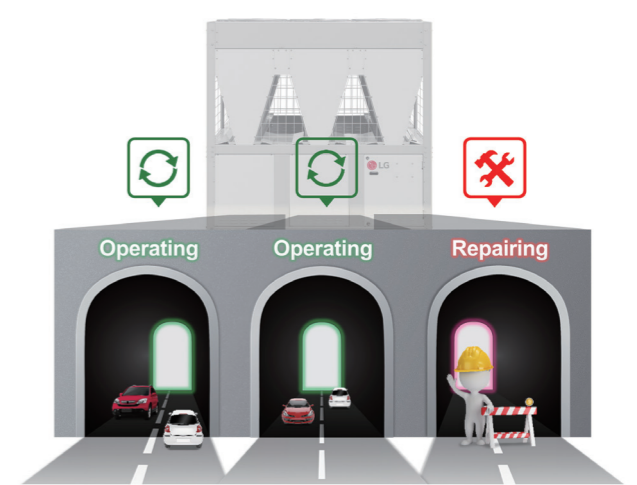
Back Up Operation

If one compressor or one cycle needs to be repaired, backup operation helps the whole system to operate continuously.

Compressor Back Up



Cycle Back Up



Corrosion Resistance (Black Fin)

'Black Fin' heat exchanger is highly corrosion resistant, designed to perform in corrosive environments such as contaminated and humid condition.

Helps Extend Lifespan & Save Operational Costs

Strengthened corrosion resistant coating

Black Fin

- Hydrophilic Film (Water flow)**
The hydrophilic coating minimizes moisture build up on the fin.
- Epoxy Resin (Corrosion resistant)**
The black coating provides strong protection from corrosion.
- Aluminum Fin**

Black Box Function

Quick service can be done because operation data can be saved for 180 seconds before system failure.

Without Black Box Function

Check many failure causes and error codes in person

↓

Take much service time and undergo trial and error

With Black Box Function

Search for the failure cause conveniently using recorded data

↓

Save service time and diagnose it more accurately

Record operation data for **180 seconds** before system failure!

Compact Size

Compact size reduces concern about installation and service space.

INVERTER SCROLL CHILLER AIR

※ 60 RT Comparison

18% Area

Foot print comparison

- LG 4.94 m²**
- Y Co. 5.69 m²
- C Co. 5.96 m²

Low Noise Level

Lower noise can reduce noise pollution and provide a quieter environment.

Noise Comparison

8 dB(A)

68 dB(A)
LG SCROLL CHILLER

76 dB(A)
A Company SCROLL CHILLER

90 dB(A)
Truck

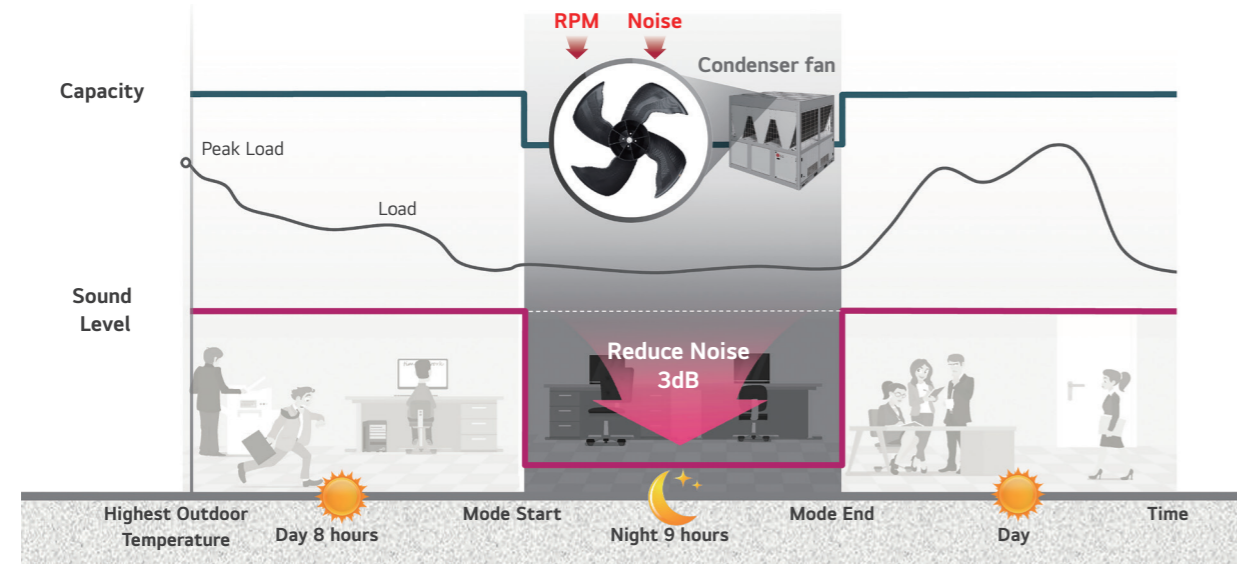
60 dB(A)
Commercial Area

50 dB(A)
Typical Urban Daytime

※ 222 kW Sound pressure level comparison (Heat pump model)
※ Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard

Night Silent Operation

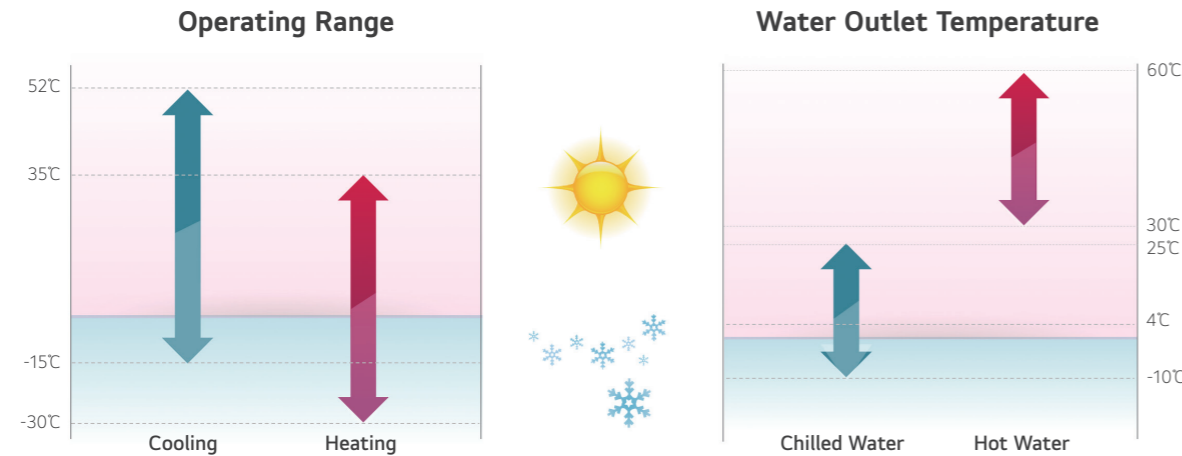
Night low noise function can reduce noise levels at night time by adjusting the fan RPM.



※ This function requires DIP switch setting. For more details, please refer to installation and owners manual.
 ※ Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Results may vary depending on environment.
 ※ If chiller RPM is changed, the cooling capacity may be reduced.

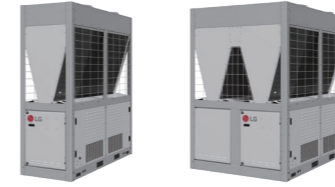
Wider Operation Range

ISC R32 can supply wider range of water temperature. Chilled water temperature become -10 ~ 25°C and hot water temperature range become 30 ~ 60°C.



※ 4 ~ -10°C : Low Temperature Function with Anti-freeze
 (Ethylene Glycol : More than 30%, Propylene Glycol More than 35%)

KCHH017LDGC / KCHH020LDGC KCHH023LDGC / KCHH033LDGC



LG participates in the ECP programme for EUROVENT LCP-HP program. Check ongoing validity of certification : www.eurovent-certification.com

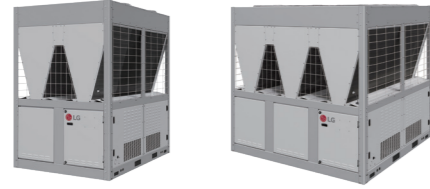
Heat Pump Model

CATEGORY	UNITS	KCHH017LDGC	KCHH020LDGC	KCHH023LDGC	KCHH033LDGC	
Power Supply	Case 1	V, Phase, Hz	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50
	Limit Range of Voltage	V	323 ~ 477	323 ~ 477	323 ~ 477	323 ~ 477
	Case 2	V, Phase, Hz	380, 3, 60	380, 3, 60	380, 3, 60	380, 3, 60
	Limit Range of Voltage	V	342 ~ 418	342 ~ 418	342 ~ 418	342 ~ 418
Capacity	Cooling	kW	57.00	65.00	74.00	114.0
	Heating	kW	60.00	70.00	82.00	120.0
Power Input	Cooling	kW	18.39	21.67	26.43	36.77
	Heating	kW	16.67	20.00	24.12	33.33
Efficiency	Cooling	W/W	3.10	3.00	2.80	3.10
	Heating	W/W	3.60	3.50	3.40	3.60
SEER	W/W	4.70	4.55	4.40	4.70	
SCOP (Average, LT)	W/W	4.45	4.45	4.45	4.45	
SCOP (Average, MT)	W/W	3.25	3.25	3.25	3.25	
Sound Pressure Levels (Cooling)	dB(A)	67.0	67.0	68.0	68.0	
Sound Power Levels (Cooling)	dB(A)	84.0	86.0	87.0	87.0	
Compressor	Type	-	Inverter Scroll	Inverter Scroll	Inverter Scroll	Inverter Scroll
	No. of Compressor	EA	2	2	2	4
	Oil Type	-	FW68L (PVE)	FW68L (PVE)	FW68L (PVE)	FW68L (PVE)
	Oil Charge	cc x No.	1,200 x 2	1,200 x 2	1,200 x 2	1,200 x 4
Refrigerant	Type	-	R32	R32	R32	R32
	Amount of Charged	kg x No.	4.7 x 2	4.7 x 2	4.7 x 2	4.7 x 4
	GWP	-	675	675	675	675
	t-CO ₂ eq	-	6.345	6.345	6.345	12.69
Evaporator	Type	-	Plate	Plate	Plate	Plate
	Pressure drop	kPa	18.7	21.5	28.7	18.7
	Operating Maximum pressure (Refrigerant / Water)	kg/cm ²	42 / 10	42 / 10	42 / 10	42 / 10
	Water Flow Rate Standard (Cooling / Heating)	LPM	163 / 171	186 / 200	211 / 235	327 / 345
	Water Flow Rate Min. (Cooling / Heating)	LPM	73 / 80	73 / 80	73 / 80	146 / 160
	Inlet /Outlet diameter (Water pipe)	mm	50 A / 50 A	50 A / 50 A	50 A / 50 A	65 A / 65 A
Fan motor	Type	-	BLDC	BLDC	BLDC	BLDC
	No. of Fan	EA	2	2	2	4
	No. of Vanes	EA	6	6	6	6
	Air Flow Rate	CMM	246 x 2	246 x 2	246 x 2	246 x 4
Weight	Motor power	kW x No.	1.5 x 2	1.5 x 2	1.5 x 2	1.5 x 4
	W	kg	521	521	521	972
Dimension	H	mm	765	765	765	1,528
	D	mm	2,210	2,210	2,210	2,210
Remote Control	-	Modbus	Modbus	Modbus	Modbus	
Guaranteed Load Capacity Range	-	20% ~ 100%	20% ~ 100%	20% ~ 100%	20% ~ 100%	

Note

- Due to our policy of innovation some specifications may be changed without notification.
- 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.
- Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Sound power level is measured ISO 9614:2009 by sound intensity method. Therefore, these values can be increased owing to ambient conditions during operation.
- Performances are based on the following conditions: Capacities and inputs are based on the following conditions
 - Cooling: Outdoor air temp. 35°C, Water inlet temp. 12°C, Water Outlet temp. 7°C
 - Heating: Outdoor air temp. 7°C, Water inlet temp. 40°C, Water Outlet temp. 45°C

KCHH040LDGC / KCHH045LDGC / KCHH050LDGC /
KCHH060LDGC / KCHH067LDGC



LG participates in the ECP programme for EUROVENT LCP-HP program. Check ongoing validity of certification : www.eurovent-certification.com

Heat Pump Model

CATEGORY		UNITS	KCHH040LDGC	KCHH045LDGC	KCHH050LDGC	KCHH060LDGC	KCHH067LDGC
Power Supply	Case 1	V, Phase, Hz	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50	380-415, 3, 50
	Limit Range of Voltage	V	323 ~ 477	323 ~ 477	323 ~ 477	323 ~ 477	323 ~ 477
	Case 2	V, Phase, Hz	380, 3, 60	380, 3, 60	380, 3, 60	380, 3, 60	380, 3, 60
	Limit Range of Voltage	V	342 ~ 418	342 ~ 418	342 ~ 418	342 ~ 418	342 ~ 418
Capacity	Cooling	kW	130.0	148.0	171.0	195.0	222.0
	Heating	kW	140.0	164.0	180.0	210.0	246.0
Power Input	Cooling	kW	43.33	52.87	55.16	65.00	79.30
	Heating	kW	40.00	48.24	50.00	60.00	72.40
Efficiency	Cooling	W/W	3.00	2.80	3.10	3.00	2.80
	Heating	W/W	3.50	3.40	3.60	3.50	3.40
SEER		W/W	4.55	4.40	4.70	4.55	4.40
SCOP (Average, LT)		W/W	4.45	4.45	4.45	4.45	4.45
SCOP (Average, MT)		W/W	3.25	3.25	3.25	3.25	3.25
Sound Pressure Levels (Cooling)		dB(A)	68.0	68.0	68.0	68.0	68.0
Sound Power Levels (Cooling)		dB(A)	90.0	91.0	88.0	91.0	92.0
Compressor	Type	-	Inverter Scroll	Inverter Scroll	Inverter Scroll	Inverter Scroll	Inverter Scroll
	No. of Compressor	EA	4	4	6	6	6
	Oil Type	-	FW68L (PVE)	FW68L (PVE)	FW68L (PVE)	FW68L (PVE)	FW68L (PVE)
	Oil Charge	cc x No.	1,200 x 4	1,200 x 4	1,200 x 6	1,200 x 6	1,200 x 6
Refrigerant	Type	-	R32	R32	R32	R32	R32
	Amount of Charged	kg x No.	4.7 x 4	4.7 x 4	4.7 x 6	4.7 x 6	4.7 x 6
	GWP	-	675	675	675	675	675
	t-CO ₂ eq	-	12.69	12.69	19.035	19.035	19.035
Evaporator	Type	-	Plate	Plate	Plate	Plate	Plate
	Pressure drop	kPa	21.5	28.7	18.7	21.5	28.7
	Operating Maximum pressure (Refrigerant / Water)	kg/cm ²	42 / 10	42 / 10	42 / 10	42 / 10	42 / 10
	Water Flow Rate Standard (Cooling / Heating)	LPM	372 / 400	411 / 470	491 / 518	558 / 600	617 / 705
	Water Flow Rate Min. (Cooling / Heating)	LPM	146 / 160	146 / 160	219 / 240	219 / 240	219 / 240
Fan motor	Inlet /Outlet diameter (Water pipe)	mm	65 A / 65 A	65 A / 65 A	65 A / 65 A	65 A / 65 A	65 A / 65 A
	Type	-	BLDC	BLDC	BLDC	BLDC	BLDC
	No. of Fan	EA	4	4	6	6	6
	No. of Vanes	EA	6	6	6	6	6
Weight	Air Flow Rate	CMM	246 x 4	246 x 4	246 x 6	246 x 6	246 x 6
	Motor power	kW x No.	1.5 x 4	1.5 x 4	1.5x 6	1.5x 6	1.5x 6
		kg	972	972	1,422	1,422	1,422
Dimension	W	mm	1,528	1,528	2,291	2,291	2,291
	H	mm	2,210	2,210	2,210	2,210	2,210
	D	mm	2,154	2,154	2,154	2,154	2,154
Remote Control		-	Modbus	Modbus	Modbus	Modbus	Modbus
Guaranteed Load Capacity Range		-	20% ~ 100%	20% ~ 100%	20% ~ 100%	20% ~ 100%	20% ~ 100%

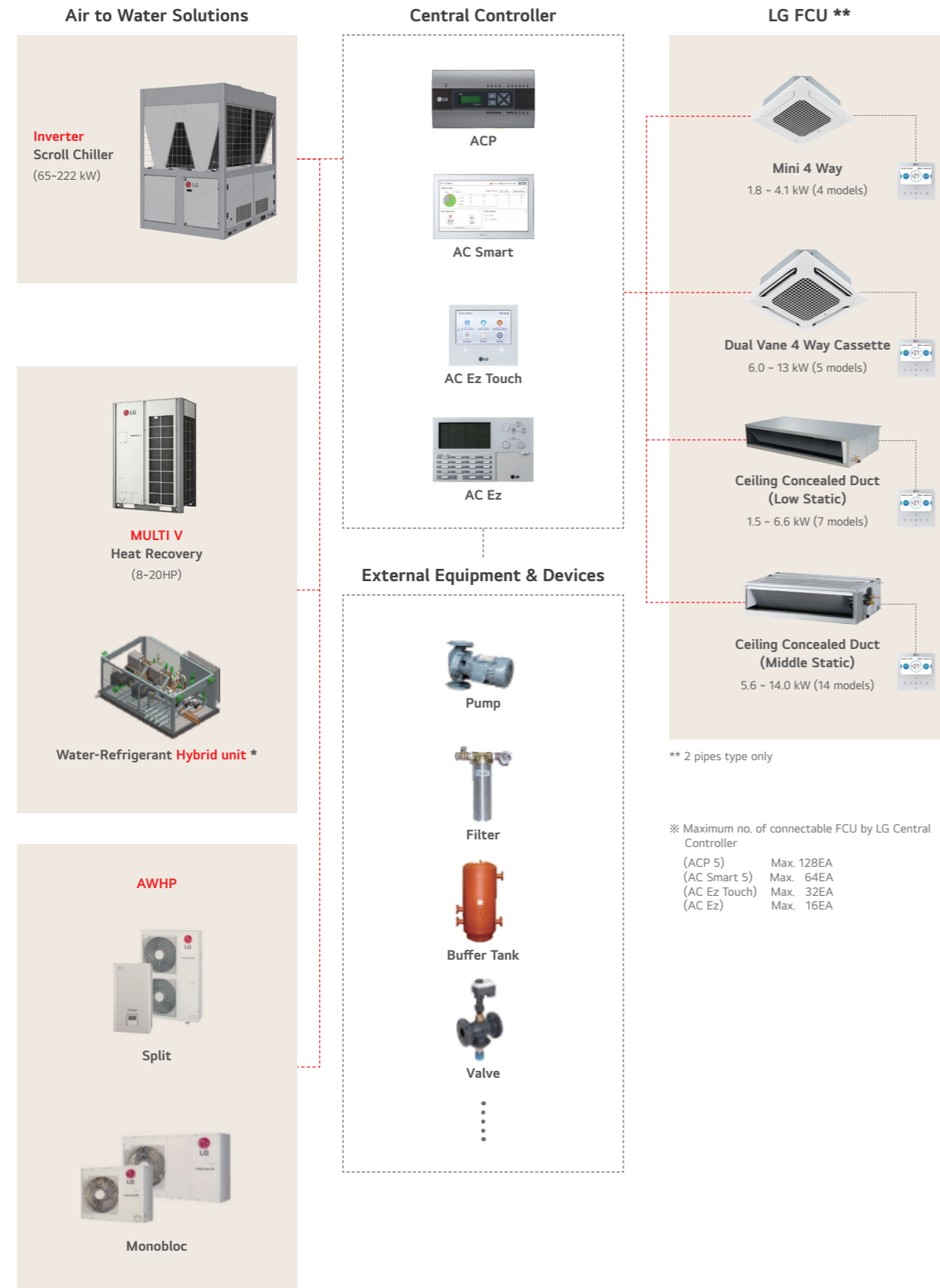
Note
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 2. Wiring cable size must comply with the applicable local and national codes. And "Electric characteristics" chapter should be considered for electrical work and design. Especial the power cable and circuit breaker should be selected in accordance with that.
 3. Sound pressure level is measured on the rated condition in the anechoic rooms by ISO 3745 standard. Sound power level is measured ISO 9614:2009 by sound intensity method. Therefore, these values can be increased owing to ambient conditions during operation.
 4. Performances are based on the following conditions: Capacities and inputs are based on the following conditions
 • Cooling: Outdoor air temp. 35°C, Water inlet temp. 12°C, Water Outlet temp. 7°C
 • Heating: Outdoor air temp. 7°C, Water inlet temp. 40°C, Water Outlet temp. 45°C

FCU



Fan Coil Unit

FCU can be applied to various solutions using water. It allows not only to control equipment individually by using the remote controller, but also apply integrated control including control of some external equipment and devices through the central controller.

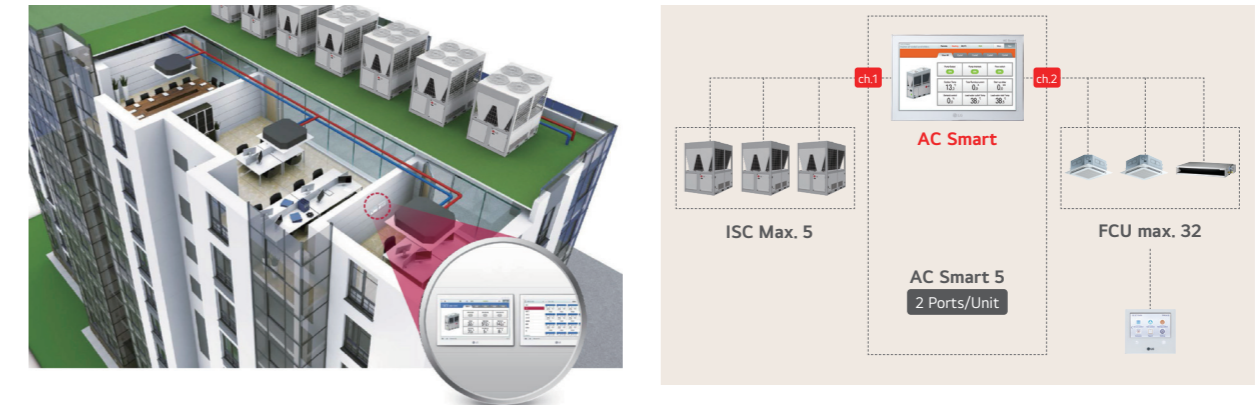


Interlocking Control

It allows Interlocking control between FCU and Inverter Scroll Chiller (ISC) by using LG central controller such as ACP, ACS. When FCU is being turned on/off, ISC turns on/off automatically by LG central controller.

What are the Benefits?

The Total Cost (Equipment + installation + BMS) is greatly reduced. It eliminated the hassle of turning on the ISC first.

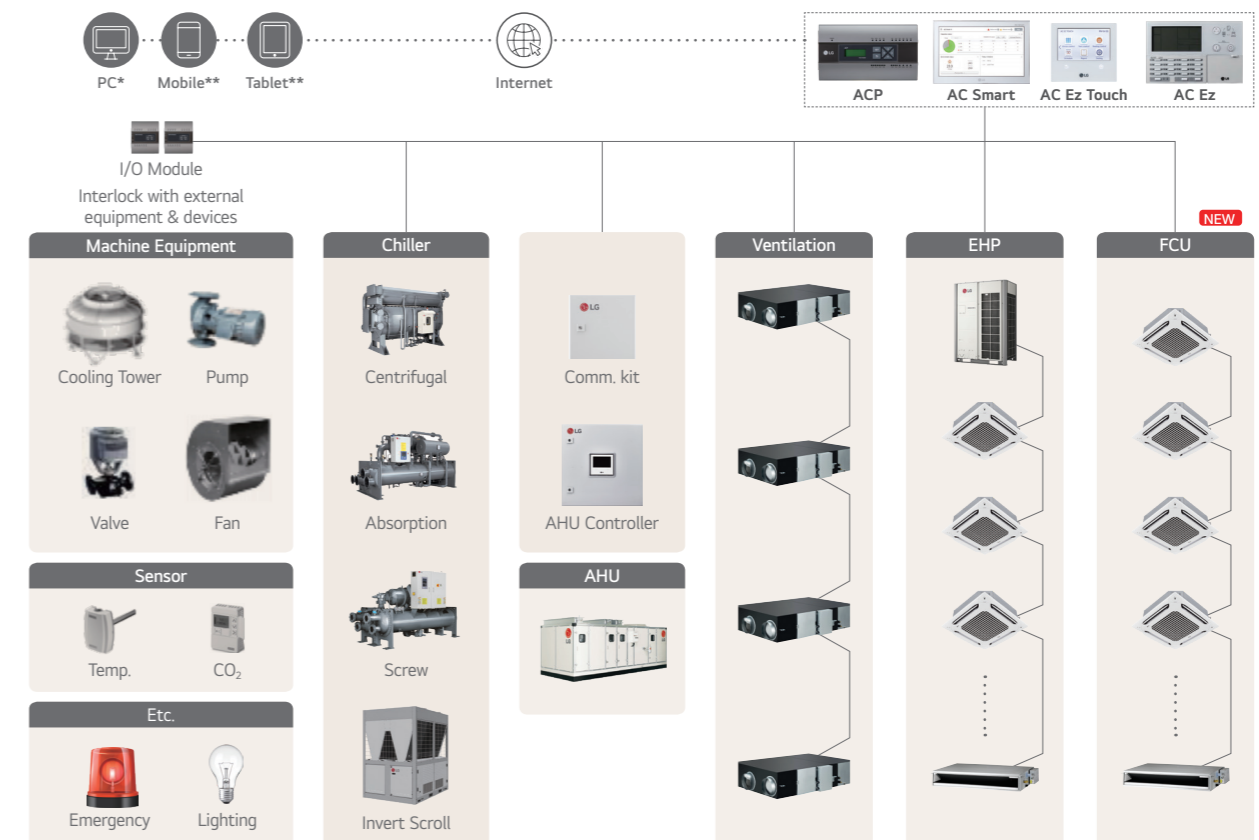


Central Controller

LG's central controller allows control of various external equipment and devices in addition to LG's equipment. (FCU, Chiller, EHP, etc.)

What are the Benefits?

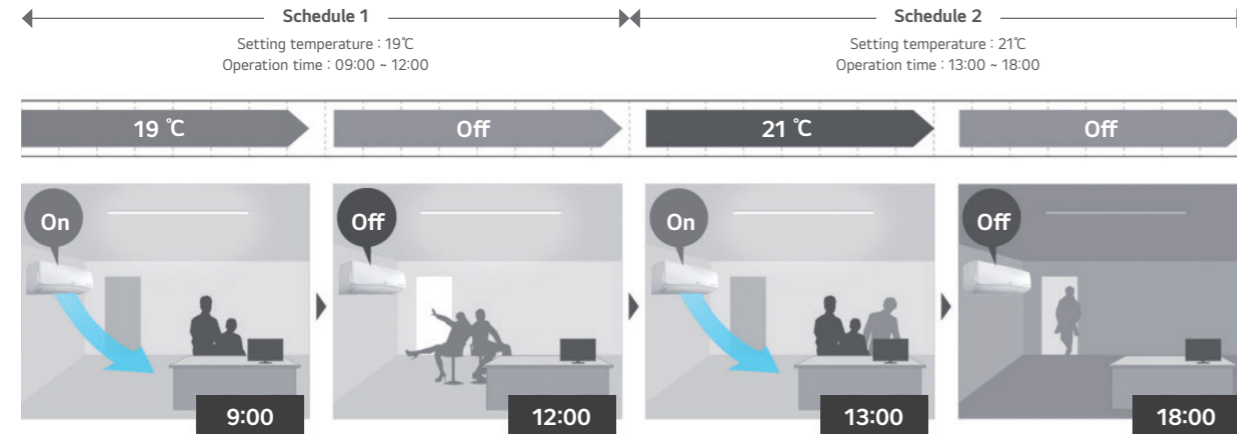
Integrated control of the system can be realized conveniently through the LG central controller. (FCU + Chiller + EHP + ... + External Equipment & Devices)



* Unable to link AC Ez ** Unable to link AC Ez, AC Ez Touch

Scheduled Operation

You can set 2 schedules for one day, and up to 14 schedules for a week.



※ This function is for wired remote controller only.
※ Wired remote controller is need to be separately purchased.

Group Control with One Remote Controller

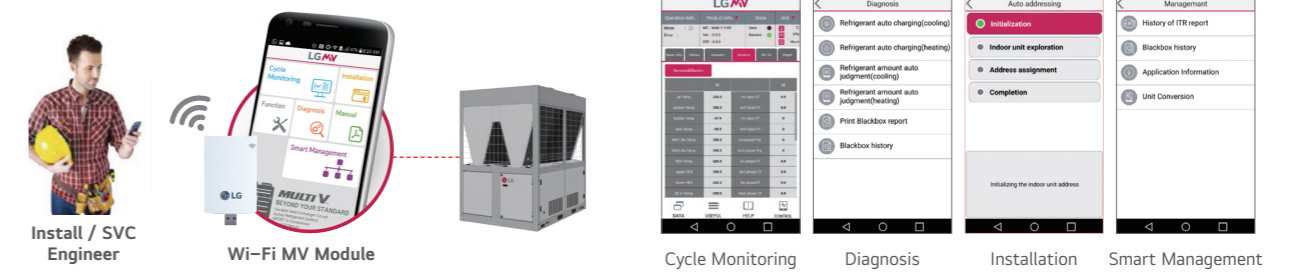
Up to 16 FCU's can be controlled with one wired remote controller. It can reduce installation costs and keep the wall interior clean.



※ If you set up to 'Installation Setting' > Group Control 'Enabled' in your Wired Remote Controller, you can use many more functions.

Easy Control (Simple Test Run via LGMV)

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



※ Search "Mobile LGMV" on Google market or App store then download the app.
※ Wi-Fi modem (PWFMD200) is required by option.

Individual Control & External Central Control

It allows not only to control each room by using the remote controller, but also apply integrated control through a 3rd party central controller.

