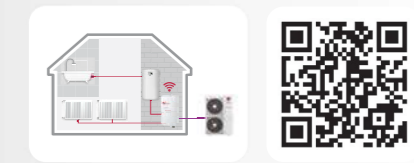




THERMA V™ HIGH TEMPERATURE



INTRODUCTION

THERMA V FEATURES

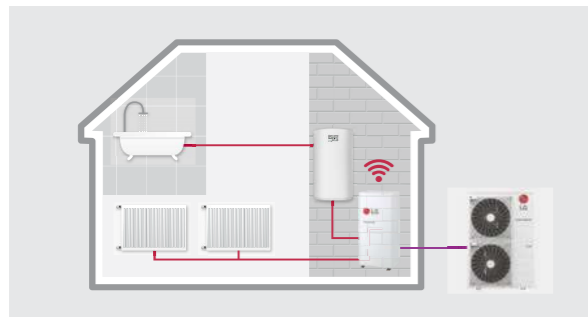
MONOBLOC

HYDROSPLIT

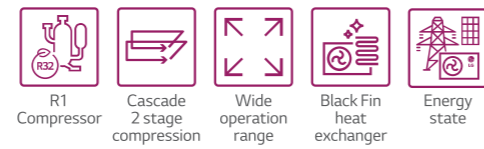
SPLIT

WATER HEATER

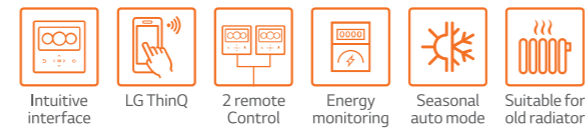
ACCESSORIES



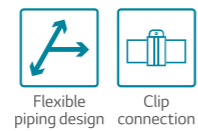
Excellent performance & efficiency



User convenience

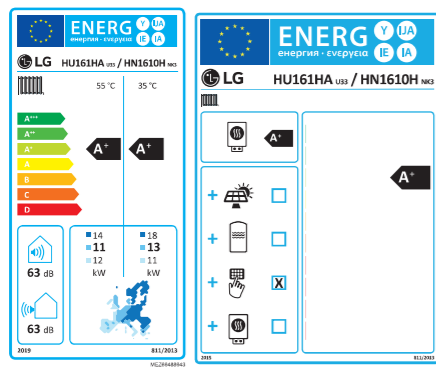


Easy installation & maintenance



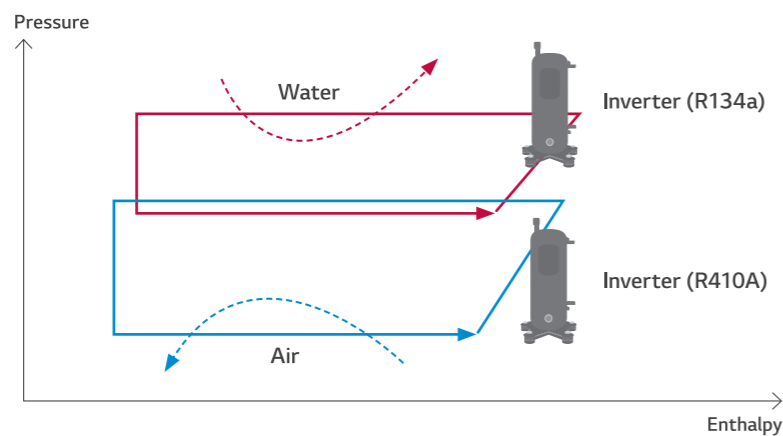
* Detailed description for each function is presented on page 44 ~ 54.

Energy Label



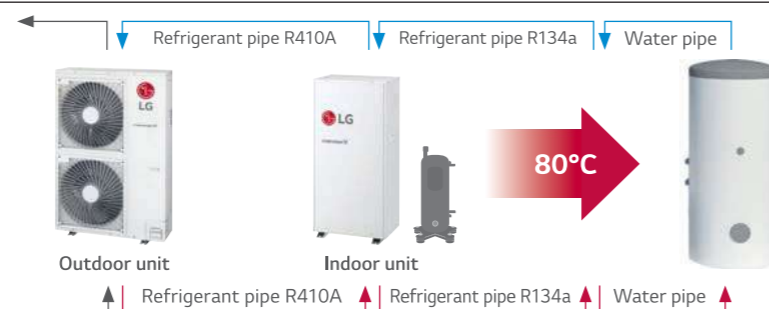
* 16 kW 1 Ø model.
* A+++ to D scale.

THERMA V High Temperature Cycle



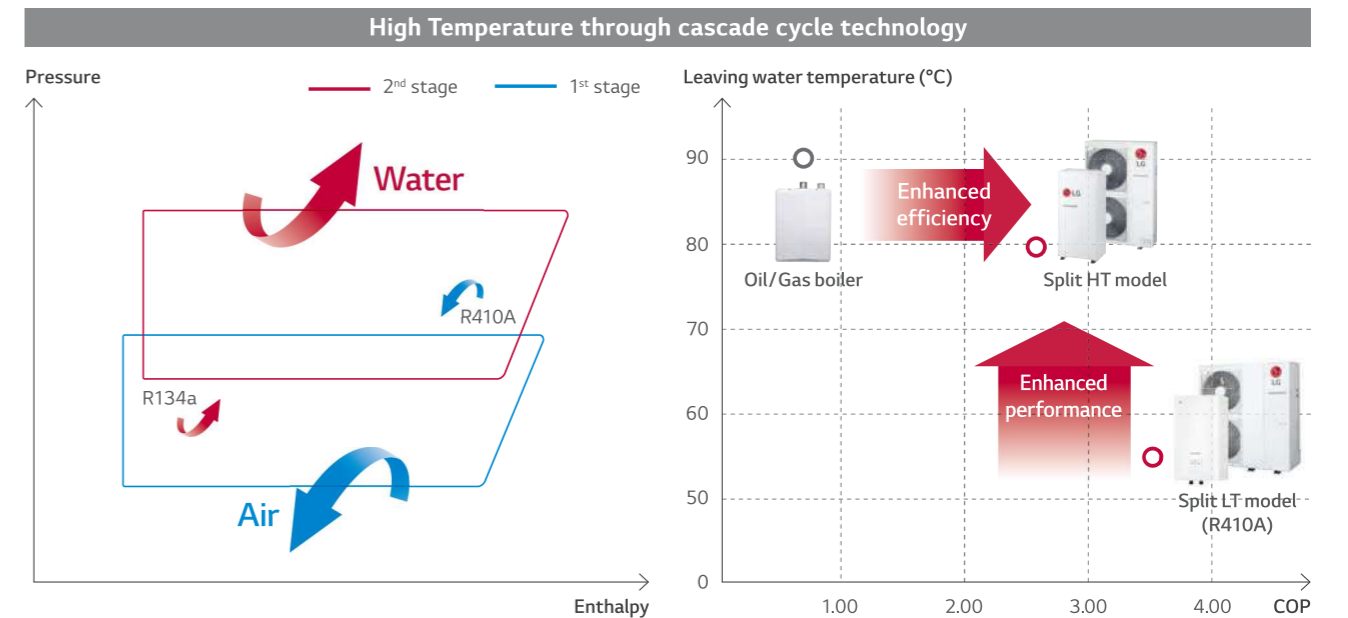
High Temperature Introduction

The LG Therma V High Temperature is a split type unit that consists of a separate indoor and outdoor unit. With cascade 2 stage compression technology, it can supply a high leaving water temperature of up to 80°C, while maintaining high energy efficiency.



Cascade 2 Stage Compression Technology

The Therma V High Temperature unit can produce up to 80°C hot water with high efficiency through cascade 2 stage compression (from R410A to R134a) technology, making it an optimized replacement for a boiler heating system which demands hot water supply.



* Condition for HT model: outdoor air temp. 18°C, entering water temp. 70°C
* Condition for LT model: outdoor air temp. 18°C, entering water temp. 55°C

Note
1. OAT: Outdoor Air Temperature, EWT: Entering Water Temperature, LWT: Leaving Water Temperature

Suitable for Old Radiator

The LG Therma V High Temperature product is suitable for houses with poor insulation, an existing radiator heating system, or are required to meet sanitary water regulation needs at high temperatures.



High Temperature



Indoor unit

HN1610H NK3

Outdoor unit

HU161HA U33



RI Compressor™ **Black Fin** **ThinQ**



Features

- Maximum 80°C leaving water temperature
- Cascade 2 stage compression
- Only for heating (no cooling)
- Suitable for old radiator
- SCOP up to 3.23 (average climate / low temp. application): **A+**
- SCOP up to 3.01 (average climate / mid temp. application): **A+**
- COP up to 3.27 (outdoor air 7°C / leaving water 35°C)
- 100 % heating capacity at -7°C OAT (@ LWT 35°C)
- Wide operation range (ambient: -25 ~ 35°C / water side: 25 ~ 80°C)
- R1 Compressor (for outdoor unit)
- Black Fin heat exchanger
- LG ThinQ
- Keymark / MCS / Eurovent certification

Model line-up

Category	Unit	Model name	
		Capacity (kW)	
		16.0	
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU161HA U33	
	Indoor unit	HN1610H NK3	

Seasonal energy

Description	Outdoor unit		HU161HA U33	
	Indoor unit		HN1610H NK3	
Space heating (according to EN14825)	Average climate water outlet 35°C	SCOP	-	3.23
		Seasonal space heating efficiency (η_s)	%	126
		Seasonal space heating eff. class (A+++ to D scale)	-	A+
	Average climate water outlet 55°C	SCOP	-	3.01
		Seasonal space heating efficiency (η_s)	%	117
		Seasonal space heating eff. class (A+++ to D scale)	-	A+

Nominal capacity and nominal power input

Description	OAT ¹⁾ (DB)	LWT ²⁾ (DB)	Outdoor unit		HU161HA U33	
			Indoor unit		HN1610H NK3	
Nominal capacity	Heating	7°C	35°C	kW	16.00	
		7°C	55°C		14.00	
		2°C	35°C		16.00	
Nominal power input	Heating	7°C	35°C	kW	4.89	
		7°C	55°C		5.00	
		2°C	35°C		4.92	
COP	Heating	7°C	35°C	W/W	3.27	
		7°C	55°C		2.78	
		2°C	35°C		3.25	

1) OAT: Outdoor Air Temperature
2) LWT: Leaving Water Temperature

Product specification (outdoor unit)

Technical specification			Unit	HU161HA U33	
Operation range (outdoor temp.)	Heating	Min. - Max.	°C DB	-25 - 35	
	Quantity		EA	1	
Compressor	Type		-	Hermetic sealed scroll	
	Type		-	R410A	
Refrigerant	GWP (Global Warming Potential)		-	2,088	
	Precharged amount		g	3,800	
	t-CO ₂ eq		-	7,933	
	Outside diameter		Gas	mm (inch)	Ø 15.88 (5/8)
Piping connections	Liquid		mm (inch)	Ø 9.52 (3/8)	
	Length		Standard	m	7.5
	Level difference		Max.	m	50
	Chargeless-pipe length		Max.	m	30
	Additional charging volume			m	7.5
	at LWT 35°C		g/m		40
	Rated water flow rate		LPM		46.0
Sound power level	Heating	Rated	dB(A)	63	
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	55	
Dimensions	Unit	W x H x D	mm	950 x 1,380 x 330	
Weight	Unit		kg	89.0	
Exterior	Color / RAL code		-	Warm gray / RAL 7044	
	Voltage, phase, frequency		V, Ø, Hz	220-240, 1, 50	
Power supply	Rated running current		Heating	A	
	Recommended circuit breaker			A	
	Power cable (included earth)		mm ² x cores		4.0 x 3 C

Product specification (indoor unit)

Technical specification			Unit	HN1610H NK3
Operation range (leaving water temp.)	Heating	Min. - Max.	°C DB	25 - 80
	Quantity		EA	1
Compressor	Type		-	Hermetic sealed twin rotary
	Type		-	R134a
Refrigerant	GWP (Global Warming Potential)		-	1,430
	Precharged amount		g	1,800
	t-CO ₂ eq		-	2,574
	Water circuit		Inlet	inch
Piping connections	Outlet		inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)
	Gas (outside diameter)		mm (inch)	Ø 15.88 (5/8)
	Liquid (outside diameter)		mm (inch)	Ø 9.52 (3/8)
Rated water flow rate (at LWT 35°C)			LPM	46.0
Sound power level	Heating	Rated	dB(A)	58 / 63 ¹⁾
Sound pressure level (at 1 m)	Heating	Rated	dB(A)	50
Dimensions	Unit	W x H x D	mm	520 x 1,080 x 330
Weight	Unit		kg	84.0
Exterior	Color / RAL code		-	Morning gray / RAL 7030
	Voltage, phase, frequency		V, Ø, Hz	220 - 240, 1, 50
Power supply	Rated running current		Heating	A
	Recommended circuit breaker			A
	Power cable (included earth)		mm ² x cores	
Wiring connections	Communication cable (included earth)		mm ² x cores	1.0 - 1.5 x 2 C (VCTF-SB)
	Accessory kit of the indoor unit			Unit
Remote controller				Standard III
Water tank temperature sensor with holder	Sensor size		Ø	7
	Resistance		kΩ	5
Strainer	Mesh size / material			28 mesh / stainless steel

1) This sound power level (63 dB(A)) is when AC cooling fan is operated.

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. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound power level is measured on the rated condition in accordance with ISO 9614 standard. Sound pressure level is converted from sound power level based on a tonality penalty of 0 dB and installation in free-field. The directivity index (Q) is assumed as 2. Therefore, these values can be increased owing to ambient conditions during operation. Rated sound power level is in accordance with EN12102-1 under condition of EN14825.
- Performances are in accordance with EN14511 and reflect ErP testing conditions. Above gives the declared values at rated conditions acc. ErP regulation.
 - Rated running current: outdoor Temp. 7°C DB / 6°C WB, LWT 35°C
 - Interconnected pipe length is standard length and difference of elevation (outdoor - indoor unit) is 0 m.
- This product contains fluorinated greenhouse gases.
- All installation sites must be equipped with an earth leakage circuit breaker (ELCB).

Performance Table for Heating Operation

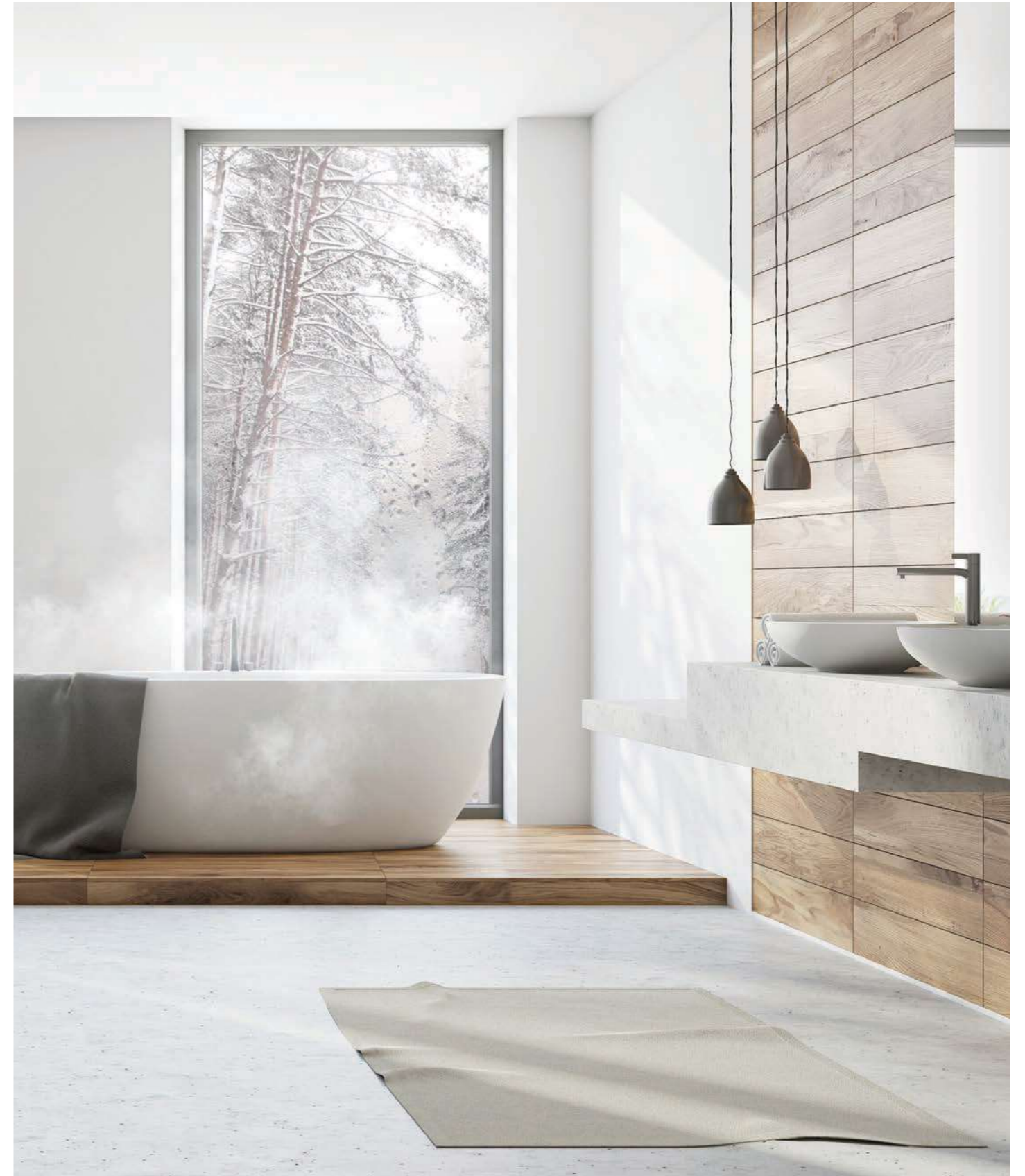
Maximum heating capacity (including defrost effect)

HU161HA U33 + HN1610H NK3

Outdoor temperature	LWT 35°C	LWT 40°C	LWT 45°C	LWT 50°C	Capacity (kW)		LWT 65°C	LWT 70°C	LWT 75°C	LWT 80°C
					LWT 55°C	LWT 60°C				
-25°C DB	13.50	13.29	13.07	12.86	12.64	12.43	12.21	12.00	-	-
-20°C DB	14.19	14.04	13.88	13.73	13.58	13.42	13.27	13.11	12.96	-
-15°C DB	14.89	14.79	14.70	14.60	14.51	14.41	14.32	14.22	14.10	14.00
-7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-4°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note

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 can be found on specifications.
 - Above table values may not be matched according to installation conditions. Except for rated values, the performance is not guaranteed.
 - The rating might slightly vary depending on test standards or countries.
4. The shaded areas are not guaranteed continuous operation.

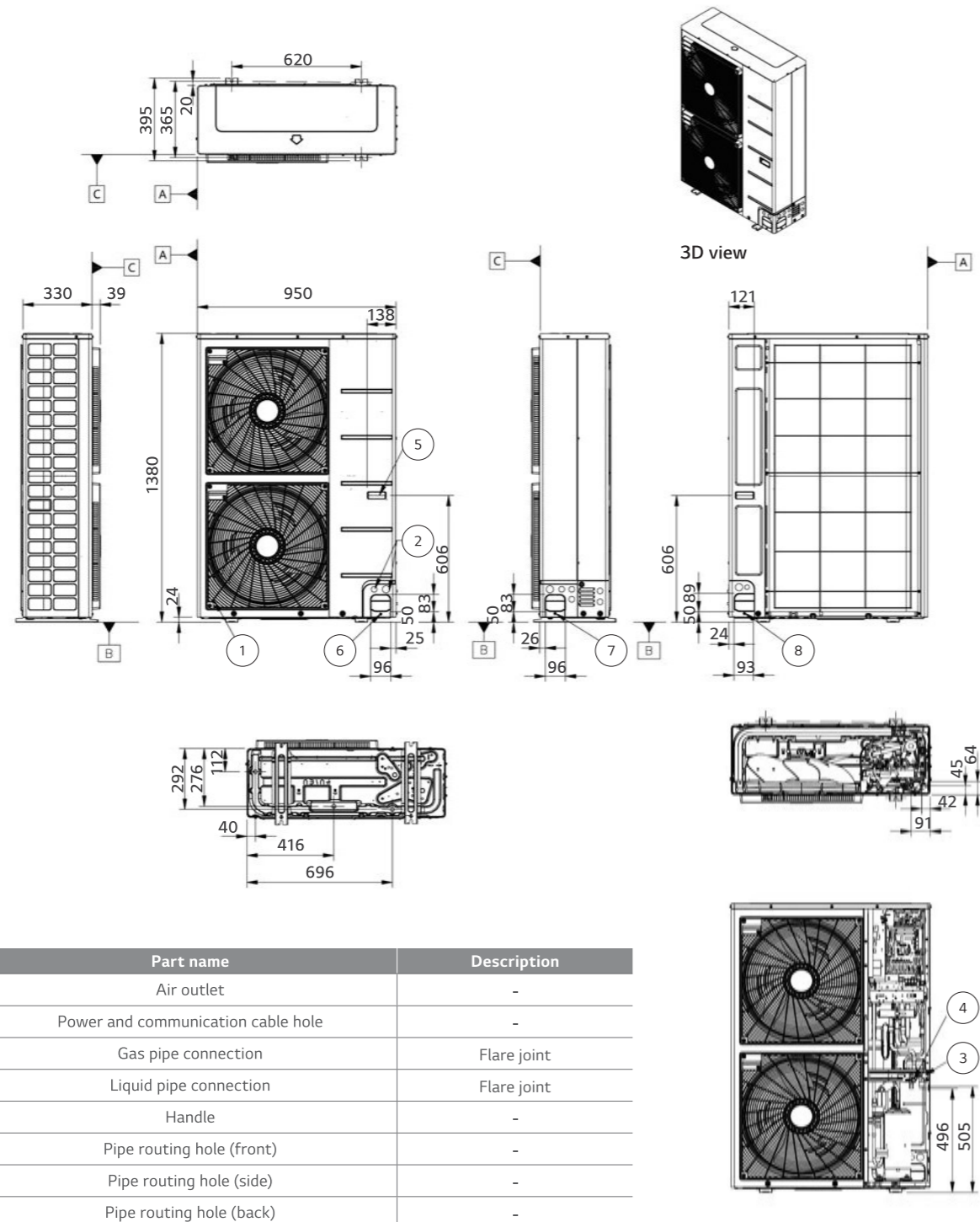


Drawings

Category	Unit	Model name
		Capacity (kW)
		16.0
1 Phase model 220 - 240 V, 1 Ø, 50 Hz	Outdoor unit	HU161HA U33
	Indoor unit	HN1610H NK3

HU161HA U33

[Unit: mm]



HN1610H NK3

[Unit: mm]

