

Cascade system control

Maximum 8 units can be combined to reach maximum 128kw



Mono product parameters



Model name			THMLd-4D/3FBp-A	THMLd-6D/3FBp-A	THMLd-8D/3FBp-A	THMLd-10D/3FBp-A	THMLd-12D/3FBp-A	THMLd-14D/3FBp-A	THMLd-16D/3FBp-A	THMLd-12S/9(6)FBp-A	THMLd-14S/9(6)FBp-A	THMLd-16S/9(6)FBp-A
Power supply		V/Ph/Hz	220-240/1/50			220-240/1/50			380-415/3/50			
Heating A7W35	Capacity	kW	4.20	6.20	8.00	9.50	12.00	14.00	15.00	12.00	14.00	15.00
	Rated input	kW	0.83	1.27	1.60	2.07	2.50	3.05	3.40	2.50	3.05	3.40
	COP		5.09	4.90	5.00	4.60	4.80	4.59	4.41	4.80	4.59	4.41
Heating A7W45	Capacity	kW	4.30	6.20	8.00	9.50	12.00	14.00	15.00	12.00	14.00	15.00
	Rated input	kW	1.10	1.63	2.13	2.59	3.00	3.60	4.30	3.00	3.60	4.30
	COP		3.90	3.80	3.76	3.68	4.00	3.89	3.49	4.00	3.89	3.49
Heating A7W55	Capacity	kW	4.40	6.00	8.00	9.50	12.00	14.00	15.00	12.00	14.00	15.00
	Rated input	kW	1.40	1.94	2.50	3.06	3.76	4.52	5.20	3.76	4.52	5.20
	COP		3.15	3.10	3.20	3.10	3.19	3.10	2.88	3.19	3.10	2.88
Cooling A35W18	Capacity	kW	4.50	6.00	8.30	10.00	12.00	14.00	16.00	12.00	14.00	16.00
	Rated input	kW	0.90	1.34	1.66	2.17	2.65	3.30	4.20	2.65	3.30	4.20
	EER		5.00	4.49	5.00	4.60	4.53	4.24	3.81	4.53	4.24	3.81
Cooling A35W7	Capacity	kW	4.50	6.00	7.20	8.80	11.60	12.95	14.00	11.60	12.95	14.00
	Rated input	kW	1.32	2.00	2.18	2.84	3.85	4.55	5.20	3.85	4.55	5.20
	EER		3.40	3.00	3.30	3.10	3.01	2.85	2.69	3.01	2.85	2.69
SCOP ²	LWT at 35℃		5.03	4.85	5.33	4.83	4.75	4.63	4.53	4.74	4.65	4.52
	LWT at 55℃		3.81	3.77	3.88	3.85	3.78	3.73	3.68	3.78	3.73	3.66
Seasonal space heating energy efficiency class ³	LWT at 35℃		A+++									
	LWT at 55℃		A++	A++	A+++	A+++	A++	A++	A++	A++	A++	A++
Electric heater power input		kW	3						9(6)			
Compressor	Type		Twin rotary DC inverter									
Outdoor fan	Motor type		Brushless DC motor									
	Number of fans		1									
Throttle type			Electronic expansion valve									
Air side heat exchanger	Type		Finned tube									
Water side heat exchanger	Type		Plate type									
Refrigerant	Type		R290									
	Factory charge	kg	0.74	0.74	1.10	1.10	1.25	1.25	1.25	1.25	1.25	1.25
Sound power level ¹		dB	56	59	60	61	64	66	68	64	66	68
Sound pressure level ⁴		dB	44	46	48	49	51	53	55	51	53	55
Net dimensions (W×H×D)		mm	1220×709×390 1293×860×495 / 1293×860×523 (New appearance)									
Packing dimension (W×H×D)		mm	1315×840×430 1395×996×535 / 1395×996×550 (New appearance)									
Net/Gross weight		kg	76/87	76/87	104/125	104/125	117/138	117/138	117/138	129/150	129/150	129/150
Piping connections			R5/4"									
Operation range	Cooling	℃	-5 ~ 46									
	Heating	℃	-25 ~ 35									
	DHW	℃	-25 ~ 43									
Water outlet	Cooling	℃	5 ~ 20									
	Heating	℃	25 ~ 80									
	DHW	℃	20 ~ 70									

Abbreviations:
DHW: Domestic hot water
LWT: Leaving water temperature

Notes:
1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02.
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.



TCL

R290 Tri-thermal ATW Heat Pump

- Environmental Protection
- Energy Saving
- 3-zone Control
- Update Online
- Strong Heating
- Cascade Control
- Remote monitoring
- Easy to Maintenance



Seasonal space heating energy efficiency
η s average up to A+++ at 35℃
η s average up to A++ at 55℃

80℃ The maximum
of leaving water
temperature is 80℃

Versatility

Heating, cooling, hot water with complet solutions, to the creative life

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 remove the need for traditional gas or oil boilers, or work together with them.

- **Diversified Heating**
 - Heating by floor heating, radiator and fan coil unit
 - Safe and comfort
- **Domestic hot water**
 - Provid DHW in time ,heating quickly
 - The maximum of leaving water temperature is 70℃
- **Compact fan coil unit cooling**
 - Ultra-thin body, comfortable and beautiful
 - Multi-angle and all-directional wind supply
- **Solar Kit**
 - Work only &work with heat pump for DHW
- **Auxiliary Heat Source**
 - Link with traditional gas boilers, industrial hot water and electric auxiliary heating



High Efficient and Energy Saving

DC inverter system



GMCC compressor
High efficiency,the highest SCOP is 5.33



Brushless DC Motor
Realize stepless speed regulation



Precise flow feedback
Energy saving and comfort temperatures

High efficient L-type heat exchager (Self made)

Adopting advanced 3- D dynamic analysis and cross-flow path design, air volume increased 8%, heat exchange more efficient.

Internal thread heat transfer pipe

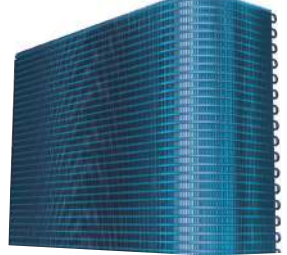
- Using hydrophilic anti-corrosive fins, heat transfer efficiency increased 6%.



Corrugated fin

- Applying inner thread tube with 10% higher heat exchange efficiency.

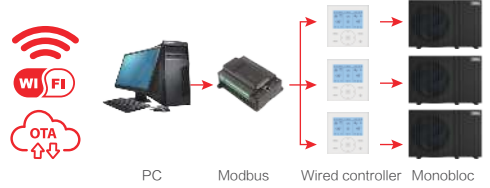




Intelligent control

Update Online

- Easy to update the software
- Convenient to define the system connections
- Remotely monitor the heat pump



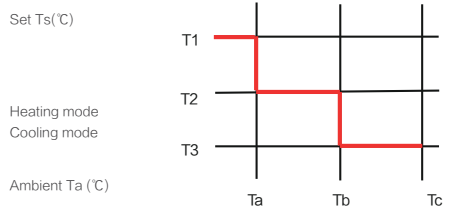
APP Controller

- Modes adjustment
- Power consumption record
- Sanitary hot water priority mode
- Unit status & fault information display
- Temp, Pump flow rate, timer setting, etc
- Capacity, power consumption and COP



Wired Controller

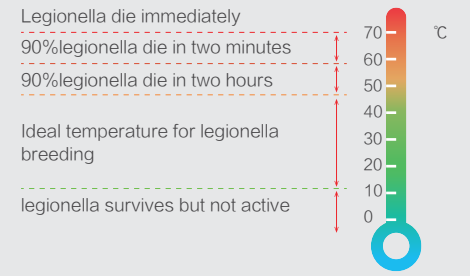
- Dual wire controller control
- 12 multiple languages
- Build in room temperature sensor, could be installed on wall
- Two colors optional (Black and White)



Safe and Comfort

Anti-bacteria mode

- Designed to gurrantee our safe and health.
- It works by heating the water to about 70 degrees.



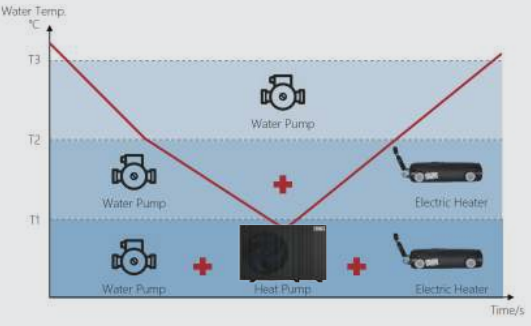
Provide DHW in time

- Water pump
Running smoothly
- Electrical heater
Heat DHW quickly
As a back-up facility for inclement weather
- Solar kit heater
Energy saving



3 level freeze protection

When the temp is lower than T3, water pump on.
When the temp is lower than T2, electric auxiliary heat on.
When the temp is lower than T1, compressor on.
T3> T2> T1



3-zone control

- Connect max 3 zones at the same time and achieve different temperatures control in different zones.



Natural environmental friendly refrigerant.

The GWP of R290 is 3.
Good performance in cold environment
Maintain higher temperature in the water system, reaching 80℃



Multiple certifications



Hermetic design

The electric control part of the unit has explosion-proof treatment.Let users feel more at ease.



Holiday mode

Running in heating mode with low setting temperature(20~25℃)
during the holiday period avoid freezing breakage