

TCL R290 Tri-thermal Ultra AI

A New Generation of High Efficient Heat Pump

A+++

strong heating
at -10°C



3m 28dB(A)



4-stage safety
protection



7-inch touch
color screen





Model	4kW	6kW	8kW	10kW	12kW	14kW	16kW
220~240V 1N~ 50Hz	•	•	•	•	•	•	•
380~415V 3N~ 50Hz			•	•	•	•	•
Integrated electric heater	3kW for single phase model 6kW/9kW for three phase model						
Operation range	Ambient temperature Cooling Heating DHW Water setting temperature -5°C46°C 5°C20°C -25°C35°C 25°C80°C -25°C43°C 20°C70°C						
Certification	CE, Erp, Rohs, Keymark						

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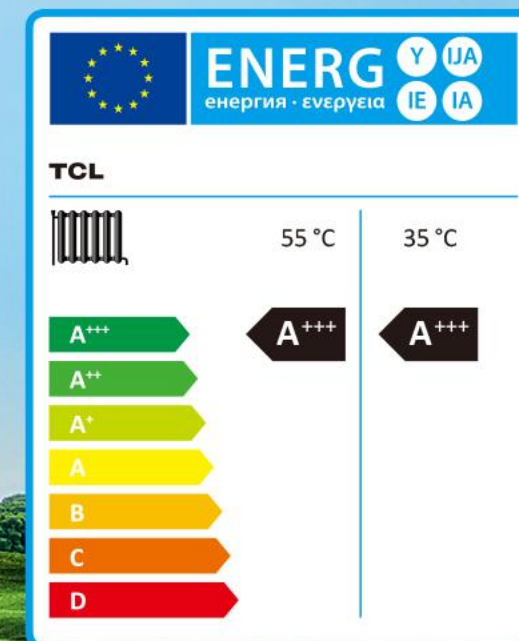
5 New Advantages

- High Efficiency
- Powerful Performance
- Ultimate Safety
- Super Quiet
- Easy Maintenance

High Efficiency

Energy Class

The entire product series (4-16kW)
achieves double A+++



Powerful performance

HP Compressor

100%
heating capacity
at -10°C

80°C
LWT
at -10°C

Displacement

12% Max

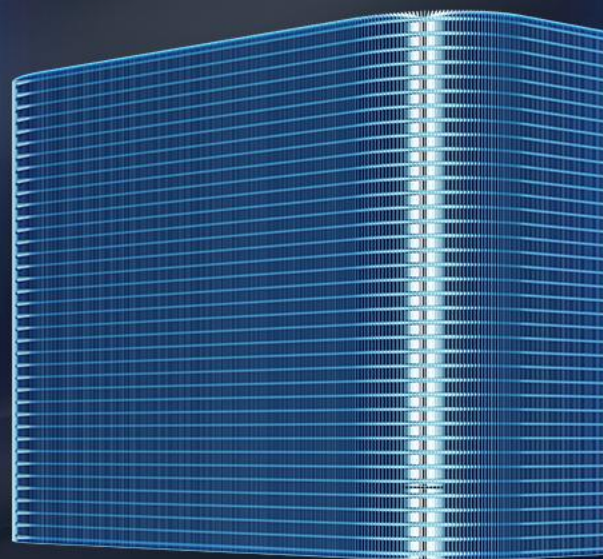


Heat Exchange Area

Reliable defrosting and low-temperature capability assured

Heat exchange area

39%

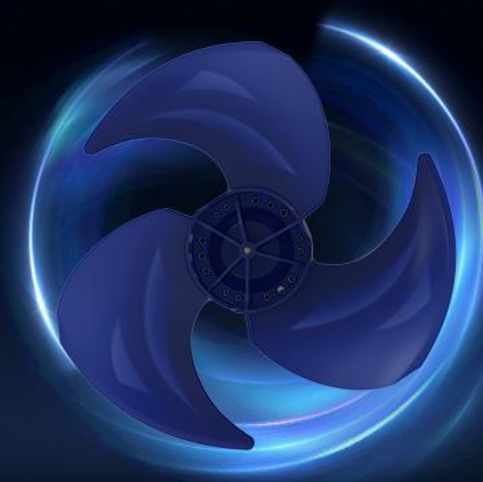


Fan Blade

Large fan blades, large airflow volume

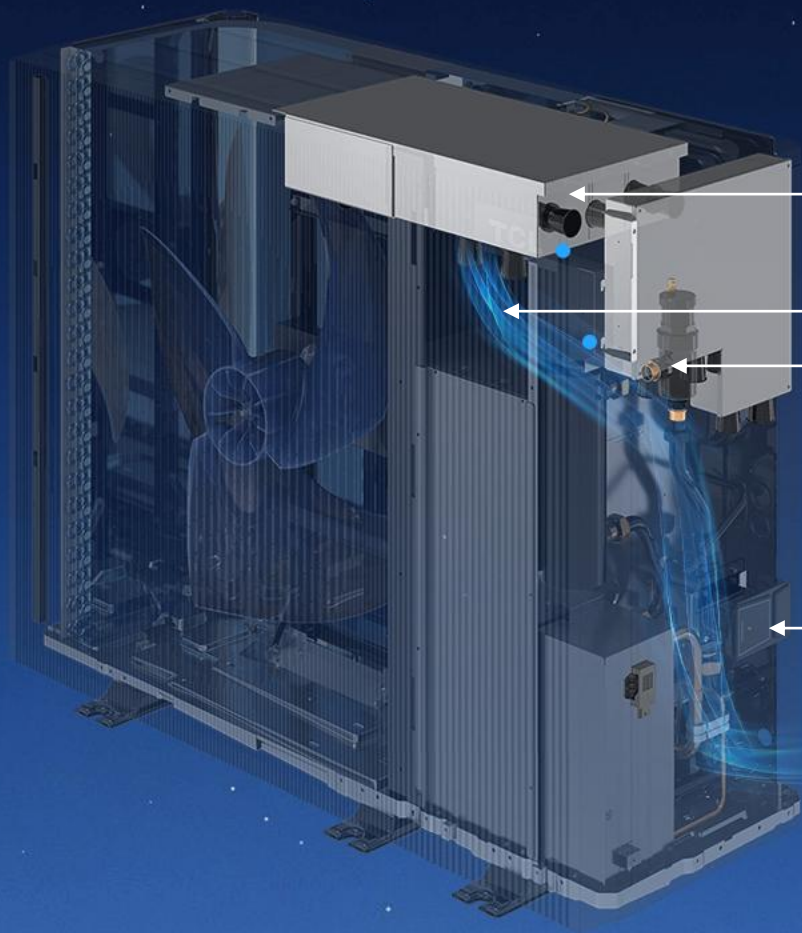
600→700mm
Diameter

17%



Ultimate Safety

Four-layer safety protection, make a promise of refrigerant safety to you.



Refrigerant-gas separator

Extracts R290 from water, preventing it from entering the indoor via water circuit.



Sealed e-box

Prevent R290 from entering the electric control box.



Gas leakage sensor

Automatically triggers the fan to ventilate the area, preventing the accumulation of flammable gas clouds.

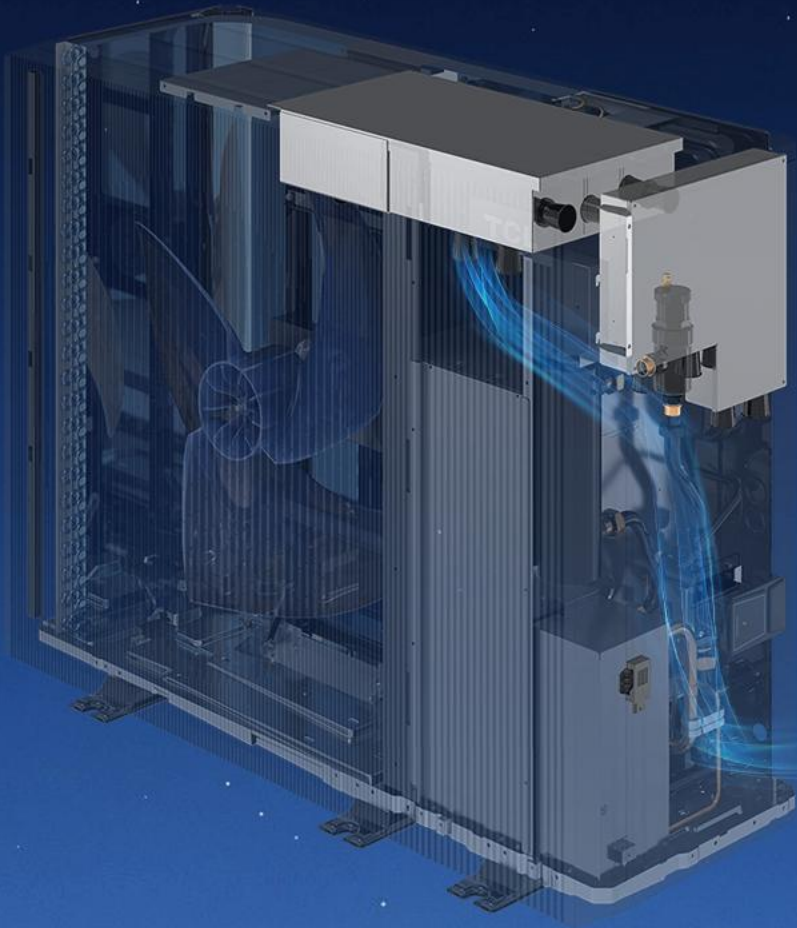


Ventilation channel

R290 can be quickly vented to the outside through the special ventilation channel.

Ultimate Safety

Four-layer safety protection, make a promise of refrigerant safety to you.



Brand	TCL New	Midea	AXEN	AUX	Hisense	Daikin	LG	Viessmann	TCL
Safe	Refrigerant sensor + Refrigerant-gas separator(Optional) + Enclosed e-box	x	x	x	x	•	x	x	•
	Pump anti-corrosion	x							•

Super Quiet

3m Distance **28dB* SPL** *Available for 8kW

↓ **9dB Max**

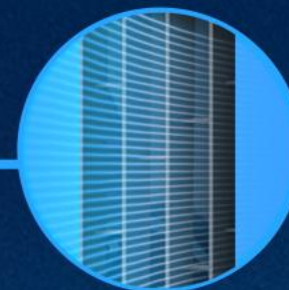
Shielding Compressor Cabinet

Reduce the noise generated by the compressor.



CFD Spiral Grill

Spiral design for quieter airflow.



Vibration Damping

- Flexible pipes
- 2-Stages compressor vibration isolation design



Bionic Fan Blades

Optimize blade shapes and angles, reducing vortex noise.



Easy Maintenance

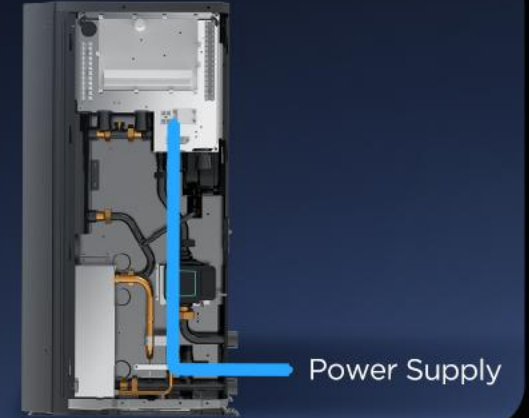
Easy Disassembly Design

- 4 Screws to access the wiring & installation
- 4 Screws to access PCB



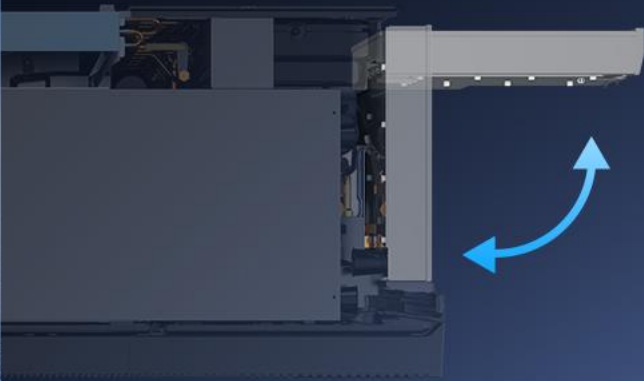
Back in & Side Wiring

Wiring is more convenient and time-saving.



Rotated E-Box

No need to disassemble E-Box, more easy for maintenance



Flow Switch

Electric Heater

Plate Heater Exchanger

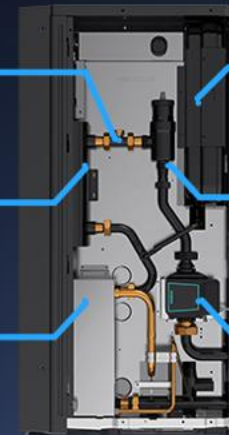
Expansion Vessel

Gas Separator

Water Pump

Accessible Design

All water parts are at the side, installation & maintenance are easier.



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AI-Powered Smart Management

- AI Hot Water
- AI Temp. Control
- 7" Smart Touch Controller
- App Control
- IOT Service Platform

AI-Powered Smart Management

AI hot water

AI Mode learns your preferences!

Within 3 days, it knows your favorite temperatures and adjusts automatically-no more manual changes.

Smart Learning



AI-Powered Smart Management

AI Temp. Control



Convenience & Intelligence

- Auto-adjusts temp to real-time ambient conditions — no manual tweaks, just effortless, worry-free heating.
- Learns historical data to predict & adjust daily temp when offline, keeping home comfort consistent at all times.

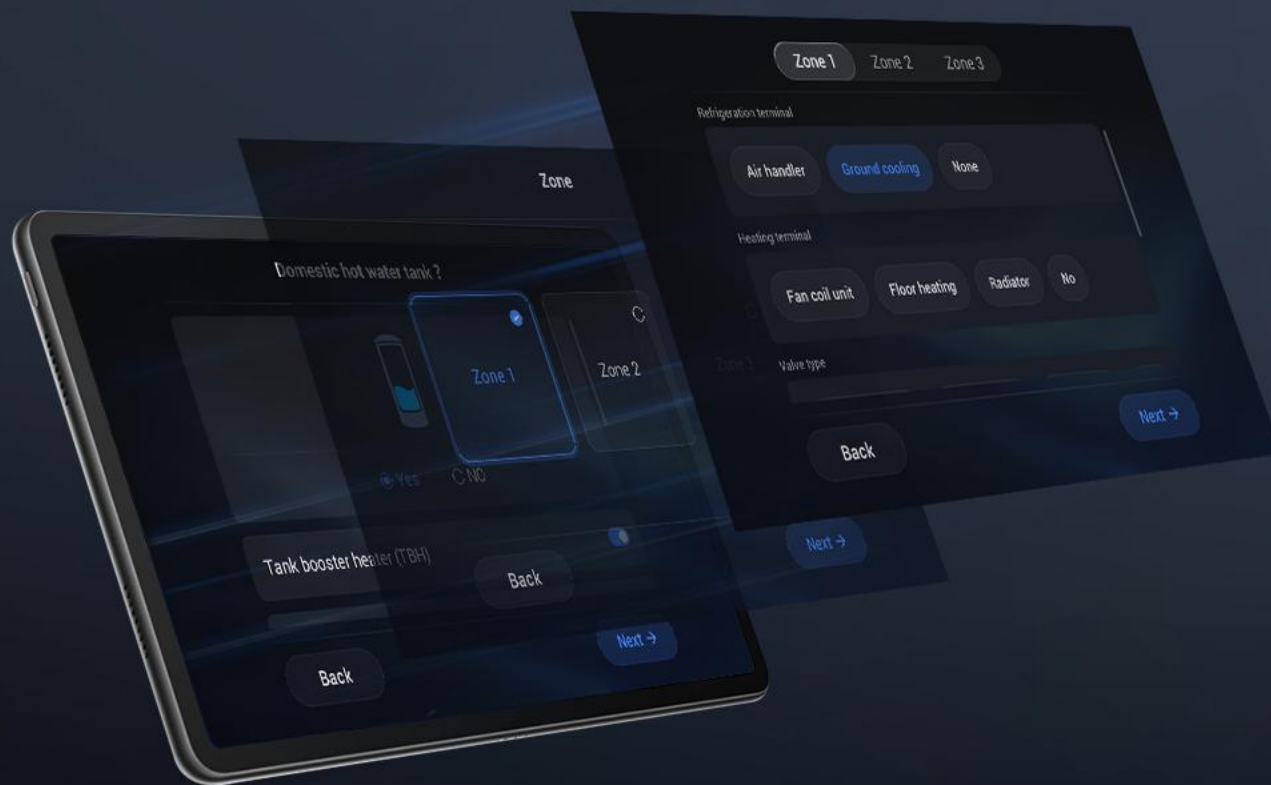


Energy Efficiency & Comfort

- Precise water temp adjustment to match real needs — no discomfort or wasted energy from wrong manual settings.

AI-Powered Smart Management

7" Smart Touch Controller



Guiding Setting & Commissioning



Upgrade user experience with a vibrant 7-inch color display



Touchscreen, effortless control at your fingertips



Quick commission, without complex setup progress and long setup times



Intuitive interface, user-friendly design for everyone



Built-in wifi module, easy to connect with APP, without any other kit installation

AI-Powered Smart Management

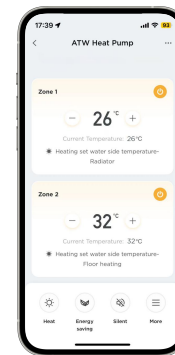
**OTA +USB
Update**



AI-Powered Smart Management

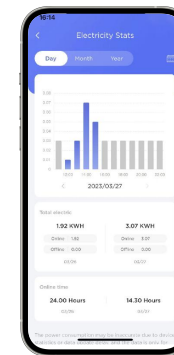
App Control

Always in control
at your fingers



Control

- On/off operation and change modes
- Change room and hot water temperatures



Monitor

- System status
- Power consumption data

AI-Powered Smart Management



Remote monitoring and debugging

Keep an eye on your devices in real-time.



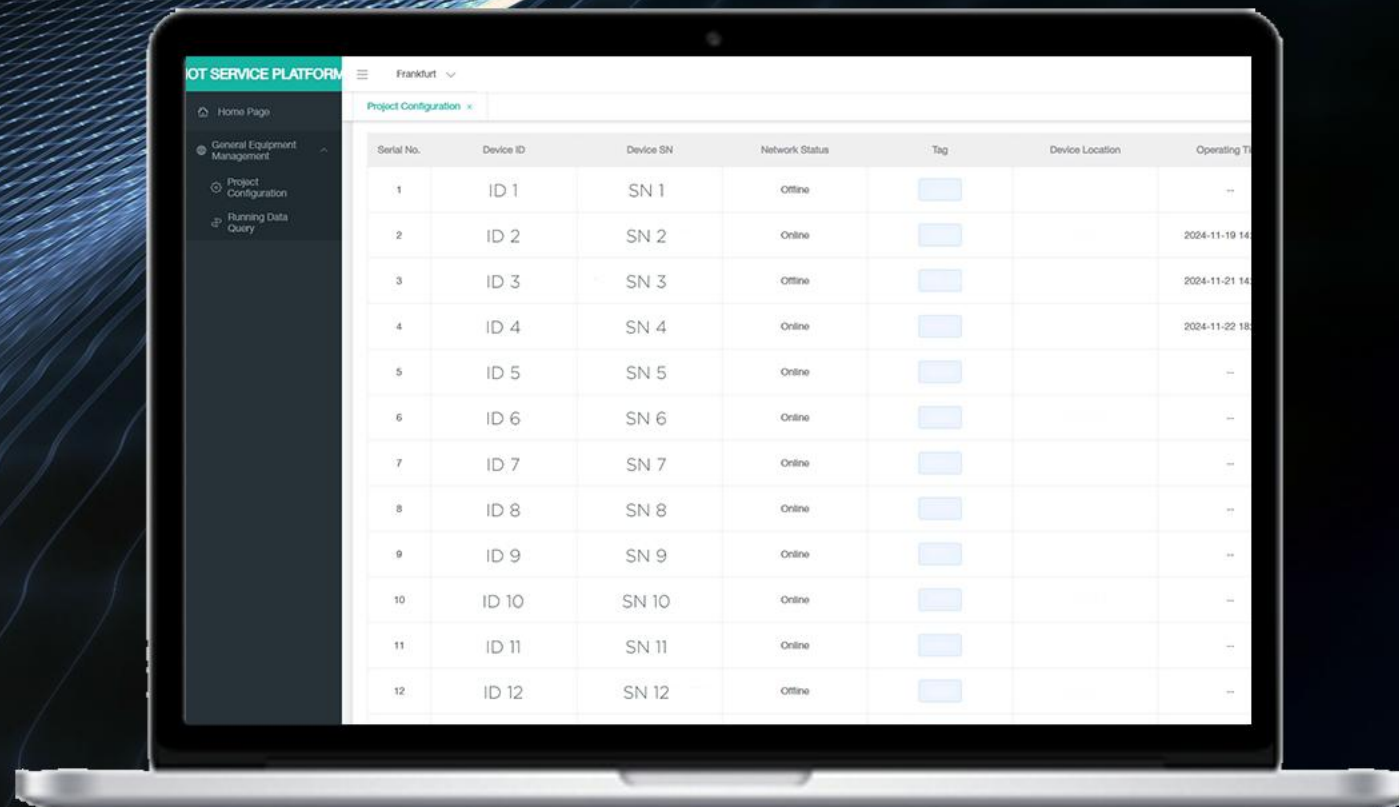
Device information query

Get all the details and historical data you need.



Check the faults in advance

No need to make multiple trips for repairs.

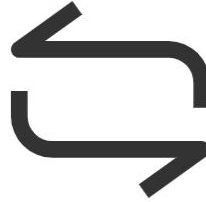


**IOT Service platform
remote monitor and control for quick after-sales**

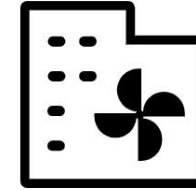
AI-Powered Smart Management



**Intelligent
commissioning**



**Intelligent
heat source
management**



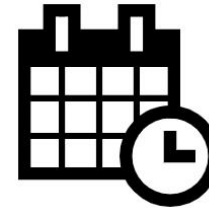
**Energy
management
system**



**Intelligent
defrosting**



SG Ready



**Human-centric
schedule**



**Automatic
anti-freezing
protection**

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03

More Features

- Renewable energy system
- 2-Zone Temp + Swimming Pool Water Temp
- 3-Zone Independent Temp. Control
- Cascade System

Renewable energy system

Can be connected with energy storage and PV panel.



Affordable



Stable



Clean



Intelligent

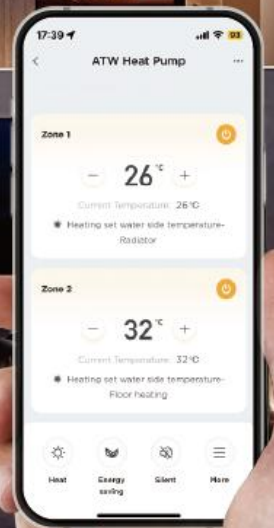
Maximising home comfort



**2-Zone Temp +
Swimming Pool
Water Temp**

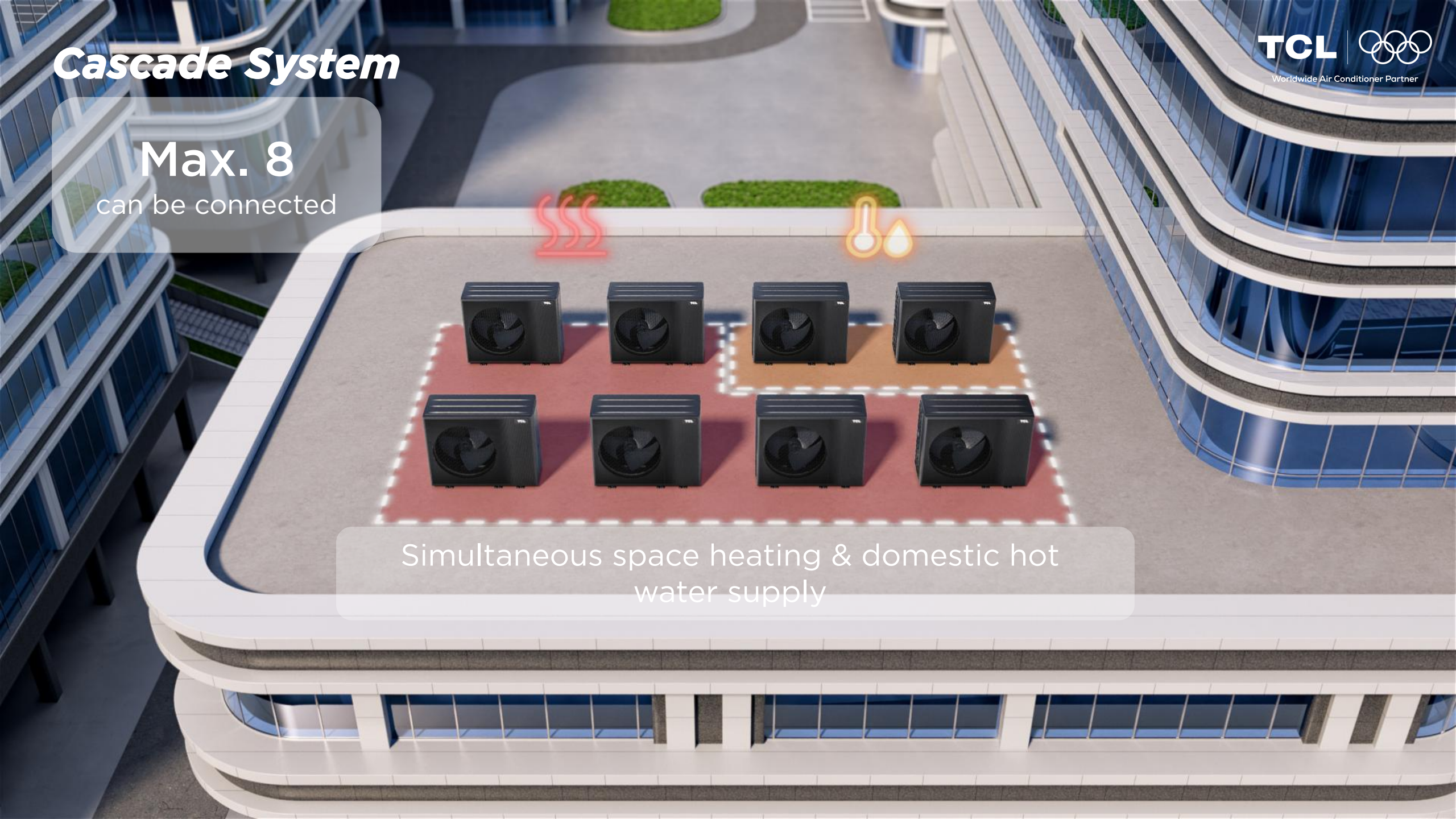


**3-Zone Independent
Temp. Control**



Cascade System

Max. 8
can be connected



The diagram shows a rooftop installation of eight black outdoor air conditioning units arranged in two rows of four. A red dashed line outlines a rectangular area containing six units, while an orange dashed line outlines a smaller rectangular area containing two units. Above the units, there are red wavy lines representing heat and a yellow thermometer icon with a flame, indicating heating functionality. The rooftop is surrounded by modern buildings with blue glass facades.

Simultaneous space heating & domestic hot water supply

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Comparison

Comparison

Brand		TCL New	Midea Nature	AXEN ULTRA	AUX AI 290 thermal	LG THERMA V
Model		16kW	16kW	16kW(Double fan)	16kW	16kW
A7W35 Capacity(kW)		16	15.5	16.1	15.1	16
A7W35 COP		4.75	4.5	4.75	4.5	4.3
A-7W35 Capacity(kW)		13.1	13.1	/	/	13.8
A-7W35 COP		2.75	2.7	/	/	3.17
A35W18 Capacity(kW)		16	15	16	16	12.5
A35W18 EER		4.42	4.25	4.49	3.9	3.7
SCOP-35°C		A+++	A+++	A+++	A+++	A+++
SCOP-55°C		A+++	A+++	A+++	A+++	A+++
Sound power(dB(A))		58	59	65	65	52
3m Sound pressure(dB(A))		28(8kW)/30(16kW)	30(8kW)/39(16kW)	/	35	35
Ambient temperature range(°C)	Heating	-25-35	-25-35	-25-35	-25-35	-28-35
	DHW	-25-46	-25-46	-25-43	-25-43	-28-35
	Cooling	-5-46	-5-46	-5-43	-5-43	5-48
LWT range(°C)	Heating	25-80	25-80	75	25-80	15-75
	DHW	20-70	20-70	/	30-75	15-80
	Cooling	5-20	5-20	/	5-25	5-27
Net size(W*H*D)(mm)		1320*1060*516	1330*1051* 475	1155*1365*419	1280*1040*420	1560*1019*520

Comparison

Brand	TCL New	Midea	AXEN	AUX	Hisense	Daikin	LG	Viessmann	TCL
Performance	A-10W80	•	×	•	×	•		×	•
	100% heating capacity at A-10	×	•	×	×	•			•
Safe	Refrigerant sensor + Refrigerant-gas separator(Optional) + Enclosed e-box	×	×	×	×	•	×	×	•
	Pump anti-corrosion	×							•
Function	IOT commissioning(All parameters)	•		•	•	•			•
	Step guide	×				•			•
	7 inch color screen	×	×	×	×	×	×	•	•
	Pool application	×							•
	Heating linear curve	•				•			•
	Copy controller setting by USB	•			•				•
	Number of DHW units can be defined for cascade	×							•
	Floor cooling	•				•		×	•

