### User Convenience



# DHW Recirculation Pump Control

Therma V can be connected to the DHW recirculation pump, which can then be managed via the scheduling function. When a user opens the faucet, hot water is immediately accessible thanks to the DHW recirculating function. This feature also has the added advantage of preventing Legionella growth in the hot water pipe.



### ThinQ Seamless Connectivity

LG ThinQ, a smart phone app, allows users to monitor and manage compatible LG products remotely, which means they can set the temperature and regulate the use of their THERMA V anytime and anywhere. In most EU countries, LG ThinQ technology also works with Google Assistant and Alexa, letting users control their Therma V with voice commands.





PWFMDD200 (LG Wi-Fi Modem) / PWYREW000 (10m extension connect cable in between THERMA V indoor and LG Wi-Fi Modem) could be required depending on installation condition.

\* Search "LG ThinQ" on Google market or App store, then download the app. rol and Alexa voice control may be restricted in use and language \* Google assistant vo in some countries.

### Energy Monitoring via Remote Controller and ThinQ

Without connecting Meter Interface, estimated power consumption and thermal energy can be monitored on both the remote controller and LG ThinQ <sup>1)</sup>.

- Instant power consumption
- Power consumption by period (Daily, Weekly, Monthly, Yearly): Categorized as Heat, Cool, and DHW
- Produced Heat output by period (Daily, Weekly, Monthly, Yearly)<sup>2)</sup>
- Renewable Energy by period (Daily, Weekly, Monthly, Yearly)<sup>2), 3)</sup>



1) To use LG ThinO. LG Wi-Fi modem (PWFMDD200) is required

When using antifreeze, it will not be available. 3) This energy information is only available with LG ThinO in Spain.

4) This image is intended to help you understand, and the

differences in actual use.

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## Key Advantages

### Easy Installation & Maintenance











Excellent Performance & Efficiency

Flash Gas Injection Range Heat Exchanger



### All-in-one solution : Integrated Water Tank Type

THERMA V R32 Split IWT is the perfect space-saving solution for residential application thanks to its fully integrated hot water tank. Unlike in the case of typical separate installation, in this all-in-one solution hydronic components and Domestic Hot Water (DHW) are prewired, which requires reduced installation time and saves valuable living space. THERMA V R32 Split IWT is easy to set up and operate while it demonstrates outstanding reliability and efficiency.





onventional

LG THERMA V R32 SPLIT IWT (Less installation space required)



## 🗟 Easy Draining System

It is convenient for maintenance or moving as the water inside can be easily drained through the built-in drain valve.





Therma V R32 Split IWT provides an energy state interlock function that enables customers to use as much as possible of their own renewable energy. It can shift set points depending on input signal from Energy Storage System (ESS) or any other third-party device using Modbus or Digital 230V inputs.

# Direct Modbus Communication

R32 Split IWT can be connected and controlled by a thirdparty control system using a Modbus protocol directly, without Modbus RTU gateway.





) Energy is generated from solar panels and sent to your batter 2) Once the battery is fully charged, the surplus energy from the ESS will heat the water tank. The user gets to monitor the

status with the LG ThinQ app. 3) Once the water is heated, the use

energy to the grid.

# LG's New THERMA V. 🐵 SPLIT IWT at a Glance



## Full-on Innovation Inside and Out

LG Therma V Split IWT with an integrated indoor hot water tank – a domestic hot water supply, space heating and cooling solution – has reached a new era of innovation. A stainless steel water tank reduces the risk of corrosion, while an internal coil type heat exchanger contributes to higher efficiency. Compact and lightweight components allow quicker and easier installation, with various advanced control options providing for user convenience.

# **Key Features**

### All-in-one integration

- Quick and easy installation
- DHW tank and hydronic component integration
- Integrated 3kW backup heater and expansion tank for heating (81)

### Enhanced installation flexibility

- Refrigerant pipes connect IDU & ODU
- Light weight and compact size indoor unit
- Max. 50m refrigerant piping and 3-way piping connection availability

### High efficiency & wide operational range

- R32 Refrigerant with low GWP
- SCOP up to 4.65 / 3.12 (low temp. / med temp. application): A+++ / A++
- Water heating efficiency 133% (5,7kW, profile L) / 140% (9kW, profile XL): A+
- COP up to 4.90 (outdoor air 7°C / leaving water 35°C)
- Leaving water temperature up to 65°C

### Innovative design & technology

- Duplex stainless steel water tank (200)
- Durable stainless steel: no need to install an anode and replace it on a regular basis in the case of a magnesium anode, or no electricity consumption in the case of an impressed current anode.



• Built-in water flow and pressure sensors to monitor the water circuit in real time

- PWM-pump with option to control by  $\Delta T$
- Energy monitoring of estimated power consumption

### Control & Connectivity

- LG ThinQ Wi-Fi control and monitoring solution
- PV / ESS or smart grid connectivity
- Modbus connectivity without a gateway
- Schedule-based control logic for DHW recirculation pump
- Enhanced 2<sup>nd</sup> circuit control logic

Product	Phase	Capacity (kW)	Indoo	or Unit	Outdoor Unit		
		5			HU051MR U44		
R32 Split IWT	1Ø	7	HN0913T NK0		HU071MR U44	LG Processed	
		9			HU091MR U44		

### Product Specification | Indoor Unit

Technical Specification			Indoor Unit	HN0913T NK0
	Heating	Min. ~ Max.	°C	15 ~ 65
Operation Range Leaving Water Temp )	Cooling	Min. ~ Max.	°C	5 ~ 27 (16 ~ 27) <sup>1)</sup>
Leaving Water lenp.y	Domestic Hot Water	Min. ~ Max.	°C	15 ~ 80 <sup>2)</sup>
	Volume		l	200
Domestic Hot Water Tank	Material		-	Duplex Stainless Steel
	Internal Thermal Protect	Limit	°C	85
/lain Water Pump	Model		-	Grundfos UPM3K 20-75 CHBL
low Sensor	Measuring Range	Min. ~ Max.	ℓ/min	5 ~ 80
Vater Pressure Sensor	Measuring Range	Min. ~ Max.	bar (G)	0 ~ 20
xpansion Vessel (Heating Circuit)	Volume		l	8
- Fater Malan	Heating Circuit	Upper Limit	bar	3
sarety valve	DHW Circuit	Upper Limit	bar	10
		Liquid (outside diameter)	mm (Inch)	Ø 9.52 (3/8)
	Refrigerant Circuit	Gas (outside diameter)	mm (Inch)	Ø 15.88 (5/8)
iping Connections	Mata Cinnit	Inlet	Inch	
	Water Circuit	Outlet	Inch	Female GT <sup>®</sup> according to ISO228-T (parallel pipe threads)
		Cold Inlet	Inch	
	DHW Tank Water Circuit	Hot Outlet	Inch	Female G1" according to ISO228-1 (parallel pipe threads)
		Recirculation	Inch	
Sound Power Level	Heating	Rated	dB(A)	42
Dimensions	Unit	W × H × D	mm	600 × 1,750 × 660
Veight (without water)	Unit		kg	118
Exterior	Color / RAL Code		-	White / RAL 9016
lectrical Specification			Indoor Unit	HN0913T NK0
Viring Connections	Power and Communication	n Cable (Included Earth, H07RN-F)	mm <sup>2</sup> x cores	0.75 x 4C
	Туре		-	Sheath
	No. of Heating Coil		EA	2
	Capacity Combination		kW	3
lectric Heater	Heating Step		Step	1
	Power Supply		V, Ø, Hz	220-240, 1, 50
	Wiring Connections Power	Supply Cable (Included Earth, H07RN-F)	mm <sup>2</sup> x cores	1.5 x 3C
	Rated Current		A	13.0

) When fan coil unit is not used.

2) DHW 58 ~ 80°C operating is available only when the electric heater is operating.

### Key Components



### Components

- Plate Heat Exchanger (Ref. / Water)
- Strainer
- 3 Expansion Tank for heating (8L)
- 4 Reserved space for DHW Expansion Tank 3 DHW Storage Tank (Stainless Steel, 200L)
- with internal coil type heat exchanger
- 6 Standard III Remote controller (Attached on front panel)
- Air vent valve
- 8 3 Way diverting valve (DC)
- 9 Electric back-up heater (3kW)
- 10 Water flow sensor
- Main water pump with air vent and safety valve (water circuit, 3bar)
- 2 Water pressure sensor
- 13 Drain valve for water circuit
- 🙆 Safety valve (DHW tank, 10bar)
- 🚯 Drain valve for DHW tank

#### Connections

- A DHW recirculation pipe (Female G1" \*) B Domestic hot water outlet pipe (Female G1" \*) C Domestic cold water inlet pipe (Female G1" \*) D Heating circuit inlet pipe (Female G1" \*)
- Heating circuit outlet pipe (Female G1" \*)
- Refrigerant Liquid pipe (SAE 3/8")
- G Refrigerant Gas pipe (SAE 5/8")
- \* According to ISO 228-1 (parallel pipe threads)

### **Product Specification** | Outdoor Unit

Technical Specification			114/7	Indoor Unit		НN0913Т NK0		
Technical Specification				Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44	
		7℃	35°C	kW	5.50	7.00	9.00	
	Heating	7°C	55°C	kW	5.50	5.50	5.50	
Nominal Capacity		2°C	35°C	kW	3.30	4.20	5.40	
		35°C	18°C	kW	5.50	7.00	9.00	
	Cooling	35°C	7℃	kW	5.50	7.00	9.00	
		7℃	35°C	kW	1.12	1.43	1.94	
	Heating	7℃	55°C	kW	2.04	2.04	2.04	
Nominal Power Input		2°C	35°C	kW	0.94	1.20	1.54	
	Casting	35°C	18°C	kW	1.20	1.56	2.14	
	Cooling	35°C	7℃	kW	1.96	2.59	3.46	
		7℃	35°C	W/W	4.90	4.90	4.65	
COP	Heating	7℃	55°C	W/W	2.70	2.70	2.70	
		2°C	35°C	W/W	3.52	3.51	3.50	
FED	Cooling	35°C	18°C	W/W	4.60	4.50	4.20	
EEK	Cooling	35°C	7℃	W/W	2.80	2.70	2.60	
Operation Range	Heating	Heating Min. ~ Max.				-25 ~ 35		
(Outdoor Temp.)	Cooling	Min. ~ Max.		°C DB	5 ~ 48			
Compressor	Туре			-	Hermetic Sealed Scroll			
Refrigerant	Туре			-		R32		
	GWP (Global Warming Potential)			-		675		
	Precharged Amount			g		1,500		
	t-CO <sub>2</sub> eq			-		1.013		
	O. t. Dimeter	Liquid		mm (inch)	Ø 9.52 (3/8)			
	Outer Diameter	Gas		mm (inch)	Ø 15.88 (5/8)			
	L	Standard		m		5		
Piping Connections	Length	Max.		m		50		
	Level Difference	Max.		m		30		
	Chargeless-Pipe Length			m		10		
	Additional Charging Volume			g/m		40		
Rated Water Flow Rate (at LW	T 35°C)			ℓ/min	15.8	20.1	25.9	
Sound Power Level	Heating	Rated		dB(A)	60	60	60	
Sound Pressure Level (at 1m)	Heating	Rated		dB(A)	52	52	52	
Dimensions	Unit	W×H×D		mm		950 × 834 × 330		
Weight	Unit			kg		60.0		
Exterior	Color / RAL Code			-		Warm Gray / RAL 7044		
Electrical Specification				Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44	
	Voltage, Phase, Frequency			V, Ø, Hz		220-240, 1, 50		
Power Supply	Pated Pupping Current	Heating		A	5.0	6.3	8.6	
	Rated Running Current	Cooling		A	5.3	6.9	9.5	
Wiring Connections	Power Supply Cable (included	earth, H07RN-F	-)	mm <sup>2</sup> x cores		4.0 x 3C		
Note				4. Performances are	in accordance with EN145	11 and reflect ErP testing	conditions. Above gives	

1. Due to our policy of innovation some specifications may be changed without notification. 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. Especially the power 6. SCOP are in accordance with EN14825.

cable and circuit breaker should be selected in accordance with that.

R1Compressor<sup>®</sup> Black Fin ThinQ

pressure level is converted from sound power level based on tonality penalty of OdB and installation in free-field. Therefore, these values can be increased owing to ambient conditions during operation Rated sound power level is in accordance with EN12102-1 under conditions of EN14825

the declared values at rated conditions acc. ErP regulation.

7. Water Heating Efficiency is in accordance with EN16147.

3. Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Sound 8. All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

### Seasonal Energy Efficiency

Description			Indoor Unit		HN0913T NK0		100	EN	ERG					; 🕐 (
Description			Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44	al G	енерги		ана се са		нергия - ενεργε		
	Average	SCOP	-	4.65	4.65	4.65		H0091	IMR 000 / HNU91	31 180	🕒 LG	н	J091MR 044 / H	HN0913T
Climate Water Outlet Space Heating Character	Climate Water	Seasonal Space Heating Efficiency (ŋ₅)	%	183	183	183			×L	A.	<b></b>			
	Outlet 35°C	Seasonal Space Heating Eff. Class	-	A+++	A+++	A+++		A	B			×xL		
EN14825)	Average	SCOP	-	3.23	3.23	3.23	C		E		+ 🛱	¥ 🗆	D E F	
	Climate Water	Seasonal Space Heating Efficiency (η₅)	%	126	126	126	D		F		+		د ش <sub>۲۱</sub>	
	Outlet 55°C	Seasonal Space Heating Eff. Class	-	A++	A++	A++	(1) 42 dB	i.		kW kW kW	+ 🎘	X	A** A* A' A	•
Domestic Hot \	Nater	Declared Load Profile	-	L	L	XL	(()	3.						
Efficiency		Water Heating Efficiency $(\eta_{wh})$	%	133	133	140	<b>60</b> d8	J			+		F	
(According to E	N 16147)	Water Heating Eff. Class	-	A+	A+	A+	2019		81	1/2013	2015			

\* A+++ to D scale.

\* EHPA label under development.

### **Performance Table for Heating Operation** | Maximum Heating Capacity (Including Defrost Effect)

#### HU051MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
Temperature	Capacity (kW)							
-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	-	-
-7°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
-4°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
-2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	-
2°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
7°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
18°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
35°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50

#### HU071MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
Temperature	Capacity (kW)							
-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	-	-
-7°C DB	7.00	7.00	7.00	7.00	7.00	7.00	6.49	-
-4°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
-2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-
2°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
7°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
18°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
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

#### HU091MR U44 + HN0913T NK0

Outdoor	LWT 30°C	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	LWT 55°C	LWT 60°C	LWT 65°C
Temperature	Capacity (kW)							
-25°C DB	6.40	6.20	6.00	5.80	-	-	-	-
-20°C DB	7.23	7.00	6.77	6.54	6.31	-	-	-
-15°C DB	8.06	7.80	7.54	7.28	7.02	7.10	-	-
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	8.60	-
-4°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
2°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
7°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
18°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
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	7.95

### **Performance Table for Cooling Operation** | Maximum Cooling Capacity

### HU051MR U44 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
Temperature	Capacity (kW)						
10°C DB	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
30°C DB	5.50	5.50	5.50	5.50	5.50	5.50	5.50
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 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
Temperature	Capacity (kW)						
10°C DB	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
30°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
35°C DB	7.00	7.00	7.00	7.00	7.00	7.00	7.00
40°C DB	6.50	6.63	6.81	7.00	7.00	7.00	7.00
45°C DB	6.43	6.48	6.63	6.66	6.70	6.74	6.77

#### HU091MR U44 + HN0913T NK0

Outdoor	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
Temperature	Capacity (kW)						
10°C DB	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
30°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
35°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00
40°C DB	8.10	8.10	8.70	9.00	9.00	9.00	9.00
45°C DB	7.50	7.70	7.80	7.90	8.00	8.10	8.20

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C)

2. Direct interpolation is permissible. Do not extrapolate. 3. Measuring procedure follows EN-14511.

Rated values are based on standard conditions and it can be found on specifications

• The table values above may not be matched, subject to installation conditions.

• The rating can slightly vary depending on the test standards or countries.

4. The shaded areas are not guaranteed continuous operation.