

Cascade system control

Maximum 8 units can be combined to reach maximum 128kw



Mono product parameters



4/6kW



8-16kW

Model name	THMLd-4D/3		THMLd-6D/3		THMLd-8D/3		THMLd-10D/3		THMLd-12D/3		THMLd-14D/3		THMLd-16D/3		THMLd-12S/9(6)		THMLd-14S/9(6)		THMLd-16S/9		
	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	FBp-A	
Power supply	V/Ph/Hz		220-240/1/50																		
Heating A7W35	Capacity	kW	4.20	6.20	8.00	9.50	12.10	14.50	15.00	12.10	14.50	15.00									
	Rated input	kW	0.82	1.27	1.60	2.07	2.50	3.08	3.49	2.50	3.08	3.49									
	COP		5.10	4.90	5.00	4.60	4.84	4.71	4.30	4.84	4.71	4.30									
Heating A7W45	Capacity	kW	4.30	6.20	8.00	9.50	12.05	14.25	15.00	12.05	14.25	15.00									
	Rated input	kW	1.12	1.63	2.13	2.59	2.96	3.58	4.17	2.96	3.58	4.17									
	COP		3.85	3.80	3.76	3.68	4.08	3.98	3.60	4.08	3.98	3.60									
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	1.42	2.00	2.50	3.06	3.63	4.31	5.17	3.63	4.31	5.17									
	COP		3.10	3.00	3.20	3.10	3.31	3.25	2.90	3.31	3.25	2.90									
Cooling A35W18	Capacity	kW	4.50	6.00	8.30	10.00	12.00	13.50	16.00	12.00	13.50	16.00									
	Rated input	kW	0.97	1.33	1.66	2.17	3.10	3.63	4.32	3.10	3.63	4.32									
	COP		4.65	4.50	5.00	4.60	3.88	3.72	3.70	3.88	3.72	3.70									
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	1.61	2.18	2.18	2.84	4.33	5.02	5.38	4.33	5.02	5.38									
	COP		2.80	2.75	3.30	3.10	2.68	2.58	2.60	2.68	2.58	2.60									
SCOP ²	LWT at 35°C		4.95	4.83	5.33	4.83	4.64	4.58	4.50	4.64	4.58	4.50									
	LWT at 55°C		3.58	3.68	3.88	3.85	3.76	3.63	3.57	3.76	3.63	3.57									
Seasonal space heating energy efficiency class ²	LWT at 35°C	A+++																			
	LWT at 55°C	A++	A++	A+++	A+++	A++	A++	A++	A++	A++	A++	A++									
Electric heater power input	kW	3	3	3	3	3	3	3	3	9	9	9									
Compressor	Type	Twin rotary DC inverter																			
Outdoor fan	Motor type	Brushless DC motor																			
	Number of fans	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	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	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Sound power Level ³	dB	57	59	60	61	64	66	69	64	66	69										
Sound pressure level ⁴	dB	44	46	48	49	51	53	56	51	53	56										
Net dimensions (W x H x D)	mm	1220 x 704 x 390			1293 x 860 x 494																
Packing dimension (W x H x D)	mm	1315 x 810 x 430			1395 x 996 x 535																
Net/Gross weight	kg	75.0/86.0	75.0/86.0	104/125	104/125	120/141	120/141	120/141	120/141	131/152	131/152	131/152									
Piping connections		R1"	R1"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"	R5/4"
Operation range	Cooling	°C	-5 ~ 46																		
	Heating	°C	-25 ~ 35																		
	DHW	°C	-25 ~ 43																		
Water outlet	Cooling	°C	5 ~ 20																		
	Heating	°C	25 ~ 80																		
	DHW	°C	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.



www.papagiannis.gr
 τηλ : 2109594585
 2109572441



R290 Tri-thermal ATW Heat Pump

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



Seasonal space heating energy efficiency ηs average up to A+++ at 35°C ηs average up to A++ at 55°C

The maximum of leaving water temperature is 80°C

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°C



Compact fan coil unit cooling

- Ultra-thin body, comfortable and beautiful
- Multi-angle and all-directional wind supply



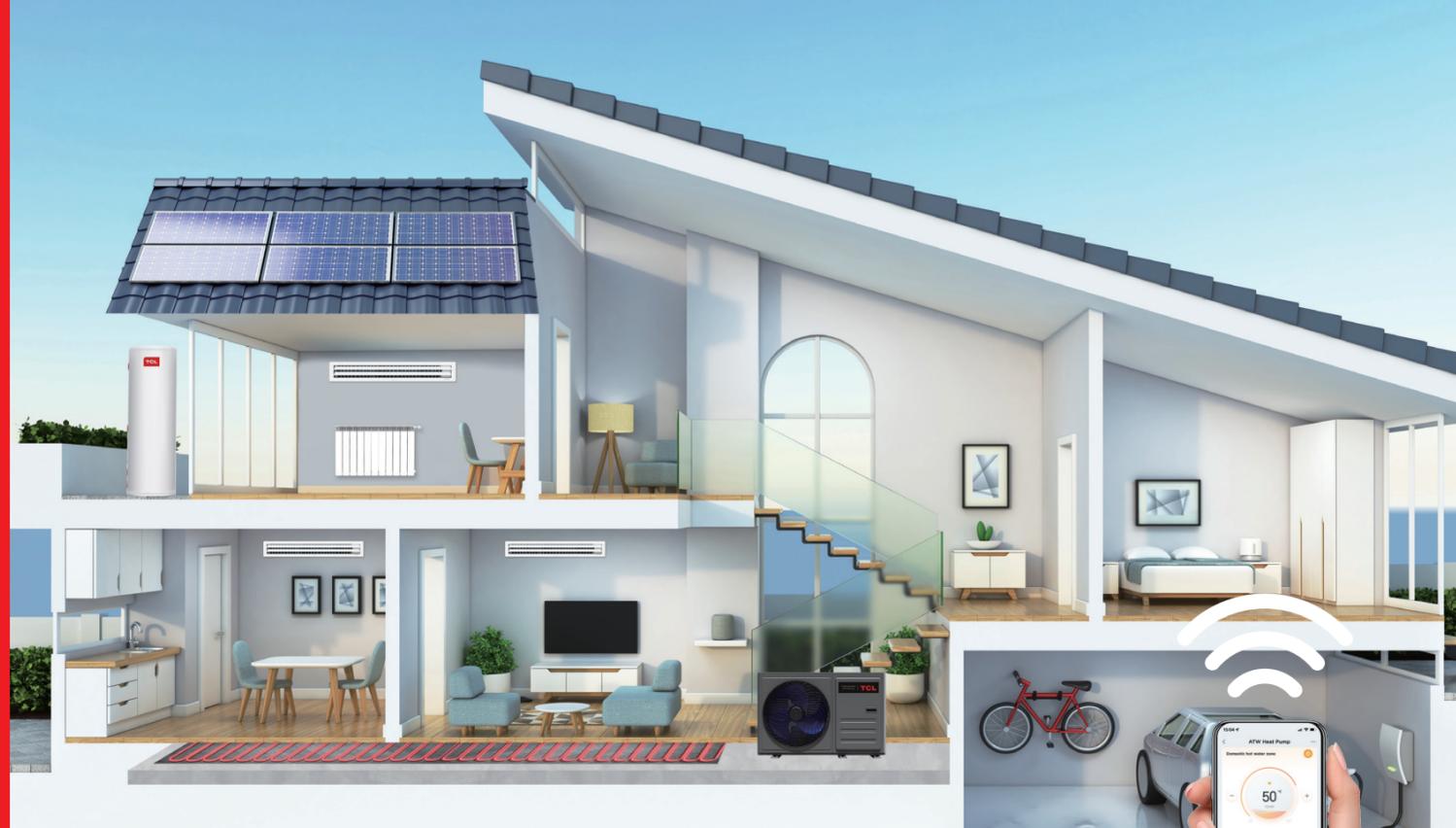
Solar Kit

- 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

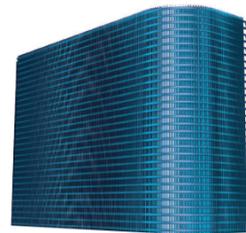
High efficient L-type heat exchanger (Self made)

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

- Internal thread heat transfer pipe**
 - Using hydrophilic anti-corrosive fins, heat transfer efficiency increased 6%.



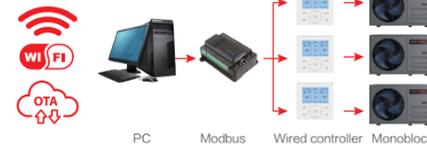
- Corrugated fin**
 - Applying inner thread tube with 10% higher heat exchange efficiency.



Intelligent control

Update Online

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



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)



APP Controller

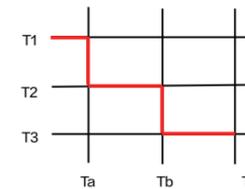
- Modes adjustment
- Power consumption record
- Sanitary hot water priority mode
- Unit status & fault information display
- Temp, Pump flow rate, timer setting ect.
- Capacity, power consumption and COP



Set Ts(°C)

Heating mode
Cooling mode

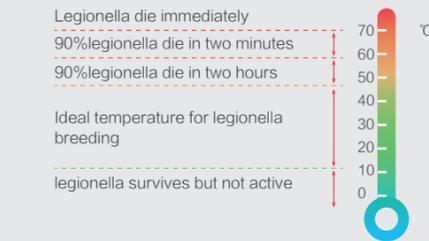
Ambient Ta (°C)



Safe and Comfort

Anti-bacteria mode

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



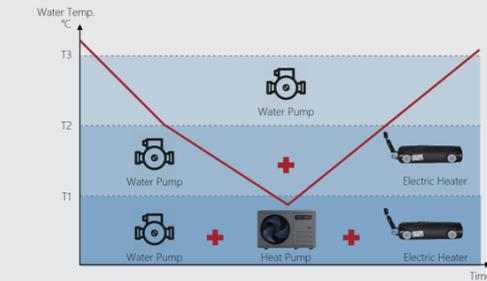
Provide DHW in time

- 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°C



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°C) during the holiday period avoid freezing breakage