

TCL

R290

Tri-thermal ATW Heat Pump



3-Zone
Temp. Control



Ultra
Low Noise



Max.LWT
80°C



Six-stage
Anti-freeze
Protection



Energy
Saving



OTA+IOT
Platform



VERSATILITY

Professional one-stop green energy solution

Tri-thermal is an integrated system that provides space heating and cooling as well as domestic hot water, offering a complete, all-year-round solution which can replace the need for traditional gas or oil boilers, or work together with them.



Diversified Heating



Domestic Hot Water



Compact Fan Coil Unit Cooling



Solar Kit



Auxiliary Heat Source

COMFORT

3-Zone Temp. Control

Ensure different space working at perfect temp.
Meet the needs of different age groups. Always hits the mark for comfort of your family.



Comfort Temp. for **Children**



Comfort Temp. for **Adults**



Comfort Temp. for **the aged**

Max.LWT 80°C

Cover more than 98% European heating scenarios, especially for old building heating.



Poor insulation



Low-efficient radiator



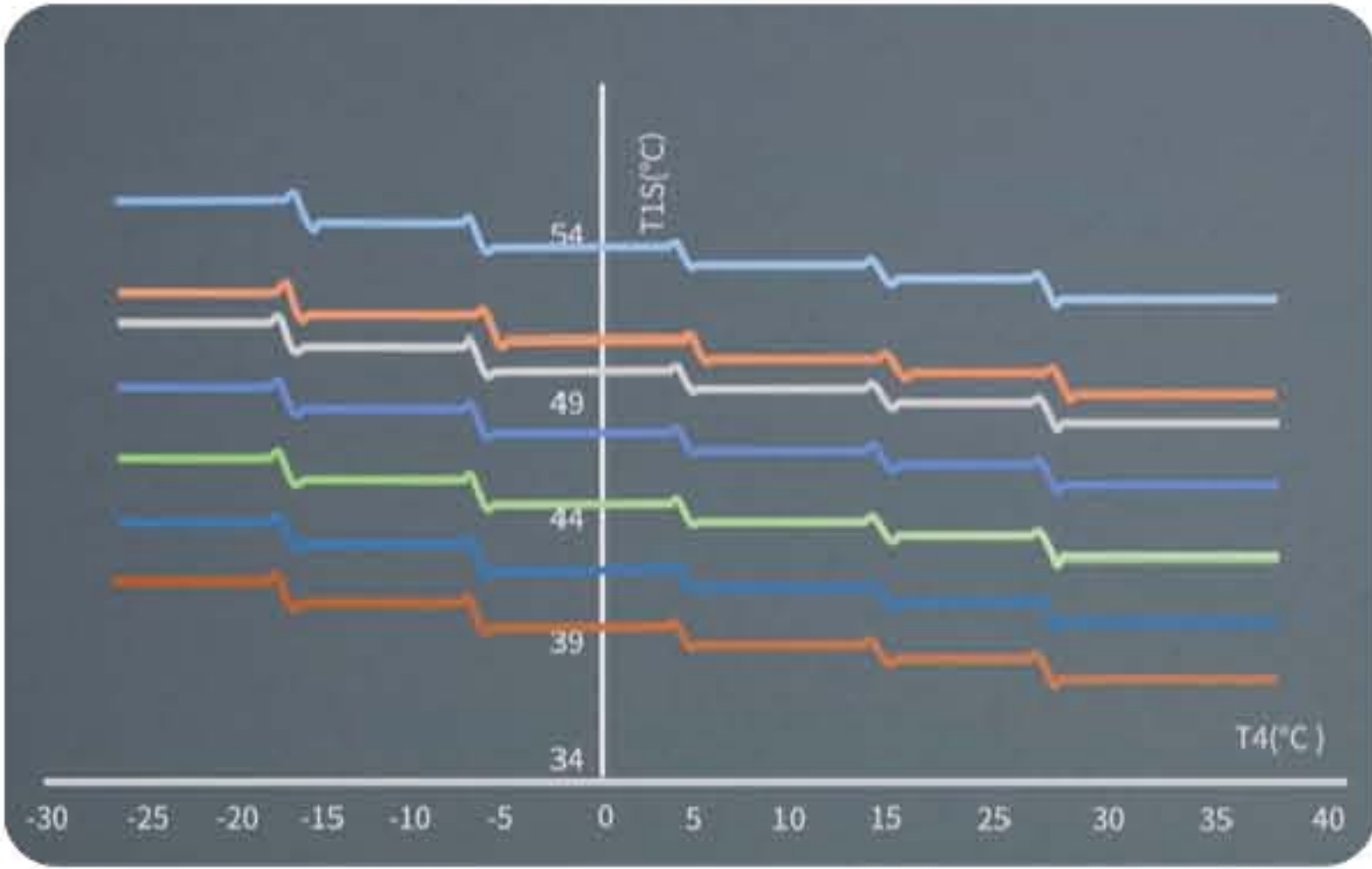
Boiler replacement

Climate curves

8-pre set +1 self-defined temperature curves, flexible adaptation to operating conditions in different climate.

Outdoor

Home





PV Panel

Zone 3
45°C
*Water Temp.

Fan coil unit

DHW

Zone 2
35°C
*Water Temp.

Floor Heating

Tri-thermal

Radiator

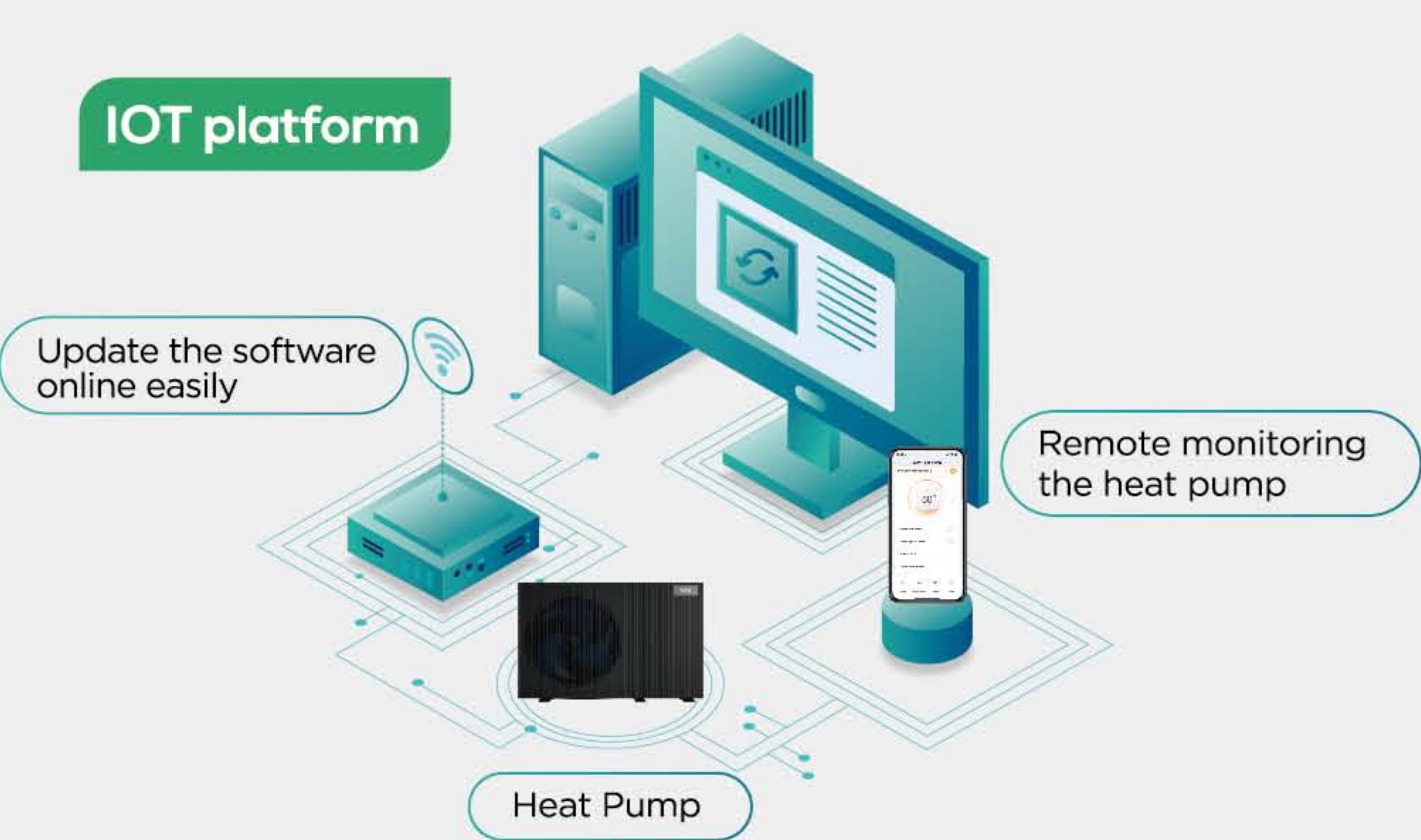
Zone 1
50°C
*Water Temp.



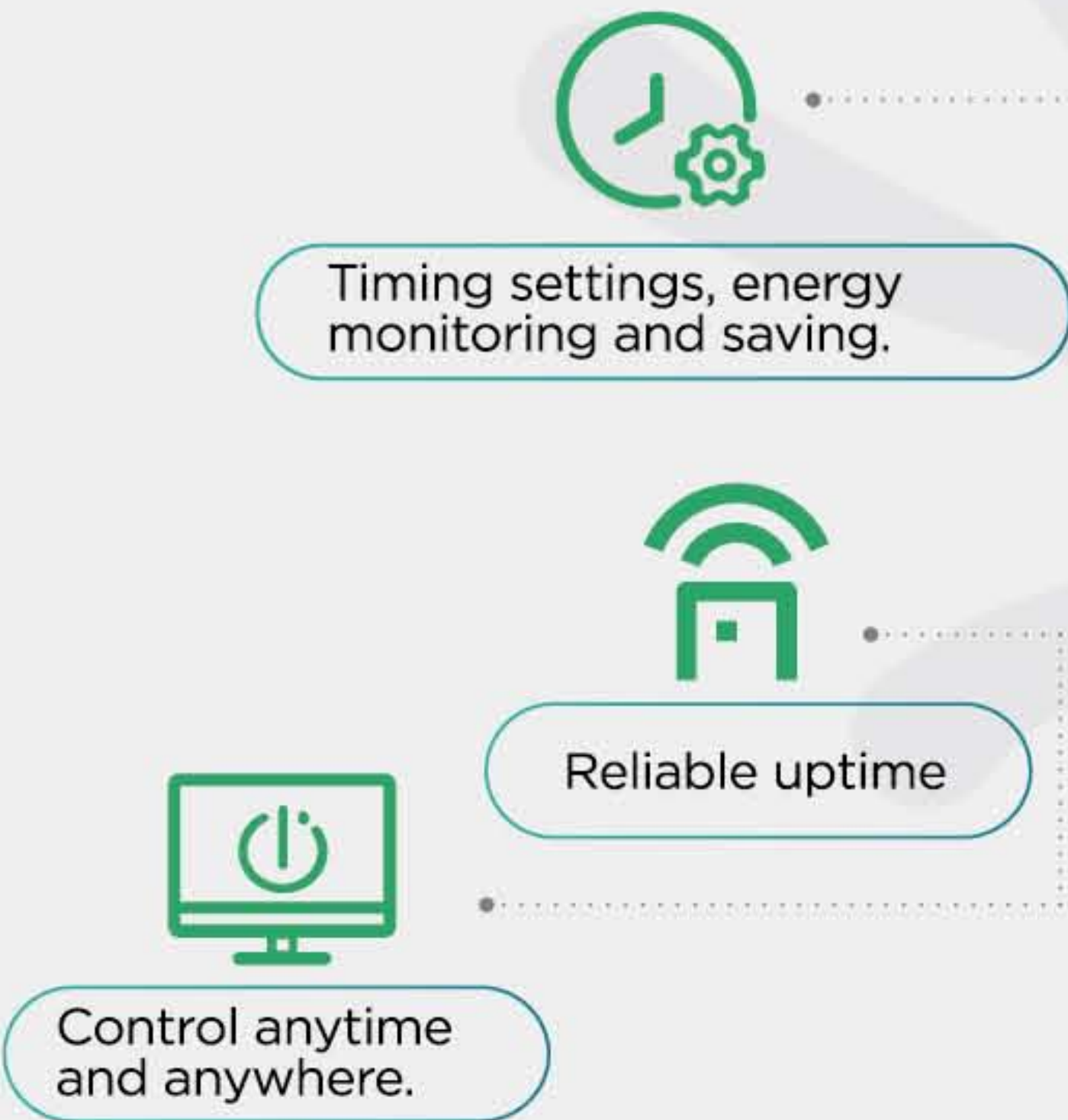
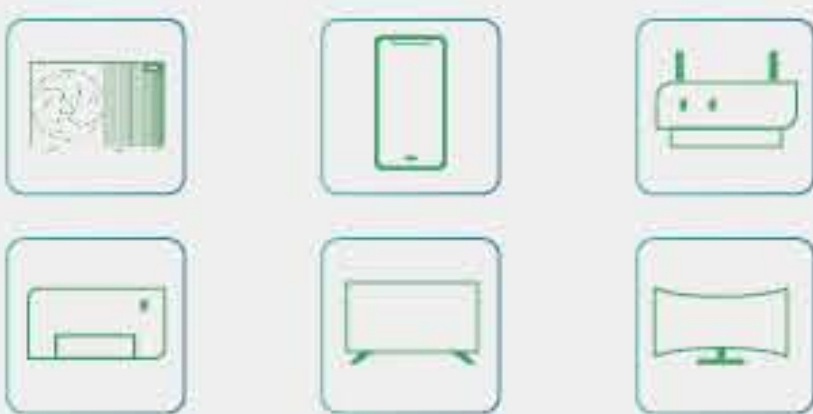
SILENT OPERATION



INTELLIGENT



TCL HOME

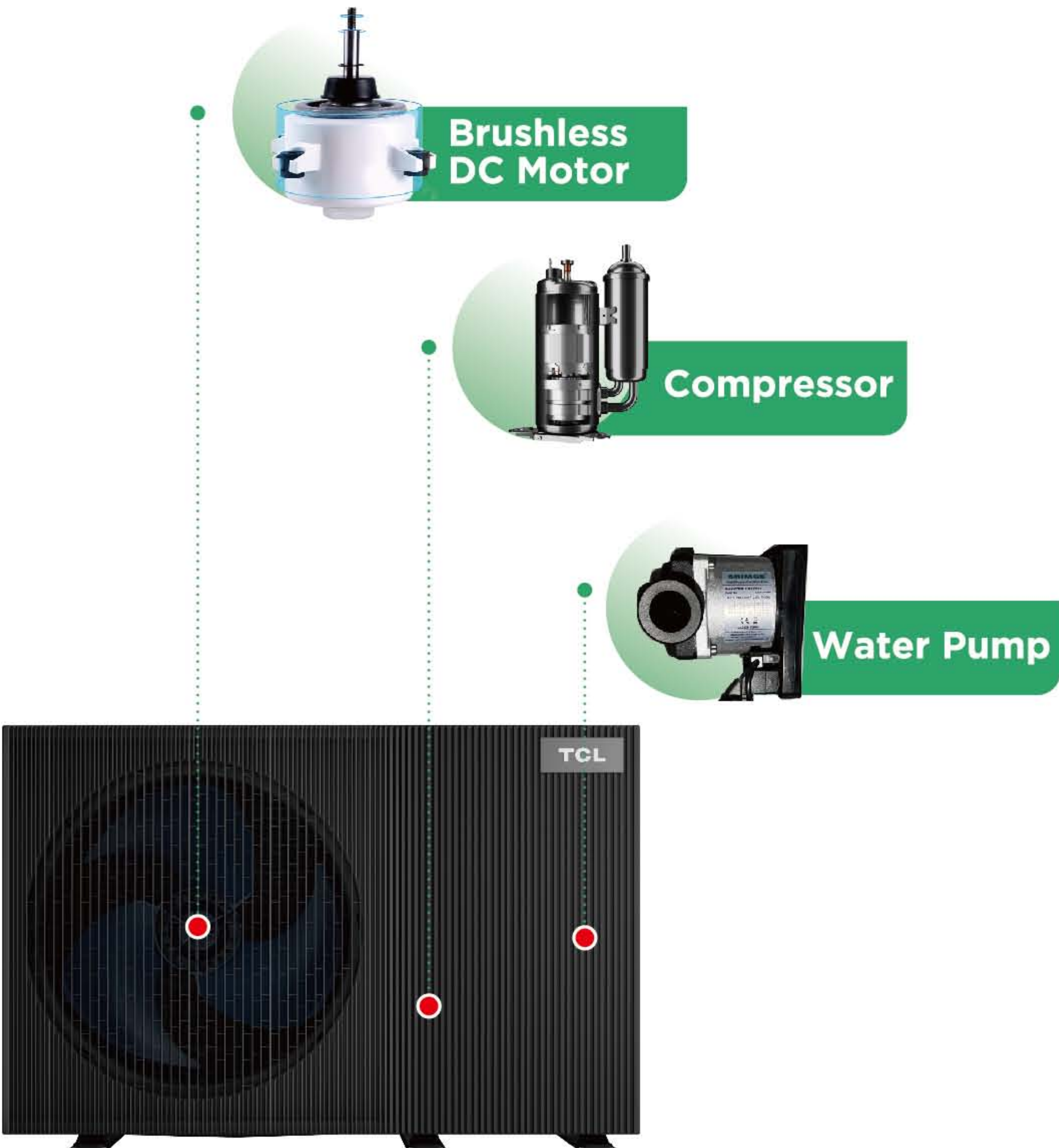


HIGH-EFFICIENT AND ENERGY SAVING

R290

DC inverter system

Tri-thermal adopts all DC inverter components and integrates high-efficient R290 environmental refrigerant, which not only ensures efficient and stable operation of the heat pump but also perfectly meets the dynamic load demand of various buildings through precise control of the output, and achieves maximum energy utilization.



Eco-friendly
R290
refrigerant

R290, natural composition derived from propane, which meets the latest EU standards. It boasts an exceptional thermodynamic performance, enabling heat pump to operate with remarkable energy savings. Its low GWP and zero ODP make it a sustainable choice for a greener future.

Environmental Protection

Energy Efficiency

GWP=3
Minimal impact on global warming

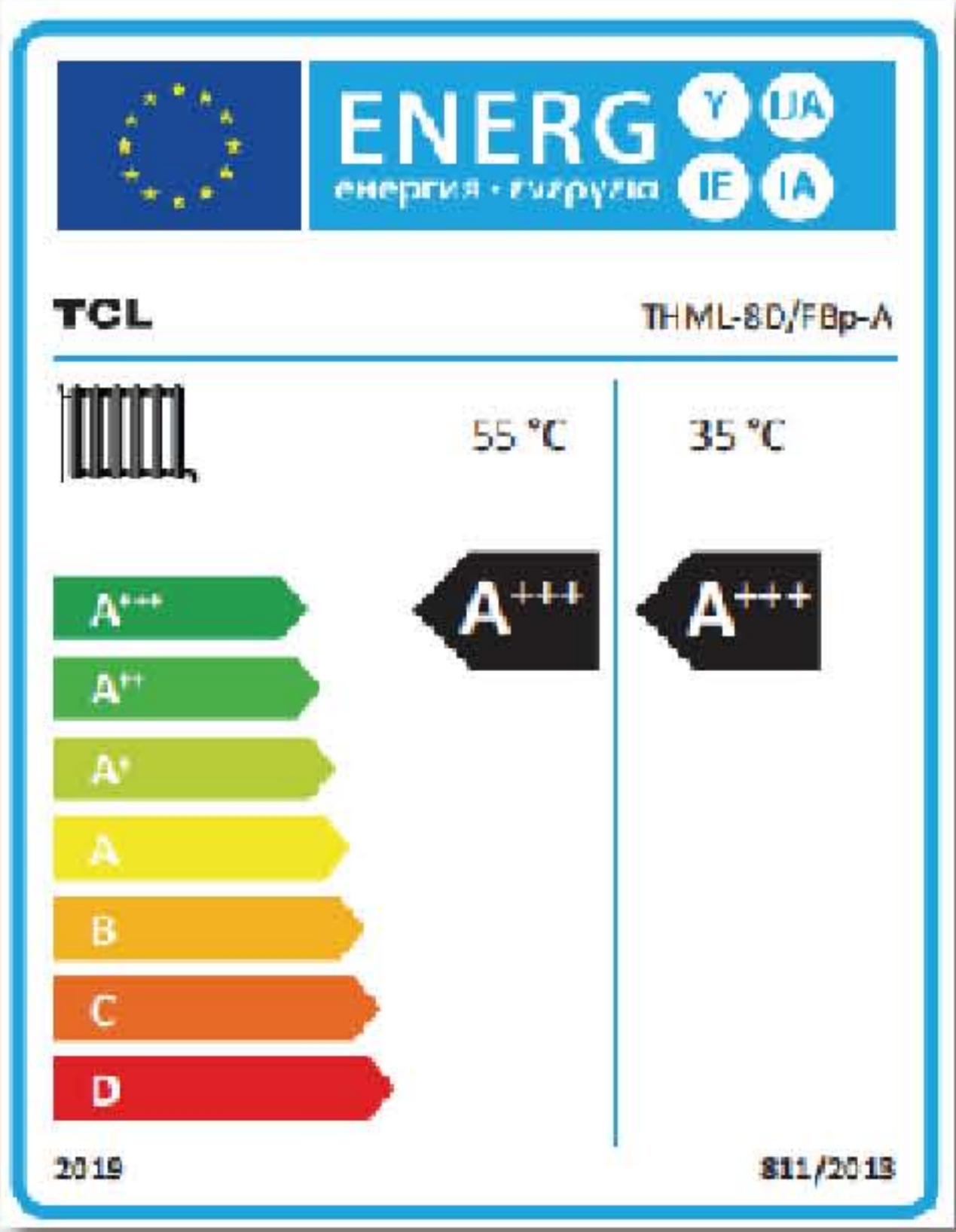
ODP=0
Neutral for the ozone layer

SCOP up to
5.33

HIGHEST ENERGY LEVEL

A+++

With all DC inverter components and integrates high-efficient R290 environmental refrigerant, TCL heat pump amplifies energy and provide longer heating and stable indoor warmth.



Minimum
-25°C
Outdoor



Smart switching based on economical efficiency

Users can set electricity and gas price by themselves, the heat pump unit automatically calculates energy usage cost, and intelligently switches to the most efficient energy mode.

SG Ready



Tri-thermal is equipped with Smart Grid control logic, smartly using the fluctuation of electricity price signal from the grid and automatically optimizes the operation strategy to maximize the economy of system operation and achieves the perfect balance between cost efficiency and energy utilization.

Extremely
sufficient electricity



Sufficient
electricity



Normal
electricity



Insufficient
electricity



RELIABLE

Six-stage anti-freeze protection

Heat pumps automatically perform heating actions of different anti-freeze levels according to ambient and water temperatures to ensure the safety of the water system.



Heat Pump
E-heater



Water Pump



Compressor



Expansion Vessel
E-heater



Plate Heat
Exchanger
E-heater



Chassis
E-heater

Component explosion-proof design

Fuse, capacitor, varistor adopt an explosion-proof design to prevent fire hazards from the root, ensuring the safe and reliable operation of heat pumps.





PARAMETERS

Model name			HB08SP0	HB10SP0	HB12SP0	HB14SP0	HB16SP0	HB12TP0	HB14TP0	HB16TP0
Power supply	V/Ph/Hz		220- 240/1/50	220- 240/1/50	220-240/1/50	220- 240/1/50	220- 240/1/50	380- 415/3/50	380- 415/3/50	380- 415/3/50
Heating A7W35	Capacity	kW	8.00	9.50	12.00	14.50	15.00	12.00	14.50	15.00
	Rated input	kW	1.60	2.07	2.50	3.08	3.49	2.50	3.08	3.49
	COP		5.00	4.60	4.80	4.71	4.30	4.80	4.71	4.30
Heating A7W45	Capacity	kW	8.00	9.50	12.00	14.25	15.00	12.00	14.25	15.00
	Rated input	kW	2.13	2.59	3.00	3.58	4.17	3.00	3.58	4.17
	COP		3.76	3.68	4.00	3.98	3.60	4.00	3.98	3.60
Heating A7W55	Capacity	kW	8.00	9.50	12.00	14.00	15.00	12.00	14.00	15.00
	Rated input	kW	2.50	3.06	3.76	4.31	5.17	3.76	4.31	5.17
	COP		3.20	3.10	3.19	3.25	2.90	3.19	3.25	2.90
Cooling A35W18	Capacity	kW	8.30	10.00	12.00	13.50	16.00	12.00	13.50	16.00
	Rated input	kW	1.66	2.17	2.65	3.63	4.32	2.65	3.63	4.32
	EER		5.00	4.60	4.53	3.72	3.70	4.53	3.72	3.70
Cooling A35W7	Capacity	kW	7.20	8.80	11.60	12.95	14.00	11.60	12.95	14.00
	Rated input	kW	2.18	2.84	3.85	5.02	5.38	3.85	5.02	5.38
	EER		3.30	3.10	3.01	2.58	2.60	3.01	2.58	2.60
Seasonal space heating energy efficiency class ²	LWT at 35°C		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55°C		A+++	A+++	A++	A++	A++	A++	A++	A++
	Type		R290	R290	R290	R290	R290	R290	R290	R290
Refrigerant		Factory charge kg	110	110	125	125	125	125	125	125
Sound power Level ³	dB		60	61	64	66	69	64	66	69
Sound pressure level ⁴	dB		48	49	51	53	56	51	53	56
Net dimensions (W×H×D)	mm		1293×860×523	1293×860×523	1293×860×523	1293×860×523	1293×860×523	1293×860×523	1293×860×523	1293×860×523
Packing dimension (W×H×D)	mm		1395×996×550	1395×996×550	1395×996×550	1395×996×550	1395×996×550	1395×996×550	1395×996×550	1395×996×550
Net/Gross weight	kg		99.5/120.5	99.5/120.5	113/134	113/134	113/134	125/146	125/146	125/146
Piping connections			R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"
Electric heater(Optional) power input	kW		3	3	3	3	3	6/9	6/9	6/9
Ambient temperature	Cooling	°C	-5~46	-5~46	-5~46	-5~46	-5~46	-5~46	-5~46	-5~46
	Heating	°C	-25~35	-25~35	-25~35	-25~35	-25~35	-25~35	-25~35	-25~35
	DHW	°C	-25~43	-25~43	-25~43	-25~43	-25~43	-25~43	-25~43	-25~43
Water setting temperature	Cooling	°C	5~20	5~20	5~20	5~20	5~20	5~20	5~20	5~20
	Heating	°C	25~80	25~80	25~80	25~80	25~80	25~80	25~80	25~80
	DHW	°C	20~70	20~70	20~70	20~70	20~70	20~70	20~70	20~70

Notes:

1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013
2. Seasonal space heating energy efficiency class tests in average climate conditions.
3. Sound power test condition: EN12102- 1
4. Sound pressure level is the maximum value tested under the two conditions of A7W35 and A35W18.
5. The data for 14/16kW models are draft version

TCL



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