

New R32 Estia 14kW Single Phase Air to Water Heat Pump

TOSHIBA are pleased to announce the new R32 Estia 14kW Single Phase Outdoor and Hydro unit with a single phase 6kW backup heater has been added to the air to water product range.

1. Features

- a) Product line up expansion of the wall mounted hydro unit
- Single Phase 6kW backup heater models for 6 and 11kW have been added
 - Hydro Unit for 14kW models have also been added
 - Compact and lightweight chassis



ESTIA



- Easy installation (New design for easy wiring and a reduction in the number of screws)
- Easy Maintenance (easy access to main parts)
- Optimised flow rate control with flow sensor and variable pump

b) Wide line up with R32 Refrigerant and single fan chassis

- 4.0kW and 6kW models are added as new line-up
- 11.0kW and 14kW model is available with 1 fan chassis

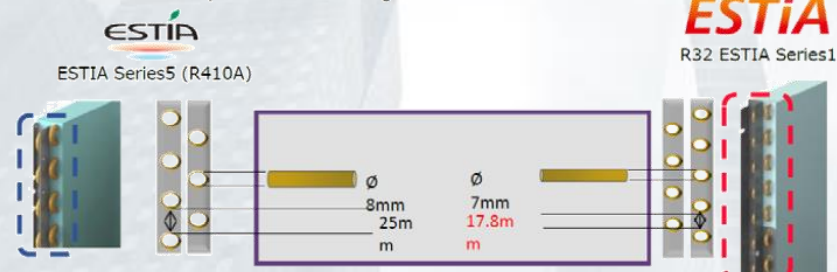


c) Achieve highest energy label 'A+++@ for all models (Average climate/Low temp climate

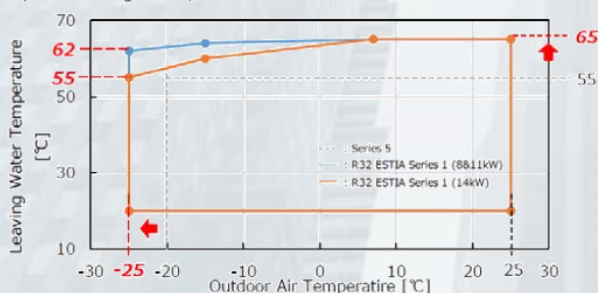
A +7/ W35	4kW	6kW	8kW	11kW	14kW
Heating capacity (Rated)	4.0	6.0	8.0	11.0	14.0
COP	5.20	4.80	5.19	4.60	4.60
Seasonal Energy Consumption (Average/Low)	178	180	182	179	183
Energy Label	A+++				
SCOP	4.53	4.58	4.63	4.55	4.65

d) 55°C LWT under OAT -25°C available for 14kW models

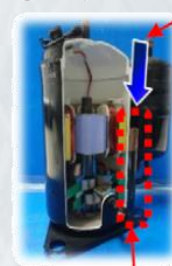
- 14kW model achieves 55°C LWT / -25°C OAT.
- New twin rotary compressor with liquid injection
- Increase the number of path for heat exchanger for CDU



<Operable Range for 8,11kW & 14kW>



Liquid refrigerant flow to compressor to cool down discharged high temperature refrigerant



Liquid Injection

- This photo is just a example of twin rotary with injection compressor

- Max. LWT extended to 65°C from 60°C for Series 5 Standard
- Min. OAT extended to -25°C from -20°C for Series 5 Standard
- Max. LWT 65 °C in case of OAT +7°C
- Max. LWT 62 °C in case of OAT -25°C (8&11kW)
- Max. LWT 55 °C in case of OAT -25°C (14kW)



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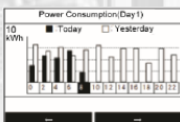
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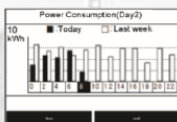
e) Remote Controller Expanded Function

- hourly/daily power consumption trend data analysis

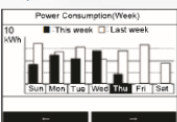
Hour :Today & Yesterday



Hour :Today & Last week



Day : This week & Last week



- Detail operation data and sensor data display

Hydro unit

Sensor information	TC 30°C
TW1 30°C	
TW2 35°C	
TH1 55°C	
WF 23.0 L/min	
RETURN	

Outdoor unit

Sensor information(2/2)	TC 16°C	CAM1 50Hz
TD 80°C	FAN1 600rpm	
TE 12°C	FAN2 600rpm	
TS 15°C	PMV 2500s	
CT 15 DA	HPS 4.00Pa	
RETURN		

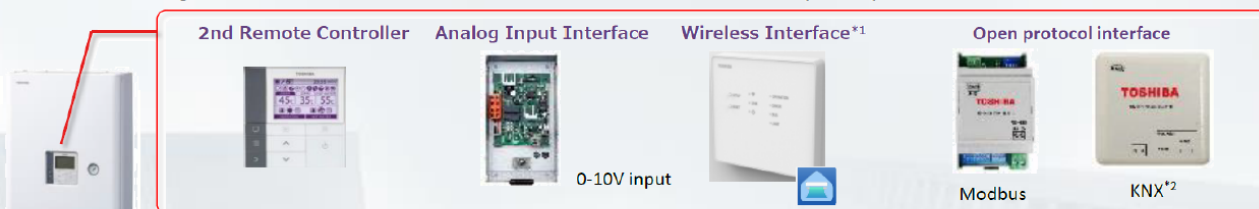


- 16 languages are available (* New)

English, Turkey, French, German, Spanish, Italian, Dutch, Finnish, Czech, Hungarian, Croatian, Slovenian, Portuguese(*), Polish(*), Danish(*), Swedish(*)

f) Various Control Solutions Available

One of following devices can be connected on remote controller communication line. (AB line)



Notes ;

*1: Detail of Wireless Interface will be informed separately.

*2: Development schedule is TBD

2. Model Names & Production Date

Outdoor Unit

Type	Rated Capacity (kW) (Heating/Cooling)	Power Supply Hz/ph/V	Model Name	Production Schedule	Factory
For Europe					
Standard	14.0/10.0	50/1/220-240	HWT-1401HW-E	Dec. 22	TCAE
With Heater	14.0/10.0	50/1/220-240	HWT-1401HRW-E		

Hydro Unit (Wall Mounted type)

Connectable CDU	Back up Heater Capacity	Model Name	Production Schedule	Factory
For Europe				
HWT-40/601HW-E	1ph/6kW	HWT-601XWHM6W-E	Oct. 22	TCAE
HWT-80/1101H(R)W-E	1ph/6kW	HWT-1101XWHM6W-E		
HWT-1401H(R)W-E	1ph/6kW	HWT-1401XWHM3W-E	Dec. 22	
	1ph/6kW	HWT-1401XWHM6W-E		
	3ph/6kW	HWT-1401XWHM6W-E		
	3ph/9kW	HWT-1401XWHM9W-E		

3. Combinations

For Europe		Outdoor Unit				
		HWT-401HW-E	HWT-601HW-E	HWT-801(R)W-E	HWT-1101(R)W-E	HWT-1401H(R)W-E
Hydro Unit (Wall Mounted)	HWT-601XWH**W-E	OK	OK			
	HWT-1101XWH**W-E			OK	OK	
	HWT-1401XWH**W-E					OK

4. Applicable Market

- UK & Ireland

5. Specifications

Performance data

Performance data				HWT-	401HW-E	601HW-E	801H(R)W-E	1101H(R)W-E	1401H(R)W-E		
Outdoor unit				HWT-	601XWH**W-E	601XWH**W-E	1101XWH**W-E	1101XWH**W-E	1401XWH**W-E		
Hydro unit combination				Air T°	Water T°						
Under floor heating	Max heating capacity	+7°C	35°C	kW	H	7.25	7.25	11.90	13.24	18.39	
	Nominal heating capacity	+7°C	35°C	kW	H	4.0	6.0	8.0	11.0	14.0	
	COP	+7°C	35°C	W/W	H	5.20	4.80	5.19	4.60	4.60	
	Energy Efficiency Class - Average Climate - Low LWT				H	A+++	A+++	A+++	A+++	A+++	
	ETAs h (ηs) - Average Climate - Low LWT				%	H	178	180	182	179	183
	SCOP- Average Climate - Low LWT				H	4.53	4.58	4.63	4.55	4.65	4.65
	Max heating capacity	-7°C	35°C	kW	H	4.80	6.06	8.11	9.10	13.05	
	Heating capacity (1)	-7°C	35°C	kW	H	4.25	5.26	7.21	7.95	10.19	
	COP	-7°C	35°C	W/W	H	3.06	2.97	2.70	2.54	2.61	
	Max heating capacity	-10°C	35°C	kW	H	4.40	5.57	7.49	8.45	11.94	
	Max heating capacity	-15°C	35°C	kW	H	3.73	4.75	6.46	7.37	10.08	
	Heating capacity (1)	-15°C	35°C	kW	H	3.43	4.39	5.96	6.77	9.27	
	COP	-15°C	35°C	W/W	H	2.54	2.57	2.40	2.27	2.41	
	Radiators heating & DHW	Energy Efficiency Class - Average Climate - Medium LWT				H	A++	A++	A++	A++	A++
ETAs h (ηs) - Average Climate - Medium LWT				%	H	135	132	142	142	138	
SCOP - Average Climate - Medium LWT				H	3.45	3.37	3.63	3.62	3.53		
Max heating capacity		+7°C	45°C	kW	H	6.97	6.97	11.75	12.41	16.30	
Max heating capacity		-7°C	45°C	kW	H	4.48	5.80	8.00	8.44	11.94	
Max heating capacity		-15°C	45°C	kW	H	3.37	4.03	6.54	7.52	9.96	
Max heating capacity		+7°C	55°C	kW	H	6.51	7.53	9.96	10.17	14.31	
Max heating capacity		-7°C	55°C	kW	H	4.31	5.42	7.35	7.72	10.50	
Max heating capacity		-10°C	55°C	kW	H	-	-	7.00	7.15	9.92	
Max heating capacity		-15°C	55°C	kW	H	-	-	6.41	6.81	8.94	
Cooling	Nominal cooling capacity		35°C	7°C	kW	C	4.0	5.0	6.0	8.0	10.0
	EER		35°C	7°C	W/W	C	3.45	3.30	3.2	2.8	2.45
	Nominal cooling capacity		35°C	18°C	kW	C	5.3	6.3	7.6	10.2	12.5
	EER		35°C	18°C	W/W	C	4.65	4.13	3.93	3.39	3.10

Max heating capacities are shown at peak value during operation, at max compressor operating range in accordance with EN14511

Nominal heating and cooling capacity are given at water delta T° 5°C and rated compressor operating frequency in accordance with EN14511

(1) Heating capacity are shown at max compressor operating frequency in accordance with EN14511

Energy Efficiencies Class & Seasonal space heating energy efficiency (ηs) are provided for Average Climate conditions in accordance with EN14825



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Physical data outdoor

Outdoor unit	HWT-	401HW-E	601HW-E	801HW-E	1101HW-E	801HRW-E	1101HRW-E	1401HW-E	1401HRW-E
Dimensions (HxWxD)	mm	630x800x300			1050x1010x370			1050 x 1010 x 370	
Weight	kg	42			75			88	
Sound power level (Point C) Heating ^{*1}	dB(A)	-	-	-	-	-	-	62	62
Sound power level (Rated) H/C	dB(A)	59/60	62/61	63/62	64/62	63/62	64/62	70/70	70/70
Sound power level (Silent Mode) H/C	dB(A)	54/55	58/57	58/59	62/60	58/59	62/60	62/63	62/63
Sound power level (Max) H/C	dB(A)	65/62	65/62	65/63	65/63	65/63	65/63	72/70	72/70
Sound pressure level (Rated) H/C at 1m (1)	dB(A)	45/46	46/46	51/50	51/51	51/50	51/51	59/59	59/59
Sound pressure level (Silent Mode) H/C at 1m (1)	dB(A)	40/41	42/41	46/47	49/47	46/47	49/47	50/51	50/51
Sound pressure level (Rated) H/C at 5m (2)	dB(A)	37/38	40/39	41/40	42/40	41/40	42/40	45/45	45/45
Sound pressure level (Silent Mode) H/C at 5m (2)	dB(A)	32/33	36/35	36/37	40/38	36/37	40/38	36/37	36/37
Compressor type		DC Twin rotary			DC Twin rotary w/injection			DC Twin rotary w/injection	
Refrigerant / Charge amount (kg)		R32 / 0.9			R32 / 1.25			R32 / 1.4	
Flare connections (gas-liquid)		4/8" - 2/8"			5/8" - 2/8"			5/8" - 2/8"	
Minimum pipe length	m	5			5			5	
Maximum pipe length (Chargeless / With Charge)	m	20 / 30			8 / 30			8 / 25	
Maximum height difference	m	30			30			25	
Chargeless pipe length	m	20			8			8	
Operating range in space heating ^{*2}	°C	-20~25			-25~25			-25 ~ 25	
Operating range Domestic hot water	°C	-20~43			-25~43			-25 ~ 43	
Operating range in cooling	°C				10~43			10 ~ 43	
Bottom tape heater power	W	-	-	-	-	150	-	-	150
Power supply	V-ph-Hz	220/240-1-50			220/240-1-50			220/240-1-50	

*1 Sound power level (Point C) is measured in accordance with EN12102:2017.

*2 Depending on the conditions only back-up heater operates.

Physical data Hydro unit

Hydro unit	HWT-	601XWHM3W-E	601XWHM6W-E	601XWHT6W-E	1101XWHM3W-E	1101XWHM6W-E	1101XWHT6W-E	1101XWHT9W-E
To be used with size		40, 60			80, 110			
Leaving water temperature (without electrical heater)	°C H	20 ~ 55°C			20 ~ 65°C			
Maximum leaving water temperature (with electrical heater)	°C H	55			65			
Leaving water temperature (cooling)	°C C	7 ~ 25°C						
Dimensions (HxWxD)	mm	725 x 450 x 235						
Weight	Kg	27						
Sound power level (H/C)	dB(A)	40/40						
Sound pressure level (H/C)	dB(A)	29/29						
Electric back up heater capacity	kW	3.0	6.0	6.0	3.0	6.0	6.0	9.0
Electric back up heater supply	V-ph-Hz	220~240-1-50			220~240-1-50			380~415-3N-50
Maximum current	A	13	26	13 x 2	13	26	13 x 2	13 x 3

Hydro unit	HWT-		1401XWHM3W-E	1401XWHM6W-E	1401XWHT6W-E	1401XWHT9W-E
To be used with size			140			
Leaving water temperature (without electrical heater)	°C	H	20 ~ 65°C			
Maximum leaving water temperature (with electrical heater)	°C	H	65			
Leaving water temperature (cooling)	°C	C	7 ~ 25°C			
Dimensions (HxWxD)	mm		725 x 450 x 235			
Weight	Kg		28			
Sound power level (H/C)	dB(A)		40/40			
Sound pressure level (H/C)	dB(A)		29/29			
Electric back up heater capacity	kW		3.0	6.0	6.0	9.0
Electric back up heater supply	V-ph-Hz		220~240-1-50		380~415-3N-50	
Maximum current	A		13	26	13 x 2	13 x 3

Physical data Sanitary Hot Water tank

Domestic hot water tank	HWS-	1501CSHM3-E			2101CSHM3-E			3001CSHM3-E		
Outdoor unit	HWT-	40/601HW-E	80/1101H(R)W-E	1401H(R)W-E	40/601HW-E	80/1101H(R)W-E	1401H(R)W-E	40/601HW-E	80/1101H(R)W-E	1401H(R)W-E
Water volume	litres	150			210			300		
Material					Stainless steel					
Max water temperature	°C				75					
Electric heater	kW				2.7					
Power supply	V-ph-Hz				220/240-1-50					
DHW Energy Efficiency Class		A+	A	A	A+	A	A	A	A	A
DHW ETA ₉₀ (η ₉₀) : Average Climate	%	120	106	112	115	118	107	122	113	106
COP at Air7°C (EN16147)		2.87	2.53	2.65	2.72	2.83	2.60	2.93	2.71	2.54
Height	mm	1,090			1,474			2,040		
Diameter	mm				550					
Weight	Kg	31			41			60		



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