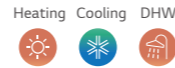


PRODUCT SPECIFICATION

R32 Split IWT (Integrated Water Tank)



Indoor Unit

HN0916T NB1

Outdoor Unit

HU051MR U44

HU071MR U44

HU091MR U44



Features

- Refrigerant pipes connects IDU & ODU
- SCOP up to 4.52 (Average climate / Low temp. application): A+++
SCOP up to 3.03 (Average climate / Mid temp. application): A+
SCOP_{DHW} 2.89 (water heating efficiency 120%, profile L): A+
- COP up to 4.50 (Outdoor air 7°C / Leaving water 35°C)
- DHW tank (200l) & hydronic component integration
- Integrable buffer tank (40l) & expansion tank for DHW circuit (8l) (optional)
- 100% heating capacity at -7°C OAT (@ LWT 35°C)
- Wide operation range (ambient: -25 ~ 35°C / water side: 15 ~ 65°C)
- Built-in water flow to monitor real-time water circuit
- R32 refrigerant with reduced global warming potential (GWP)
- R1 compressor
- Black Fin heat exchanger
- LG ThinQ
- KEYMARK / EHPA (for Germany, Austria) / EUROVENT certification

Model Line-up

Category	Unit	Model Name		
		Capacity (kW)		
		5.0	7.0	9.0
1 Phase Model 220 – 240V, 1Ø, 50Hz	Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44
	Indoor Unit	HN0916T NB1		

Seasonal Energy

Description			Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44
			Indoor Unit	HN0916T NB1		
Space Heating (according to EN14825)	Average Climate Water Outlet 35°C	SCOP	-	4.52	4.47	4.45
		Seasonal Space Heating Efficiency (η _s)	%	178	176	175
		Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A+++	A+++	A+++
	Average Climate Water Outlet 55°C	SCOP	-	3.01	3.00	3.03
		Seasonal Space Heating Efficiency (η _s)	%	117	117	118
		Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A+	A+	A+
Domestic Hot Water Efficiency acc. EN16147	Average Climate	Declared Load Profile	-	L	L	L
		Water Heating Efficiency (η _{WH})	%	125	125	125
		SCOP _{DHW}	-	2.89	2.89	2.89
		Water Heating Efficiency Class	-	A+	A+	A+
	Warmer Climate	Declared Load Profile	-	L	L	L
		Water Heating Efficiency (η _{WH})	%	156	156	156
		SCOP _{DHW}	-	3.61	3.61	3.61
		Water Heating Efficiency Class	-	A+	A+	A+
	Colder Climate	Declared Load Profile	-	L	L	L
		Water Heating Efficiency (η _{WH})	%	106	106	106
		SCOP _{DHW}	-	2.44	2.44	2.44
		Water Heating Efficiency Class	-	A+	A+	A+

Nominal Capacity and Nominal Power Input

Description		OAT (DB)	LWT (DB)	Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44
				Indoor Unit	HN0916T NB1		
Nominal Capacity	Heating	7°C	35°C	kW	5.50	7.00	9.00
		7°C	55°C		5.00	5.25	5.50
	Cooling	35°C	18°C	5.50	7.00	9.00	
Nominal Power Input	Heating	7°C	35°C	kW	1.22	1.56	2.05
		7°C	55°C		1.92	2.02	2.12
	Cooling	35°C	18°C	1.20	1.59	2.20	
COP	Heating	7°C	35°C	W/W	4.50	4.50	4.40
		7°C	55°C		2.60	2.60	2.60
EER	Cooling	35°C	18°C	4.60	4.40	4.10	

PRODUCT SPECIFICATION

R32 Split IWT (Integrated Water Tank)

Product Specification (Outdoor Unit)

Technical Specification			Unit	HU051MR U44	HU071MR U44	HU091MR U44
Operation Range (outdoor temp.)	Heating	Min. - Max.	°C DB	-25 - 35		
	Cooling			5 - 48		
Compressor	Quantity		EA	1		
	Type			Hermetic Sealed Scroll		
Refrigerant	Type			R32		
	GWP (global warming potential)			675		
	Precharged Amount			1,500		
	t-CO ₂ eq			1,013		
Piping Connections	Outside Diameter	Gas	mm (inch)	Ø 15.88 (5/8)		
		Liquid	mm (inch)	Ø 9.52 (3/8)		
	Length	Standard	m	5		
		Max.	m	50		
	Level Difference	Max.	m	30		
	Chargeless-Pipe Length		m	10		
	Additional Charging Volume		g/m	40		
Rated Water Flow Rate (at LWT 35°C)			LPM	15.8	20.1	25.9
Sound Power Level	Heating	Rated	dB(A)	60	61	
	Cooling	Rated	dB(A)	52	53	
Dimensions	Unit	W x H x D	mm	950 x 834 x 330		
Weight	Unit		kg	60.0		
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	5.0	6.3	8.6
		Cooling	A	5.3	6.9	9.5
	Recommended Circuit Breaker		A	16	20	25
Wiring Connections	Power Supply Cable (included earth, H07RN-F)		mm ² x cores	4.0 x 3C		

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 according with ISO 9614 standard. Sound pressure level is converted from sound power level based on tonality penalty of 0dB and installation in free-field. Therefore, these values can be increased owing to ambient conditions during operation. Rated sound power level is according to the EN12102-1 under conditions of the EN14825.
- Performances 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. (Outdoor - Indoor Unit)

Product Specification (Indoor Unit)

Technical Specification			Unit	HN0916T NB1	
Operation Range (leaving water)	Heating	Min. - Max.	°C DB	15 - 65	
	Cooling			5 - 27 (16 - 27) ¹⁾	
	DHW			15 - 80 ²⁾	
Domestic Hot Water Tank	Volume		ℓ	200	
	Internal Thermal Protect Limit		°C	85	
Flow Sensor	Measuring Range	Min. - Max.	LPM	5 - 80	
Water Pressure Sensor	Measuring Range	Min. - Max.	bar(G)	0 - 20	
Expansion Vessel (Heating Circuit)	Volume		ℓ	12	
Safety Valve	Heating Circuit	Upper Limit	bar	3	
	DHW Circuit	Upper Limit	bar	10	
Electric Heater (Case 1 / Case 2 / Case 3) ³⁾	Type			Sheath	
	Number of Heating Coil			1 / 2 / 3	
	Capacity combination			2.0 / 2.0 + 2.0 / 2.0 + 2.0 + 2.0	
	Heating Step			1	
	Power Supply			V, Ø, Hz 220-240, 1, 50 / 220-240, 1, 50 / 380-415, 3, 50	
	Power Supply Cable (Included Earth, H07RN-F)			mm ² x cores 4.0 x 3C / 4.0 x 3C / 2.5 x 5C	
Piping Connections	Refrigerant Circuit	Gas (outside diameter)	mm (inch)	Ø 15.88 (5/8)	
		Liquid (outside diameter)	mm (inch)	Ø 9.52 (3/8)	
	Water Circuit	Inlet	Inch	Female G 1" according to ISO 228-1 (parallel pipe threads)	
		Outlet	Inch	Female G 1" according to ISO 228-1 (parallel pipe threads)	
	DHW Tank Water Circuit	Cold Inlet	Inch	Female G 3/4" according to ISO 228-1 (parallel pipe threads)	
		Hot Outlet	Inch	Female G 3/4" according to ISO 228-1 (parallel pipe threads)	
		Recirculation	Inch	Female G 3/4" according to ISO 228-1 (parallel pipe threads)	
Wiring Connections	Power and Communication Cable (included earth, H07RN-F)		mm ² x cores	0.75 x 4C	
Sound Power Level	Heating	Rated	dB(A)	43	
Dimensions	Unit	W x H x D	mm	601 x 1,812 x 685	
Weight	Unit		kg	140.0	
Exterior	Color / RAL Code			White / RAL 9002	

1) When fan coil unit not used.
 2) DHW 58-80°C Operating is available only when the booster heater is operating.
 3) The capacity of electric heater can be adjusted by wiring.

Accessory Parts (Optional Accessory)

Buffer Tank for Space Heating



As an optional accessory, the installer can install a standard 40ℓ buffer tank for space heating. Fitting seamlessly into the main casing, it can be attached on the backside of the indoor unit.

Buffer tank for space heating		Unit	OSHB-40KT.AEU
Water Volume		ℓ	40
Dimensions (W x H x D)		mm	518 x 560 x 175
Weight (w/o water)	Product	kg	24

Expansion Vessel for DHW



As an optional accessory, the installer can install a standard 8ℓ DHW expansion vessel that conveniently fits inside the indoor unit. It is provided with an accessory kit that includes a flexible connection tube.

Expansion vessel for DHW		Unit	OSHE-12KT.AEU
Expansion Volume		ℓ	8
Connection		inch	3/4
Max. Pressure		bar	10
Pre-charge		bar	3
Dimensions (W x H x D)		mm	416 x 238 x 502
Weight (w/o water)	Product	kg	2.5

Accessory Parts (Separately Provided)

Shut-off valve (1EA)



Shut-off valve with strainer (1EA)



PRODUCT SPECIFICATION

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HU051MR U44 + HN0916T NB1

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
	TC	TC	TC	TC	TC	TC	TC	TC
-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 + HN0916T NB1

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
	TC	TC	TC	TC	TC	TC	TC	TC
-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	7.00	-
-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 + HN0916T NB1

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
	TC	TC	TC	TC	TC	TC	TC	TC
-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	6.76	-	-
-7°C DB	9.00	9.00	9.00	9.00	9.00	9.00	9.00	-
-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	9.00

Note

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (l/min), TC : Total Capacity (kW)
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.
 - 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.
4. The shaded areas are not guaranteed continuous operation.

Performance Table for Cooling Operation

Maximum Cooling Capacity

HU051MR U44 + HN0916T NB1

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
10°C DB	6.42	6.95	7.49	7.85	8.39	8.75	9.11
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 + HN0916T NB1

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
10°C DB	8.17	8.85	9.54	9.99	10.68	11.13	11.59
20°C DB	7.70	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	6.79	6.81	6.83	6.85	6.87	6.88
45°C DB	6.53	6.58	6.63	6.66	6.70	6.74	6.77

HU091MR U44 + HN0916T NB1

Outdoor Temperature	LWT 7°C	LWT 10°C	LWT 13°C	LWT 15°C	LWT 18°C	LWT 20°C	LWT 22°C
	TC	TC	TC	TC	TC	TC	TC
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	9.30	9.48	9.65	9.77	9.95	10.06	10.18
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

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (l/min), TC : Total Capacity (kW)
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.
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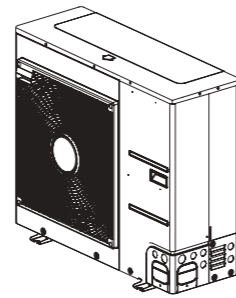
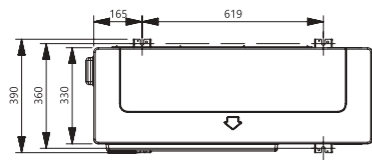
PRODUCT SPECIFICATION

Drawings

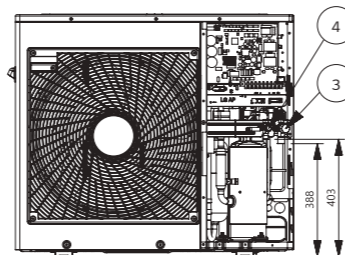
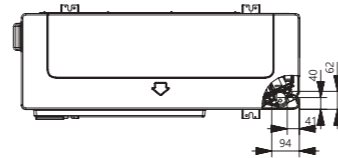
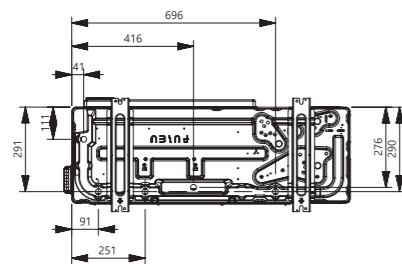
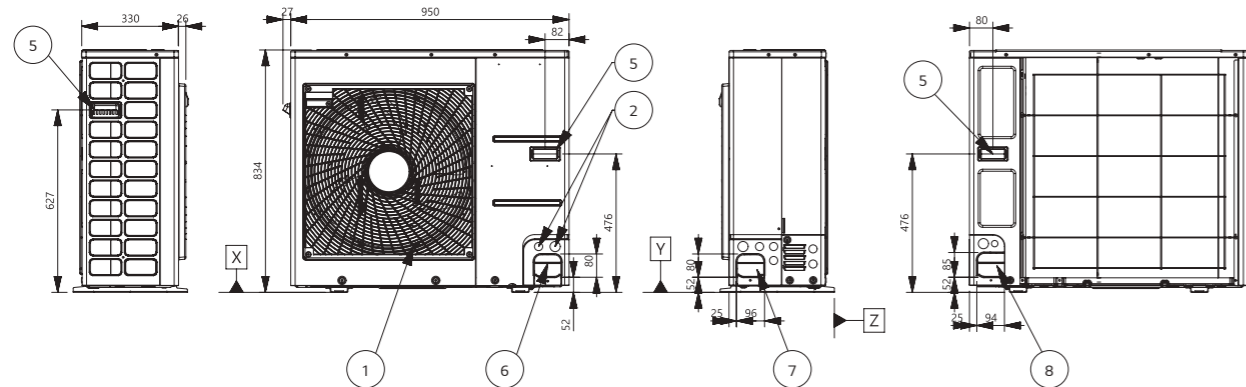
Category	Unit	Model Name		
		Capacity (kW)		
		5.5	7.0	9.0
1 Phase Model 220 - 240V, 1Ø, 50Hz	Outdoor Unit	HU051MR U44	HU071MR U44	HU091MR U44
	Indoor Unit	HN0916T NB1		

HU051MR U44 / HU071MR U44 / HU091MR U44

[Unit : mm]



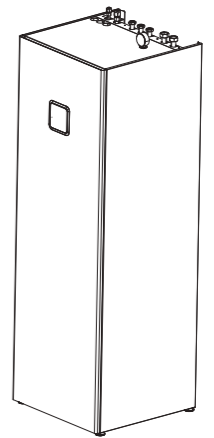
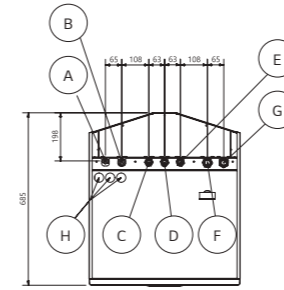
3D View



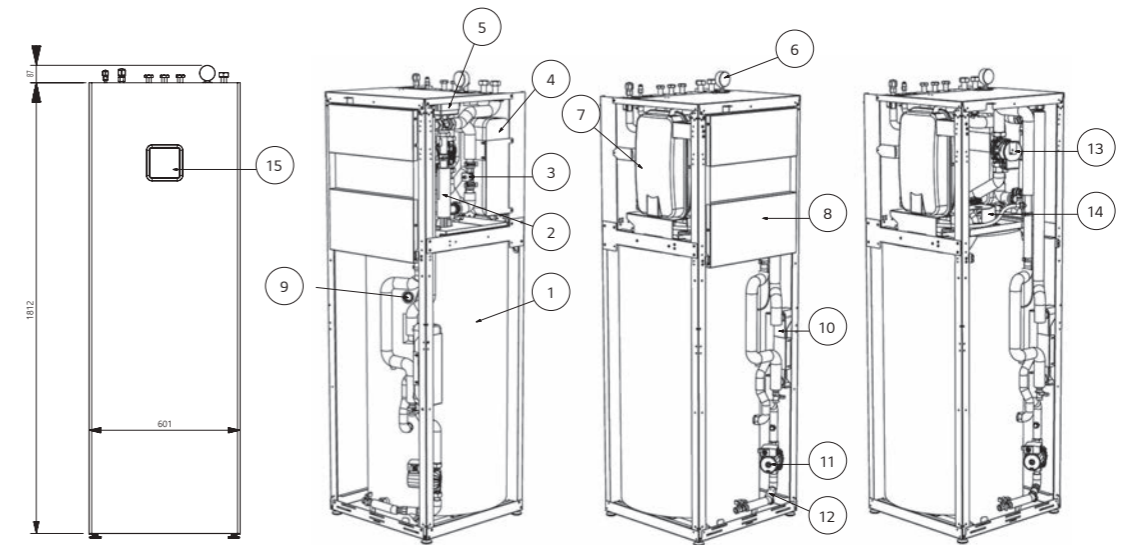
No.	Part Name	Description
1	Air Outlet	-
2	Power and Communication Cable Hole	-
3	Gas Pipe Connection	Flare joint
4	Liquid Pipe Connection	Flare joint
5	Handle	-
6	Pipe Routing Hole (front)	-
7	Pipe Routing Hole (side)	-
8	Pipe Routing Hole (back)	-

HN0916T NB1

[Unit : mm]



3D View



No.	Part Name	Description	No.	Description
1	DHW Tank	Domestic Hot Water Tank (200L)	A	G5/8" Refrigerant Gas Pipe
2	Electric Heater	Max. 6kW	B	G3/8" Refrigerant liquid Pipe
3	Flow Sensor	SIKA VVXC9SNBUC00252P	C	G3/4" Domestic hot water outlet
4	Heat Exchanger	Plate-heat-exchanger (refrigerant/water)	D	G3/4" Domestic cold water inlet
5	3 Way Valve	3 Way valve (DHW/heating)	E	G3/4" DHW Re-circulation
6	Pressure Gauge	Pressure gauge	F	G1" Heating circuit inlet
7	Expansion Vessel (12L)	Expansion vessel for Heating	G	G1" Heating circuit outlet
8	Control Box	PCB and terminal blocks	H	Cable lead throughs
9	Magnesium Anode	To prevent corrosion		
10	Heat Exchanger	Plate-heat-exchanger (water/DHW)		
11	DHW Water Pump	WILO ZRS 15/6-3 KU		
12	DHW Strainer	Filtering and stacking particles		
13	Main Water Pump	WILO Para KU 25-130/8-75/12 iPWM1		
14	Bracket	For DHW Expansion vessel (accessory)		
15	Remote Controller	Built-in remote controller		