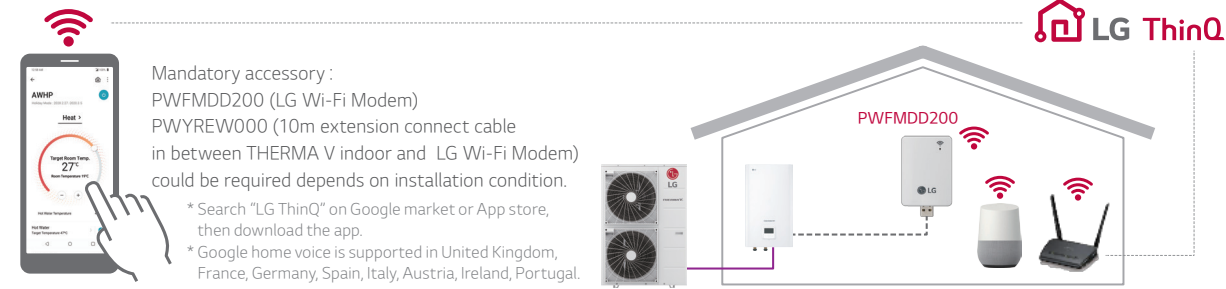




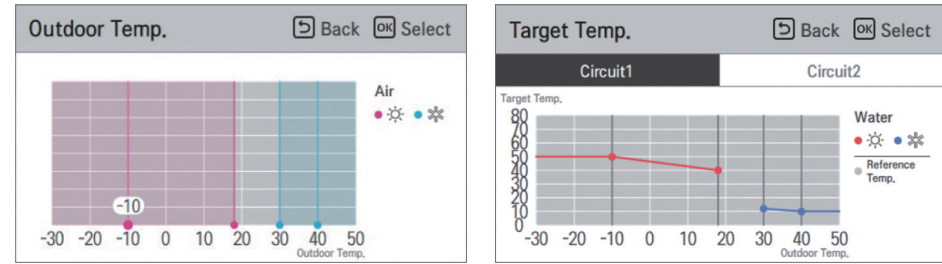
LG ThinQ SEAMLESS CONNECTIVITY

LG ThinQ allows users to monitor and control compatible LG products remotely, so they can set the temperature and regulate the use of their THERMA V anytime, anywhere. LG ThinQ technology also works with voice activation with Google Home.



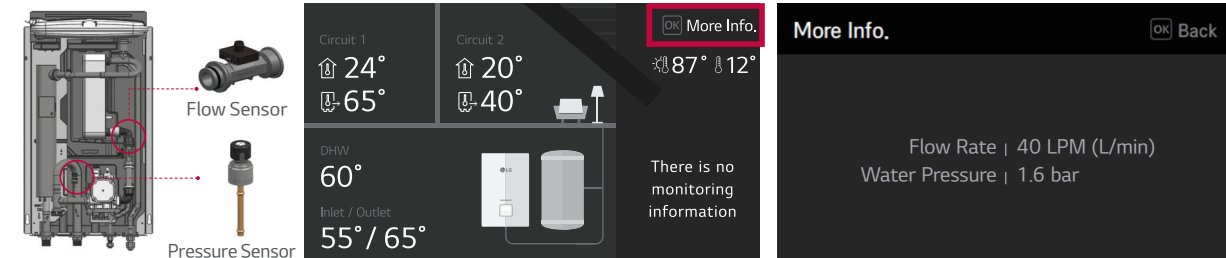
SEASONAL AUTO MODE

In this mode, the target temperature will vary according to the outdoor temperature automatically. This mode adds the cooling season function to the conventional weather dependent operation mode. Moreover, this function can be conveniently set using visualized graphics.



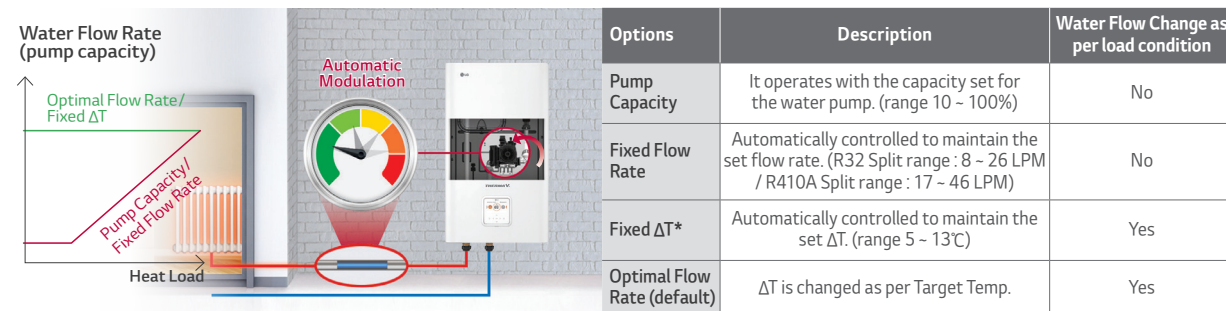
WATER CIRCUIT MONITORING

It is possible to monitor via remote controller not only temperature of water circuit but also flow rate and pressure. This information is not only useful to the installer during installation, but also helps to periodically clean the strainer.



ADVANCED PUMP CONTROL OPTIONS

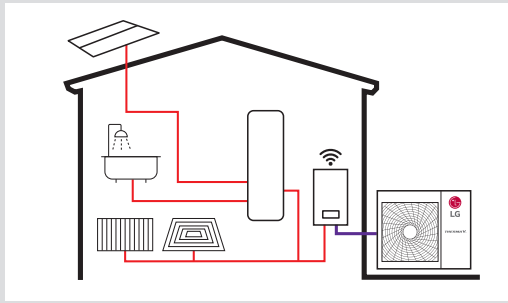
Various pump control options are possible for the user's convenience. With the the R32 Split & R410A Split, the water flow rate can be changed as per heat load condition, therefore it makes more energy efficient operation during low load condition.



*ΔT = temperature difference between inlet and outlet water temperature.

LG'S THERMA V SPLIT AT A GLANCE

The LG THERMA V Split is a hydro box type comprising a separate indoor and outdoor unit, which are connected by refrigerant piping. Hydronic components such as plate heat exchanger, expansion tank and water pump are located within the indoor unit, making the unit capable of withstanding freezing outside ambient temperatures.



LG'S THERMA V R32 Split / R410A Split

Enhanced installation flexibility

- Refrigerant pipes connects IDU & ODU
- Hydronic components built into IDU : plate heat exchanger, water pump, back up heater, expansion tank, air vent, etc
- User-friendly installation settings interface

High efficiency & operational range

- SCOP up to 4.65 (average climate / low temp. application) : A+++
- 100% Heating capacity at -7°C outdoor temperature (except for 16kW R410A Split)
- Leaving water temperature up to 65°C (R32) / 57°C (R410A)
- Expanded operative range of solar thermal system

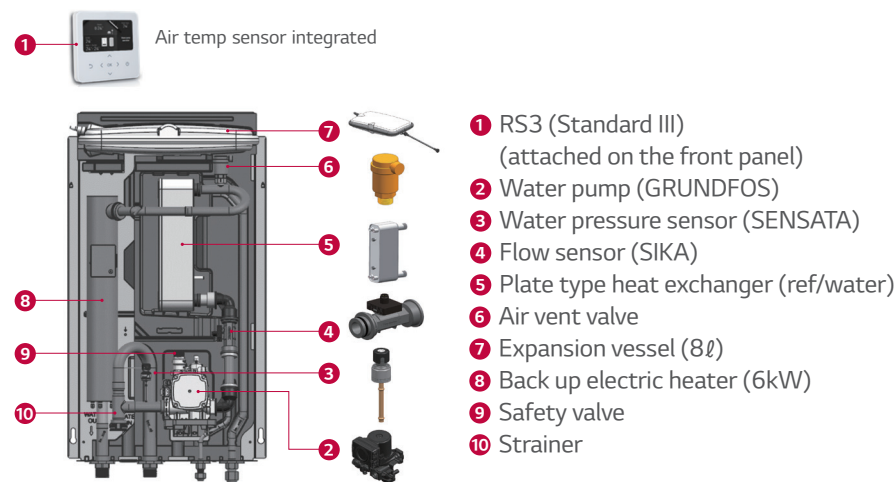
Innovative design & technology

- Built-in water flow & pressure sensors to monitor real-time water circuit
- Advanced water pump control (optimal flow rate, fixed capacity, fixed flow rate, fixed ΔT)
- Enhanced 2nd circuit control logic

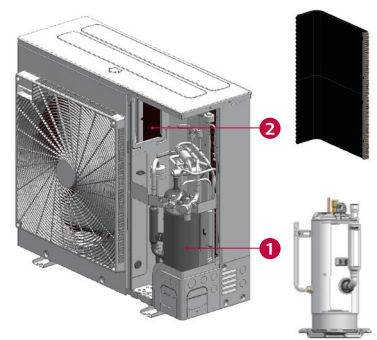
	Indoor Unit	Outdoor Unit
10	HN091MR NK5	HU051MR U44 HU071MR U44 HU091MR U44

	Indoor Unit	Outdoor Unit
10	HN1616M NK5	HU121MA U33 HU141MA U33 HU161MA U33
30	HN1636M NK5	HU123MA U33 HU143MA U33 HU163MA U33

KEY COMPONENTS



- 1 R1 compressor
- 2 Black Fin heat exchanger (ref/air)

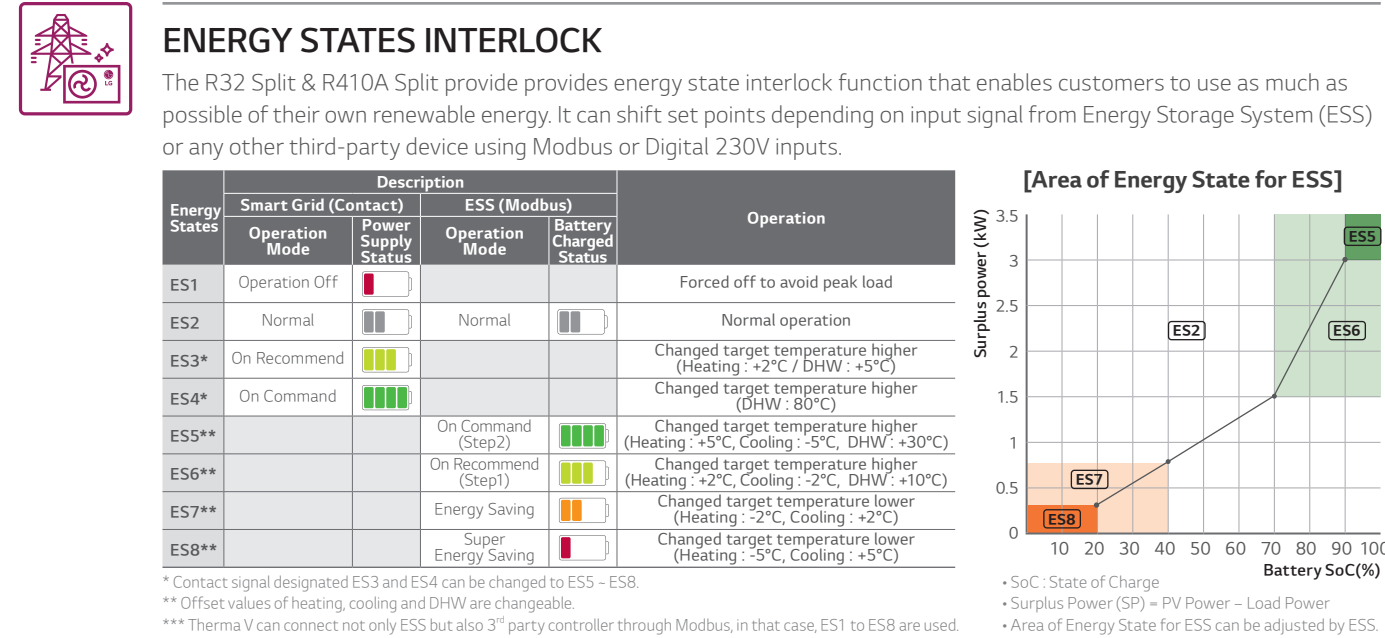
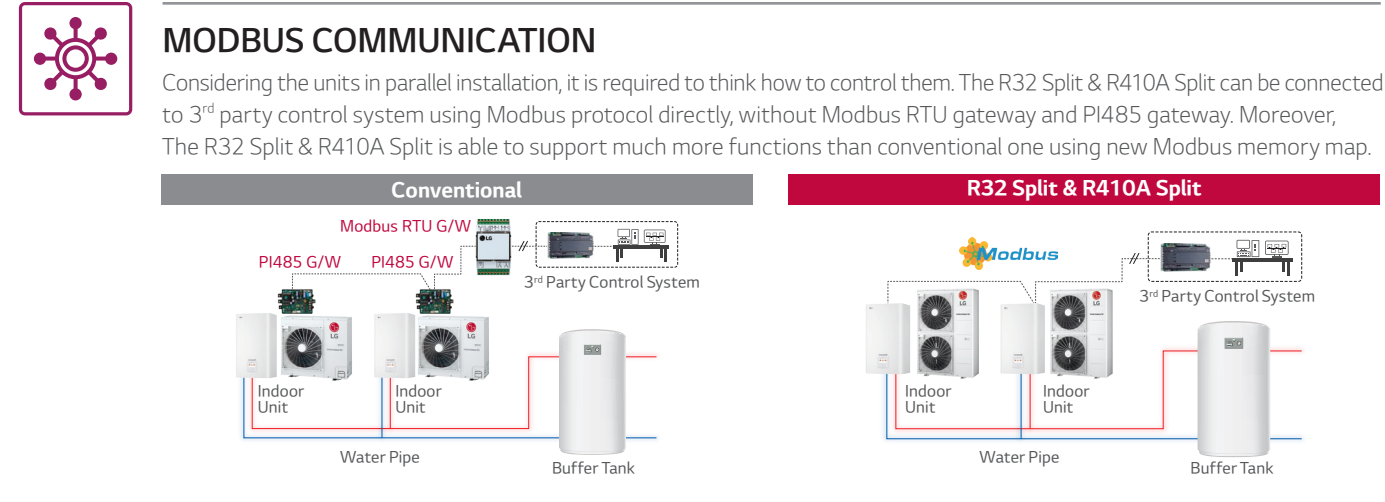
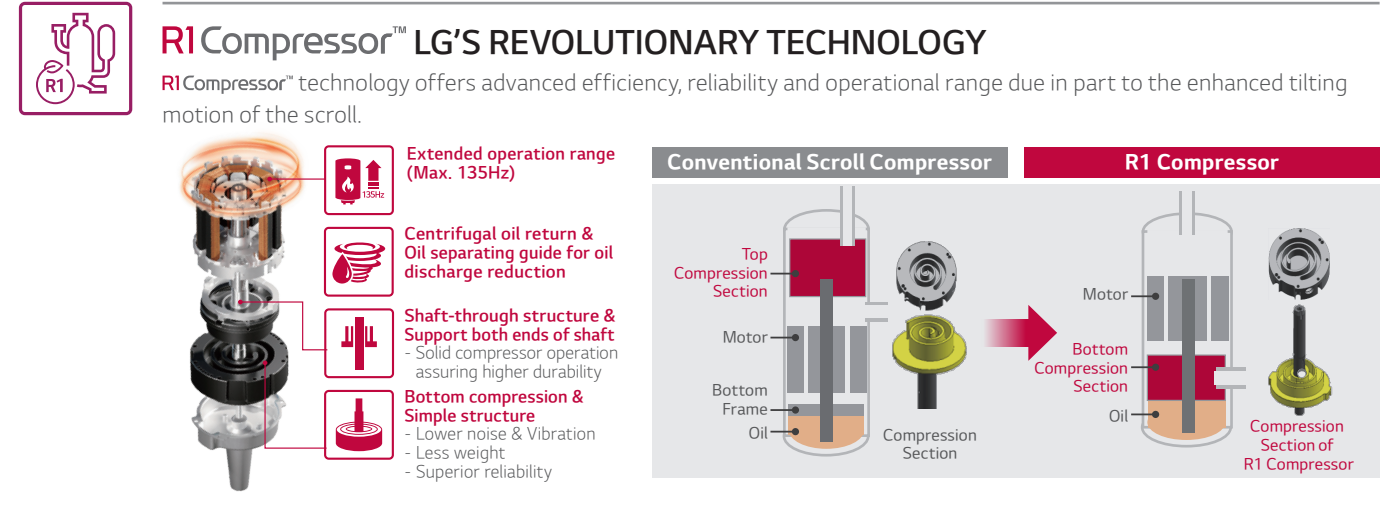
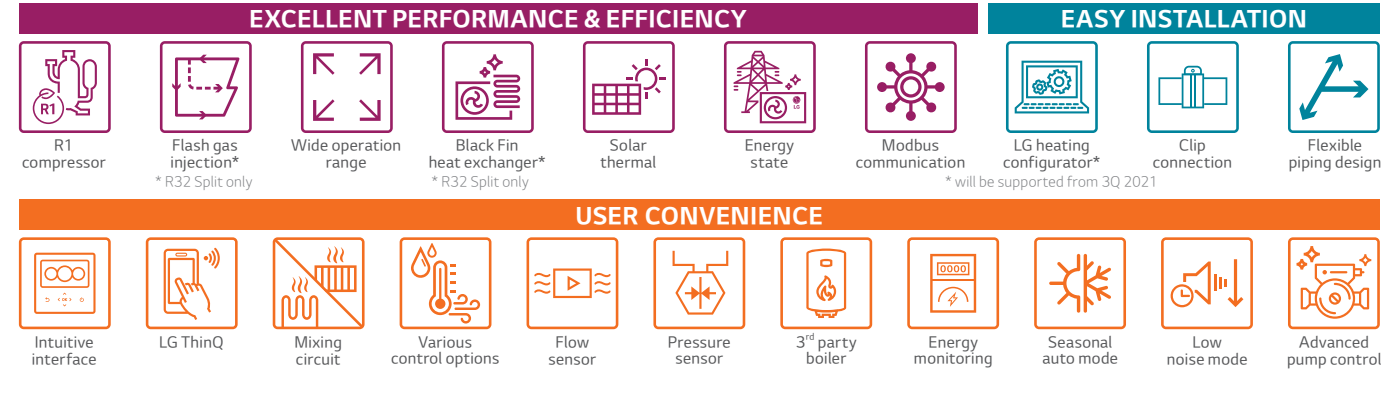


* Illustrated based on R32 Split outdoor unit.
* For R410A Split, Gold Fin heat exchanger is applied.



THERMA V™

R32 Split / R410A Split



PRODUCT SPECIFICATION

R32 Split

INDOOR UNIT

Technical Specification			Indoor Unit		HN091MR NK5	
Operation Range (Leaving water temp.)	Heating	Min. ~ Max.	°C DB	15 ~ 65	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
	Cooling	Min. ~ Max.	°C DB	-	°C DB	15 ~ 80 ²⁾
Flow Sensor	Measuring Range	Min. ~ Max.	l/min	5 ~ 80	l/min	5 ~ 80
	Flow (Trigger point)	Min.	l/min	7	l/min	7
Water Pressure Sensor	Measuring Range	Min. ~ Max.	bar (G)	0 ~ 20	bar (G)	0 ~ 20
	Expansion Vessel	Volume	l	8	l	8
Safety Valve	Pressure Limit	Upper Limit	bar	3	bar	3
	Water Circuit	Inlet	mm (Inch)	Male PT 25.4(1)	mm (Inch)	Male PT 25.4(1)
Piping Connections	Refrigerant Circuit	Outlet	mm (Inch)	Ø 15.88 (5/8)	mm (Inch)	Ø 15.88 (5/8)
	Refrigerant Circuit	Liquid	mm (Inch)	Ø 9.52 (3/8)	mm (Inch)	Ø 9.52 (3/8)
Sound Power Level	Heating	Rated	dB(A)	44	dB(A)	44
	Unit	W x H x D	mm	490 x 850 x 315	mm	490 x 850 x 315
Dimensions			Weight	kg	kg	37.6
Electrical Specification			Indoor Unit		HN091MR NK5	
Wiring Connections	Power and Communication Cable (Included Earth, H07RN-F)	Type	mm² x cores	0.75 x 4C	mm² x cores	0.75 x 4C
	Capacity Combination	Number of Heating Coil	EA	2	EA	2
Back-up Heater	Heating Steps	Rated Current	kW	3.0 + 3.0	kW	3.0 + 3.0
	Power Supply	Rated Current	V, Ø, Hz	220-240, 1, 50	V, Ø, Hz	220-240, 1, 50
Power Supply	Rated Current	Rated Current	A	25.0	A	25.0
	Power Supply Cable (included earth, H07RN-F)	Power Supply Cable (included earth, H07RN-F)	mm² x cores	4.0 x 3C	mm² x cores	4.0 x 3C

1) When fan coil unit not used. 2) DHW 58 ~ 80°C operating is available only when the booster heater is operating.

OUTDOOR UNIT

Technical Specification			Indoor Unit		HN091MR NK5		
Nominal Capacity	Heating	OAT	LWT	Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44
		7°C	35°C	kW	5.50	7.00	9.00
Nominal Power Input	Cooling	7°C	55°C	kW	5.50	5.50	5.50
		35°C	35°C	kW	3.30	4.20	5.40
COP	Heating	35°C	18°C	kW	5.50	7.00	9.00
		7°C	35°C	kW	1.12	1.43	1.94
EER	Cooling	7°C	55°C	kW	1.57	1.57	1.57
		35°C	35°C	kW	0.94	1.20	1.54
Operation Range (Outdoor temp.)	Heating	Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
		Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
Compressor	Type	Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
		Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
Refrigerant	GWP (Global Warming Potential)	Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
		Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
Piping Connections	Outer Diameter	Gas	mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)
		Liquid	mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)
Rated Water Flow Rate (at LWT 35°C)	Sound Power Level	Standard	m	m	m	m	m
		Max.	m	m	m	m	m
Sound Pressure Level (at 1m)	Dimensions	Chargeless-Pipe Length	g/m	g/m	g/m	g/m	g/m
		Additional Charging Volume	l/min	l/min	l/min	l/min	l/min
Weight	Unit	Heating	Rated	Rated	Rated	Rated	Rated
		Unit	W x H x D	W x H x D	W x H x D	W x H x D	W x H x D
Electrical Specification	Voltage, Phase, Frequency	Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
		Min. ~ Max.	°C DB	°C DB	°C DB	°C DB	°C DB
Power Supply	Rated Running Current	Heating	Rated	Rated	Rated	Rated	Rated
		Cooling	Rated	Rated	Rated	Rated	Rated
Wiring Connections	Recommended Circuit Breaker	Power Supply Cable (included earth, H07RN-F)	mm² x cores	mm² x cores	mm² x cores	mm² x cores	mm² x cores
		Power Supply Cable (included earth, H07RN-F)	mm² x cores	mm² x cores	mm² x cores	mm² x cores	mm² x cores

- 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 ISO 9614 standard.
- Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Therefore, these values can be increased owing to ambient conditions during operation.
- Performance are based on the following conditions (It is according to EN14511):
 - Interconnected pipe length is standard length and difference of elevation (outdoor - indoor unit) is 0m.
 - This product contains fluorinated greenhouse gases.

SEASONAL ENERGY EFFICIENCY

Description		Indoor Unit		HN091MR NK5		
Space Heating (According to EN14825)	Average Climate Water Outlet 55°C	SCOP	-	4.65	4.65	4.65
	Seasonal Space Heating Efficiency (ns)	%	-	183	183	183
Average Climate Water Outlet 55°C	SCOP	-	-	A+++	A+++	A+++
	Seasonal Space Heating Efficiency (ns)	%	-	3.23	3.23	3.23
Average Climate Water Outlet 55°C	SCOP	-	-	A+++	A+++	A+++
	Seasonal Space Heating Efficiency (ns)	%	-	126	126	126
Average Climate Water Outlet 55°C	SCOP	-	-	A++	A++	A++
	Seasonal Space Heating Efficiency (ns)	%	-	126	126	126



* 5kW 10 model. * A+++ to D scale.

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HU051MR U44 + HN091MR NK5

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
-25°C DB	4.02	3.90	3.78	3.66	-	-	-	-
-20°C DB	4.64	4.51	4.38	4.26	4.13	-	-	-
-15°C DB	5.26	5.12	4.99	4.85	4.72	4.58	-	-
-10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
-5°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
0°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
5°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
10°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
15°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
20°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
25°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50

HU071MR U44 + HN091MR NK5

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
-25°C DB	5.00	4.85	4.71	4.56	-	-	-	-
-20°C DB	5.58	5.43	5.27	5.11	4.95	-	-	-
-15°C DB	6.17	6.00	5.83	5.66	5.49	5.32	-	-
-10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
-5°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
0°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
5°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
10°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
15°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
20°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
25°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

HU091MR U44 + HN091MR NK5

Outdoor Temperature	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
-25°C DB	6.40	6.20	6.00	5.80	-	-	-	-
-20°C DB	7.42	7.00	6.77	6.54	6.31	-	-	-
-15°C DB	8.06	7.80	7.54	7.28	7.02	6.76	-	-
-10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
-5°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
0°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
5°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
10°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
15°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
20°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
25°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00

Performance Table for Cooling Operation

Maximum Cooling Capacity

HU051MR U44 + HN091MR NK5

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
10°C DB	7.42	6.95	6.77	6.54	6.31	6.07	5.83
20°C DB	6.05	6.37	6.70	6.91	7.23	7.45	7.66
30°C DB	5.68	5.79	5.90	5.97	6.08	6.15	6.22
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
40°C DB	5.32	5.34	5.35	5.37	5.38	5.40	5.41
45°C DB	5.13	5.17	5.21	5.23	5.27	5.29	5.32

HU071MR U44 + HN091MR NK5

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
10°C DB	8.17	8.85	9.54	9.99	10.68	11.13	11.59
20°C DB	7.10	8.11	8.52	8.80	9.21	9.48	9.75
30°C DB	7.23	7.37	7.51	7.60	7.74	7.83	7.92
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
40°C DB	6.77	6.81	6.87	6.83	6.87	6.83	6.88
45°C DB	6.53	6.58	6.63	6.66	6.70	6.74	6.77

HU091MR U44 + HN091MR NK5

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
10°C DB	10.50	11.38	12.26	12.85	13.73	14.31	14.90
20°C DB	9.90	10.43	10.96	11.31	11.84	12.19	12.54
30°C DB	9.48	9.65	9.82	9.95	10.06	10.18	10.29
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
40°C DB	8.70	8.73	8.76	8.78	8.81	8.83	8.85
45°C DB	8.40	8.46	8.52	8.56	8.62	8.66	8.70

- Note
- DB: Dry Bulb Temperature (°C), LWT: Leaving Water Temperature (°C), LPM: Liters Per Minute (l/min), TC: Total Capacity (kW)
 - Direct interpolation is permissible. Do not extrapolate.
 - Measuring procedure follows EN14511.
 - Rated values are based on standard conditions and it can be found on specifications.
 - Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
 - In accordance with the test standard (or nations), the rating will vary slightly.
 - The shaded areas are not guaranteed continuous operation.

R32 Split

PRODUCT SPECIFICATION

R410A Split

INDOOR UNIT

Technical Specification			Indoor Unit		HN1616M NK5		HN1636M NK5	
Operation Range (Leaving water temp.)	Heating	Min. ~ Max.	°C DB	15 ~ 57	°C DB	15 ~ 57	°C DB	15 ~ 57
	Cooling	Min. ~ Max.	°C DB	5 ~ 27 (16 ~ 27) ¹⁾	°C DB	5 ~ 27 (16 ~ 27) ¹⁾	°C DB	5 ~ 27 (16 ~ 27) ¹⁾
Flow Sensor	Measuring Range	Min. ~ Max.	l/min	5 ~ 80	l/min	5 ~ 80	l/min	5 ~ 80
	Flow (Trigger point)	Min.	l/min	15	l/min	15	l/min	15
Water Pressure Sensor	Measuring Range	Min. ~ Max.	bar (G)	0 ~ 20	bar (G)	0 ~ 20	bar (G)	0 ~ 20
	Expansion Vessel	Volume	l	8	l	8	l	8
Safety Valve	Pressure Limit	Upper Limit	bar	3	bar	3	bar	3
	Water Circuit	Inlet	mm (Inch)	Male PT 25.4(1)	mm (Inch)	Male PT 25.4(1)	mm (Inch)	Male PT 25.4(1)
Piping Connections	Refrigerant Circuit	Outlet	mm (Inch)	Ø 15.88 (5/8)	mm (Inch)	Ø 15.88 (5/8)	mm (Inch)	Ø 15.88 (5/8)
	Refrigerant Circuit	Liquid	mm (Inch)	Ø 9.52 (3/8)	mm (Inch)	Ø 9.52 (3/8)	mm (Inch)	Ø 9.52 (3/8)
Sound Power Level	Heating	Rated	dB(A)	44	dB(A)	44	dB(A)	44
	Unit	W x H x D	mm	490 x 850 x 315	mm	490 x 850 x 315	mm	490 x 850 x 315
Dimensions			Weight	kg	kg	40	kg	41
Electrical Specification			Indoor Unit		HN1616M NK5		HN1636M NK5	
Wiring Connections	Power and Communication Cable (Included Earth, H07RN-F)	Type	mm² x cores	0.75 x 4C	mm² x cores	0.75 x 4C	mm² x cores	0.75 x 4C
	Capacity Combination	Number of Heating Coil	EA	2	EA	2	EA	2
Back-up Heater	Heating Steps	Rated Current	kW	3.0 + 3.0	kW	3.0 + 3.0	kW	3.0 + 3.