

55°C

• Made in Japan



The heating and cooling systems of the future!

- Toshiba Estia air-to-water heat pumps, are the ideal solution to increase energy efficiency (COP), using air as a main source of energy. This is an all-in-one system designed to deliver the right temperature for space heating, for domestic sanitary hot water and with the additional advantage of offering air-conditioning in the warmer seasons.

Toshiba air-to-water heat pump systems can manage two independent zones. This solution enables the delivery of water to diverse emitters at different temperature levels up to 55°C.

Features

- **World-leading energy efficiency**
 - Easy to install.
 - Environment conscious.
 - One system, multiple solutions.
 - The right temperature at the right time.
 - A class pump included.**



Outdoor unit

Inverter technology and the DC twin rotary compressor. Estia heat pumps operate with the reliable and safe R-410A refrigerant.



Hydro unit

The high efficiency plate heat exchanger receives the optimum quantity of refrigerant to produce hot water at low or medium temperature (20-55°C), or cold water (7°C - 25°C). A back-up heater (3, 6 or 9 kW options) further supports the operation for extreme conditions.



Domestic hot water tank

The Estia tank is a compact stainless steel insulated tank producing domestic hot water for sanitary use. The performance of the overall system is also maximized thanks to the integrated coaxial heat exchanger which uses hot water produced by the heat pump (whenever energy efficient and possible).

SYSTEM CAPACITIES

HWS_XWH / HWS_H

Outdoor Unit	HWS-	Single Phase Units				Three Phase Units	
		804H-E1	1104H-E1	1404-E1	1104H8-E1	1404H8-E1	1604H8-E1
Hydre unit combination	HWS-	804XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1	1404XWH__E1
Heating Power* - (Nominal / Maximum)		8.00 / 8.52	11.20 / 14.63	14.00 / 16.74	11.20 / 14.73	14.00 / 15.77	16.00 / 16.76
Power Input - (Nominal / Maximum)		1.79 / 2.01	2.30 / 3.24	3.11 / 3.95	2.34 / 3.14	3.16 / 3.55	3.72 / 3.89
Cooling Power* - (Nominal / Maximum)		9.19	13.82	15.00	13.15	15.44	16.39
Power Input - (Nominal / Maximum)		2.59	3.49	4.07	3.34	4.39	4.98
Heating Power** - (Maximum)	kW	8.13	13.62	14.26	13.93	15.07	15.77
Cooling Power** - (Nominal / Maximum)	kW	6.00 / 7.00	10.00 / 10.24	11.00 / 11.78	10.00 / 10.16	11.00 / 12.02	13.00 / 12.84
ns/SCOP/ENERGY CLASS (Average) - 30°/35° C ***	% / - / -	161/4,10/A++	163/4,15/A++	159/4,05/A++	161/4,10/A++	157/4,00/A++	159/4,05/A++
ns/SCOP/ENERGY CLASS (Average) - 47°/55° C ***	% / - / -	127/3,25/A++	130/3,33/A++	129/3,30/A++	130/3,33/A++	129/3,30/A++	130/3,33/A++
ns/SCOP/ENERGY CLASS (Warm) - 30°/35° C ***	% / - / -	196/4,98/A+++	202/5,13/A+++	201/5,10/A+++	207/5,25/A+++	199/5,05/A+++	188/4,65/A+++
ns/SCOP/ENERGY CLASS (Warm) - 47°/55° C ***	% / - / -	171/4,35/A+++	164/4,18/A+++	169/4,30/A+++	176/4,48/A+++	176/4,48/A+++	167/4,25/A+++

OUTDOOR UNITS DATA

HWS_H

Outdoor Unit	HWS-	Single Phase Units				Three Phase Units	
		804H-E1	1104H-E1	1404-E1	1104H8-E1	1404H8-E1	1604H8-E1
Dimensions (HxWxD)	mm	890x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320
Weight	Kg	63	92	92	93	93	93
Sound pressure Level	dB(A)	49	49	51	50	51	52
Power supply	V-ph-Hz	220/230-1-50			380/400-3N-50		
Operating Range	°C	-20 + 43					
Minimum pipe length	m	5					
Maximum pipe length	m	30					
Maximum height difference	m	± 30					
Chargeless pipe length	m	30					
Compressor Type		DC Twin rotary					
Refrigerant		R410A					
Flare connections (gas-liquid)		5/8" - 3/8"					

HYDRO UNITS DATA

HWS_XWH

Domestic hot water tank	HWS-	804xWHM3-E1	804xWHT6-E1	804xWHT9-E1	1404xWHM3-E1	1404xWHT6-E1	1404xWHT9-E1
To be used with size		80	80	80	110-140-160	110-140-160	110-140-160
Leaving water temperature	°C	H	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C	20 ~ 55°C
	°C	C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C
Dimensions (HxWxD)	mm	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg	50	50	50	54	54	54
Sound pressure level	dB(A)	27	27	27	29	29	29
Electric back up heater capacity	kW	3	6	9	3	6	9
Electric back up heater supply	V-ph-Hz	220/230-1-50	380/400-3N-50	380/400/3N-50	220-230-1-50	380/400-3N-50	380/400/3N-50
Maximum current	A	13	13(13Ax2P)	13(13Ax3P)	13	13(13Ax2P)	13(13Ax3P)

DOMESTIC HOT WATER TANKS DATA

HWS_CSHM

	HWS-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Water volume	litres	150	210	300
Max water temperature	°C	75	75	75
Electric heater	kW	2.75	2.75	2.75
Power supply	V-ph-Hz	220/230-1-50	220/230-1-50	220/230-1-50
Height	mm	1090	1474	2040
Diameter	mm	550	550	550
60Weight (empty)	kg	31	41	60
Material		Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model Name	Description	Functions
TCB-PCIN3E	Output signal PCB	Boiler operation output signal, Alarm output signal, Defrost output signal, Compressor operation output signal
TCB-PCM03E	Input signal PCB	Room thermostat input, Emergency stop input
HWS-AMS11E	Wired RC	Wired Remote controller for Room air temperature control

The capacities in this catalogue are calculated based on following conditions:

* Heating Leaving hot water temperature: 35°C (ΔT 5°C). Outdoor air temperature: 7°C DB / 6°C WB.

Cooling Leaving cold water temperature: 18°C (ΔT 5°C). Outdoor air temperature: 35°C DB

** Heating Leaving hot water temperature: 45°C (ΔT 5°C). Outdoor air temperature: 7°C DB / 6°C WB.

Cooling Leaving cold water temperature: 7°C (ΔT 5°C). Outdoor air temperature: 35°C DB

*** In accordance with standard EN14825

The sound pressure level is given at 1m distance from outdoor units, and 1,5m distance from hydro units.

C = Cooling mode H = Heating mode

AIR-TO-WATER HEAT PUMP SPLIT SYSTEM

HWS -

60°C

• Made in Japan



For low ambient area and / or for areas where require high water temperature!

Features

• The development of new powerful type of ESTIA series 4 to operate it in cold region, especially North Europe, East Europe and etc.

• Operation range down to -25°C.
Maintain the rated capacity down to -15°C.
Leaving water temperature up to 60°C.



Outdoor unit

Inverter technology and the DC twin rotary compressor. Estia heat pumps operate with the reliable and safe R-410A refrigerant.



Hydro unit

The high efficiency plate heat exchanger receives the optimum quantity of refrigerant to produce hot water at low or medium temperature (20-60°C), or cold water (7°C - 25°C). A back-up heater (3, 6 or 9 kW options) further supports the operation for extreme conditions.



Domestic hot water tank

The Estia tank is a compact stainless steel insulated tank producing domestic hot water for sanitary use. The performance of the overall system is also maximized thanks to the integrated coaxial heat exchanger which uses hot water produced by the heat pump (whenever energy efficient and possible).

SYSTEM CAPACITIES

HWS_XWH / HWS_H

		Single Phase Units	
Outdoor unit	HWS-	P804HR-E1	P1104HR-E1
Hydro unit combination	HWS-	P804XWH__-E1	P1104XWH__-E1
Heating Capacity-(LWT 35°C @ OAT 7°C /-2°C /-15°C)	KW	15,23 / 12,36 / 8,43	18,05 / 14,39 / 11,23
Cooling Capacity-(LWT 18°C @ OAT 35°C)	KW	9.65	12.49
Heating Capacity-(LWT 45°C @ OAT 7°C /-2°C /-15°C)	KW	12,60 / 10,41 / 7,24	14,74 / 11,95 / 8,13
Cooling Capacity-(LWT 7°C @ OAT 35°C)	KW	7.20	9.66
ns/SCOP/ENERGY CLASS (Average)-30°/35° C **	% / - / -	157 / 4,00 / A++	175 / 4,45 / A++
ns/SCOP/ENERGY CLASS(Average)-47°/55° C **	% / - / -	125/3,20/A++	131/3,35/A++
ns/SCOP/ENERGY CLASS (Warm)-30°/35° C **	% / - / -	185 / 4,70 / A+++	187 / 4,75 / A+++
ns/SCOP/ENERGY CLASS (Warm)-47°/55° C **	% / - / -	158/4,03/A+++	150/3,83/A+++

OUTDOOR UNITS SPECIFICATIONS

HWS_H

		Single Phase Units	
Outdoor unit	HWS-	P804HR-E1	P1104HR-E1
Dimensions (HxWxD)	mm	1340x900x320	1340x900x320
Net Weight	Kg	92	92
Sound pressure Level *	dB(A)	49	49
Power supply	V-ph-Hz	220/230-1-50	
Operating range	°C	-25 ÷ 43	
Minimum pipe length	m	5	
Maximum pipe length	m	30	
Maximum height difference	m	± 30	
Chargeless pipe length	m	30	
Compressor type		DC Twin rotary	
Refrigerant		R410A	
Flare connections (gas-liquid)		5/8" - 3/8"	

HYDRO UNIT SPECIFICATIONS

HWS_XWH

Hydro unit	HWS-	P804XWHM3-E1	P804XWHT6-E1	P804XWHT9-E1	P1104XWHM3-E1	P1104XWHT6-E1	P1104XWHT9-E1
To be used with size		80	80	80	110	110	110
Electric back up heater capacity	kW	3	6	9	3	6	9
Leaving water temperature (heating)	°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C	20 ~ 60°C
Leaving water temperature (cooling)	°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C	7 ~ 25°C
Dimensions (HxWxD)	mm	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg	49	49	49	52	52	52
Sound pressure level *	dB(A)	27	27	27	29	29	29
Electric back up heater supply	V-ph-Hz	220/230-1-50	380/400-3N-50	380/400-3N-50	220/230-1-50	380/400-3N-50	380/400-3N-50
Maximum current	A	13	13 (13A*2P)	13 (13A*3P)	13	13 (13A*2P)	13 (13A*3P)

DOMESTIC HOT WATER TANKS DATA

HWS_CSHM

	HWS-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Water volume	litres	150	210	300
Max water temperature	°C	75	75	75
Electric heater	kW	2.75	2.75	2.75
Power supply	V-ph-Hz	220/230-1-50	220/230-1-50	220/230-1-50
Height	mm	1090	1474	2040
Diameter	mm	550	550	550
Net weight	Kg	31	41	59
Material	Kg	Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model Name	Description	Functions
TCB-PCIN3E	Output signal PCB	Boiler operation output signal, Alarm output signal, Defrost output signal, Compressor operation output signal
TCB-PCMO3E	Input signal PCB	Room thermostat input, Emergency stop input
HWS-AMS11E	Wired RC	Wired Remote controller for Room air temperature control

* The outdoor unit operating noise is measured at the point of 1 m away from the unit back surface centre and 1.5 m high from the ground. The hydro unit operating noise is measured at the point of 1 m away from the unit front surface centre. The value of the operating noise varies depending on room structure where the unit is installed.

** In accordance with standard EN14825