

*Better Air Solutions*

INVERTER SYSTEMS

AIR TO WATER



## Best in Class Energy Efficiency - COP of 4.88\*

With its best in class COP performance, Estia air to water heat pump system delivers more heating power with less energy consumption.

Estia uses high quality components and material which contribute to the overall savings in energy consumption.

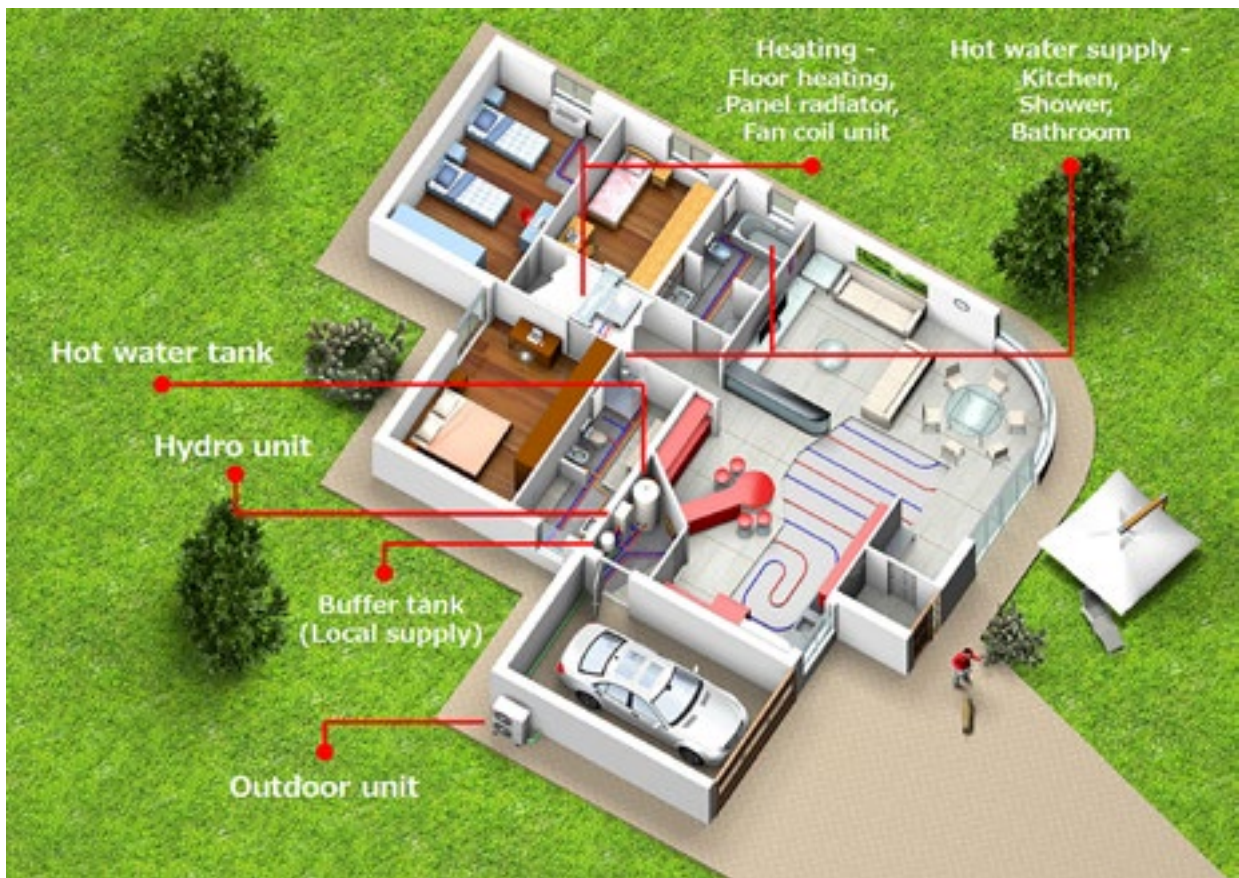
With the Toshiba advanced inverter, Estia air to water heat pump system only delivers the heating capacity required; thus consuming only the necessary electricity.

The hot water temperature is also optimised thanks to Toshiba's advanced control depending on the outside air temperature.

The milder the outside temperature, the air-to-water systems automatically produces a lower water temperature to anticipate decreased needs of space heating. The same control logic allows to anticipate as well as increase heating needs when weather conditions become extreme; this overall temperature management gives the best conditions of comfort.

All this saving has a positive impact on the personal electricity bill and the whole community by reducing the CO<sub>2</sub> emissions in the atmosphere.

\*HWS-1105H-E model



## Estia System Options



HWS-455H-E

HWS-805H-E

HWS-1105H-E  
HWS-1105H8-E  
HWS-1405H-E  
HWS-1405H8-E  
HWS-1605H8-E

HWS-455XWHM3-E  
HWS-805XWHM3-E  
HWS-1405XWHM3-E

Wired - HWS-AMS54E  
Optional additional controller directly linked to the hydronic module. It can be placed directly in the living area for immediate and easy access.

## One System, Multiple Solutions

Estia heat pump systems can be used in combination with different types of emitters: existing heating low temperature radiators, floor heating or fan coil units.



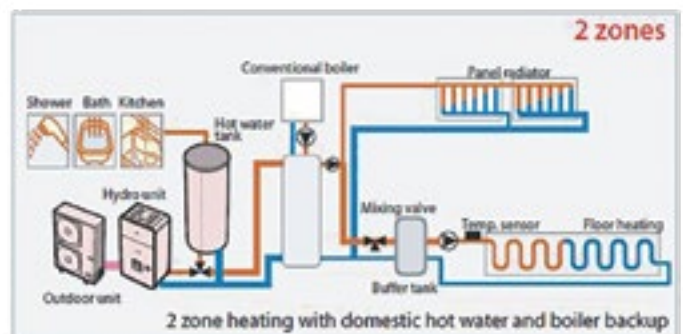
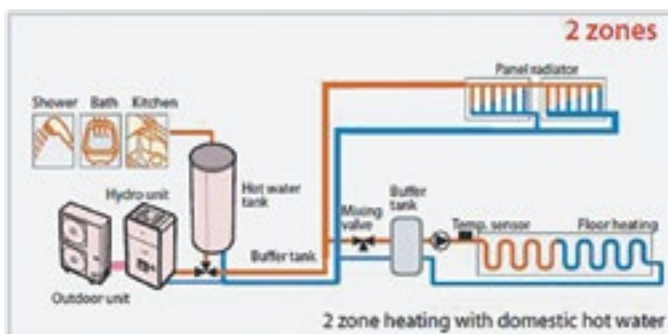
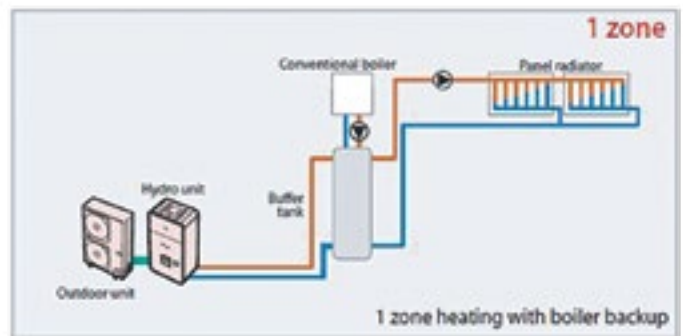
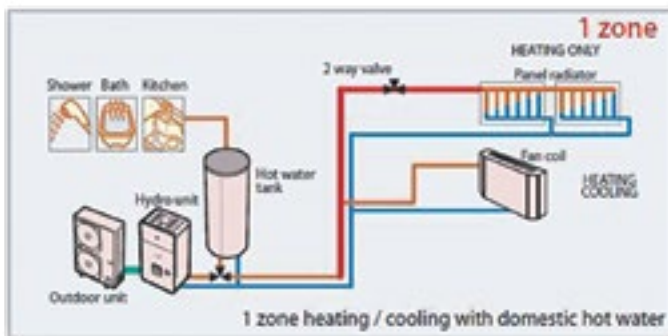
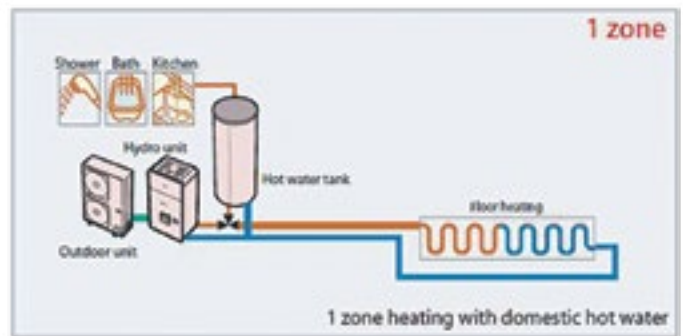
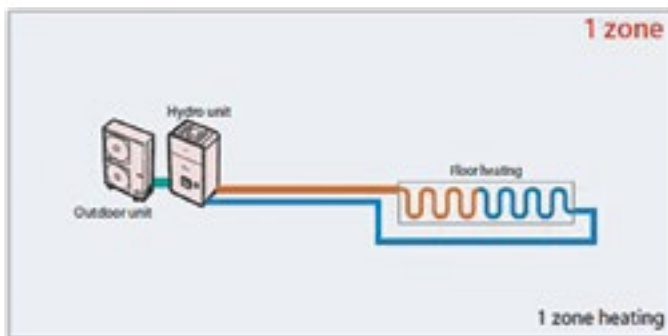
## Environment Conscious

The use of Toshiba Estia heat pump contribute to the reduction of global CO<sub>2</sub> emissions in the atmosphere and limit the use of fossil fuels or other non-renewable energy primary sources. The unit has a built-in refrigerant pump down system.



## One System, Full Combination Flexibility

For new houses or refurbishment, Estia heat pump offers a variety of combinations. Some examples below:



In existing dwellings already equipped with traditional gas or fuel boilers, Toshiba Estia air to water heat pump system can be combined with the existing heating system to cover exclusively and in an optimised way all the heating needs, all year round. Then, the boiler is only used as a back-up source during some extreme weather days in the winter. The intelligent Toshiba control balances the energy source in the most efficient way.

## The Right Temperature at the Right Time

It can produce water at different temperatures for several applications simultaneously.

Toshiba Estia air to water heat pump system operates smoothly both with low outdoor air temperature down to -20°C in winter and up to 43°C in the summer season. The system has a unique anti-ice build-up protection embedded.



## Easy to Install

Quick and easy to install. The hydro module unit can be placed safely in the most suitable place within the house.

There's no need for chimney or underground captors which require additional works on site.

The compact indoor unit can be placed anywhere outside the house or on a balcony, thanks to extensive piping options.



## New Remote Controller



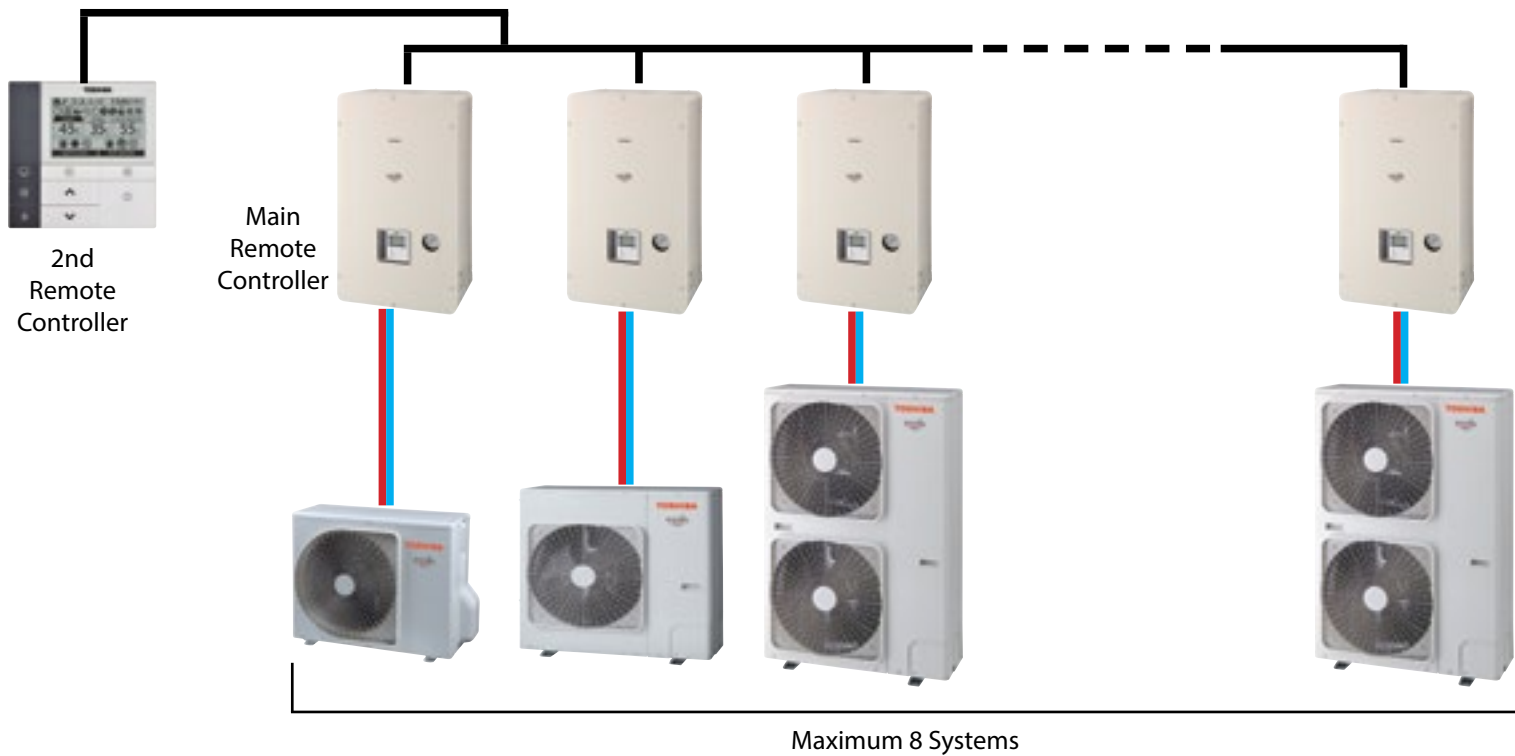
**HWS-AMS54E**



- Stylish design and new icons
- Backlight installed
- 6 languages available ( English, French, German, Turkish, Italian, Spanish)
- Line-up as a second remote controller

## Group Control Function

Operate a maximum of 8 systems simultaneously using one remote controller. In case of group control, two remote controllers should be connected - one as the main controller and the other as a secondary controller. The connection to any other controllers must be cut.

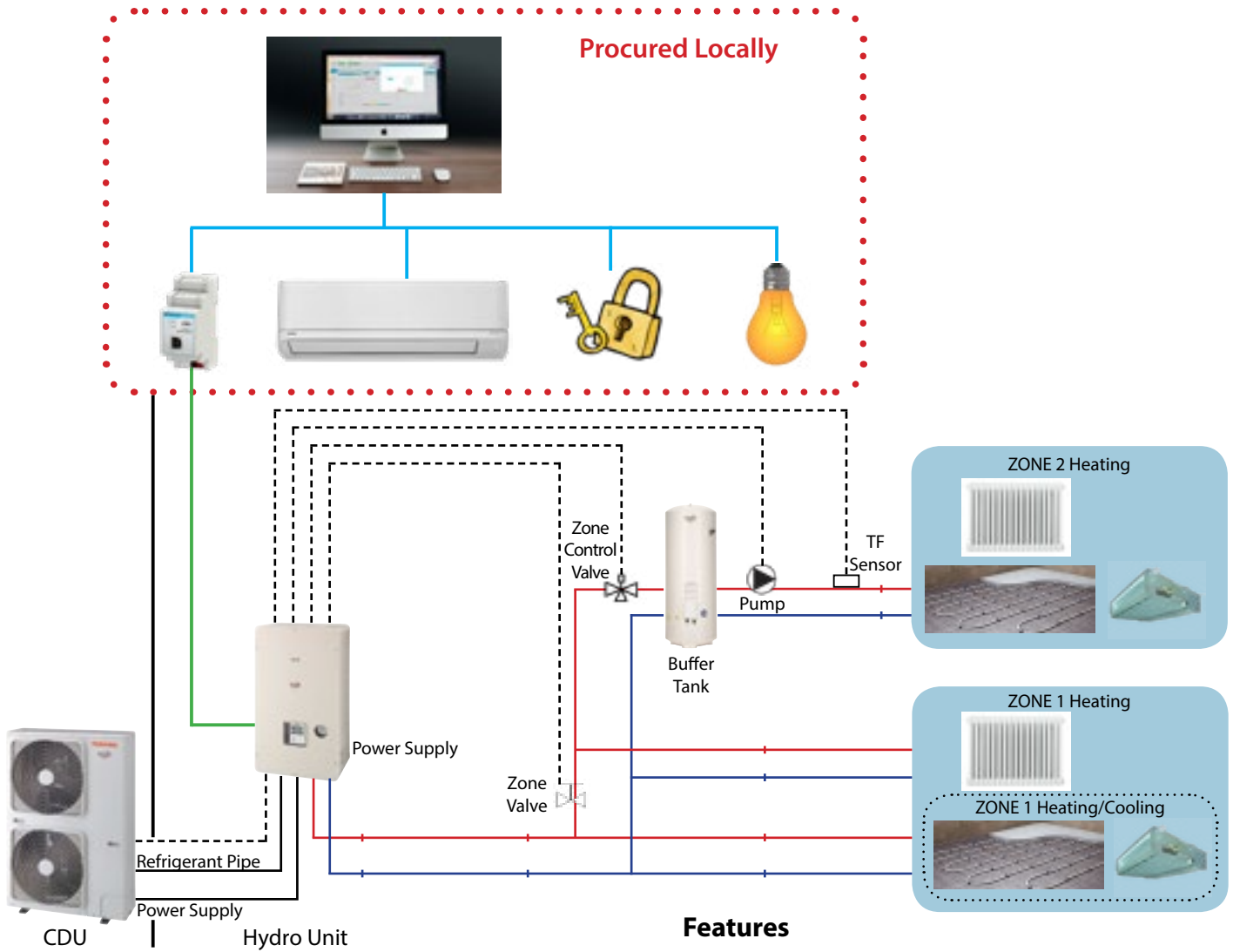


## Floor Drying Function

This function changes the target hot water temperature according to the setting by the installer in the stages to gradually dry concrete when this underfloor heating system is installed.

## Open Protocol Interface for Estia

Modbus® and KNX interfaces are available for home energy management use. These interfaces can be connected with all Series 5 models. A second remote controller cannot be connected with Modbus®/KNX interface.



### Features

- ON/OFF
- Mode - Cooling/Heating/DHW
- Temperature Settings - Cooling/Heating/DHW
- Night Set Back (5°C Temperature Reduction)
- Domestic Hot Water Boost
- Frost Protection
- Alarm Status/Code
- Auto Temperature Operation
- Anti-Bacteria

### Accessories

Description		Model Number
Open Protocol Interface	for Modbus®	BMS-IFMBOAWR-E
	for KNX	BMS-IFKX0AWR-E
Remote Controller		HWS-AMS54E
Output Signal PCB		TCB-PCIN3E
Input Signal PCB		TCB-PCMO3E

**HWS\_XWH/HWS\_H**
**System capacities**

Outdoor Unit	Air T°	Water T°	HWS-	Single Phase				Three Phase		
				455H-E	805H-E	1105H-E	1405H-E	1105H8-E	1405H8-E	1605H8-E
Hydro Unit Combination			HWS-	455XWHM3-E	805XWHM3-E	1405XWHM3-E	1405XWHM3-E	1405XWHM3-E	1405XWHM3-E	1405XWHM3-E
Max Heating Capacity (H)	+7°C	35°C	kW	6.83	8.52	14.63	14.73	16.74	15.77	16.76
Nominal Heating Capacity (H)	+7°C	35°C	kW	4.50	8.00	11.20	14.00	11.20	14.00	16.00
COP (H)	+7°C	35°C	W/W	4.90	4.46	4.88	4.50	4.80	4.44	4.30
Max Heating Capacity (H)	-7°C	35°C	kW	4.48	5.74	9.67	10.79	9.50	10.64	11.25
Heating Capacity (H)	-7°C	35°C	kW	4.18	5.00	8.04	8.63	8.04	8.64	9.05
COP (H)	-7°C	35°C	W/W	3.01	2.70	2.78	2.62	2.79	2.76	2.67
Max Heating Capacity (H)	-15°C	35°C	kW	3.61	4.47	7.52	8.37	7.29	8.16	8.63
Heating Capacity (H)	-15°C	35°C	kW	3.14	4.28	6.57	7.31	6.79	7.30	7.65
COP (H)	-15°C	35°C	W/W	2.45	2.68	2.50	2.47	2.63	2.60	2.52
Nominal Cooling Capacity (C)	35°C	7°C	kW	4.50	6.00	10.00	11.00	10.00	11.00	13.00
EER (C)			W/W	3.08	3.10	3.07	2.89	3.07	2.89	2.71

**HWS\_H**
**Outdoor Units Data**

Outdoor Unit	HWS-	Single Phase				Three Phase		
		455H-E	805H-E	1105H-E	1405H-E	1105H8-E	1405H8-E	1605H8-E
Dimensions (HxWxD)	mm	630x800x300	890x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320
Weight	kg	42	63	92	92	93	93	93
Sound Pressure Level	db(A)	48	49	49	51	49	51	52
Power Supply	V-ph-Hz	220/230-1-50				380/400-3N-50		
Operating Range	°C	-20 to +43						
Minimum Pipe Length	m	5						
Maximum Pipe Length	m	15						30
Maximum Height Difference	m	10						30
Chargeless Pipe Length	m	15						30
Compressor Type		DC Twin Rotary						
Refrigerant		R410A						
Flare Connection (Gas-Liquid)	in	1/4 - 1/2						5/8 - 3/8

**HWS\_XWH**
**Hydro Units data**

Hydro Unit	HWS-	455XWHM3-E	805XWHM3-E	1405XWHM3-E
To be used with size		45	80	110-140-160
Leaving Water Temperature	°C H	20 ~ 55		
	°C C	7 ~ 25		
Dimensions (HxWxD)	mm	925 x 525 x 355		
Weight	kg	49	52	
Sound Pressure Level	db(A)	27	29	
Electric Back Up Heater Capacity	kW	3		
Electrical Back Up Heater Supply	V-ph-Hz	220/230-1-50		
Maximum Current	A	13		

C = Cooling Mode  
H = Heating Mode

Notice: Toshiba is committed to continuously improving its product to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.

All features and specifications subject to change without prior notice.

Note: All images provided in this catalogue are used for illustration purposes only.

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Equipment rated in accordance with MEPS AS/NZS 60335.2.40:2006 and AS/NZS 60335.1:2002 + A1- A4

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