

- ETWH 180 E and ETWH 230 E:  
thermodynamic storage water heater on ambient air,  
with electrical back-up



ETWH 180 E  
ETWH 230 E

ETWH thermodynamic water storage heaters stand on the floor and run on ambient air down to +5°C. They are used for heating domestic hot water up to 65°C and are therefore perfectly suited for replacing electric water heaters. The two models come with a 1.5-kW back-up immersion heater.

They comprise principally:

- A glass-lined tank with magnesium anode protection;
- A rotary compressor;
- A copper condenser located around the tank;
- And a specific controller for a DHW application that incorporates programming, various operating modes, back-up management, the anti-legionella function and the frost protection mode: see page 3.

### USE CONDITIONS

Max operating temperature of the tank: 70°C

Max operating pressure of the tank: 8 bar

Air temperature for thermodynamic module functioning: +5 to +43°C

### INSTALLATION CONDITIONS

The room in which KALIKO ESSENTIEL is installed must be frost-free.



Domestic hot water



Thermodynamic module air/  
water



Electricity  
(energy supplied to the  
compressor)



Natural renewable energy  
free of charges



# THE VARIOUS MODELS AVAILABLE

## Thermodynamic water heater



ETWH\_Q0001A



With heat pump on ambient air for domestic hot water until 65°C

(l) for an ambient temperature of +7°C/+15°C

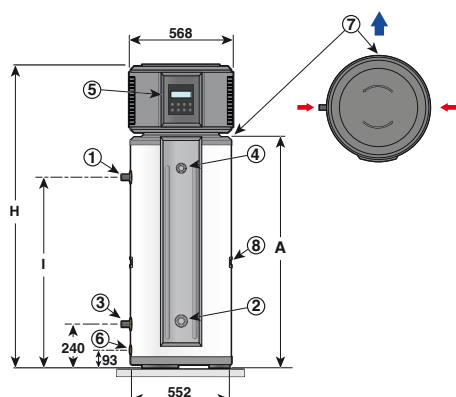
Model	Capacity (l)	Heat pump output (W)
ETWH 180 E	180	1000/1500 (l)
ETWH 230 E	230	1000/1500 (l)

With 1500 W electrical backup

# TECHNICAL SPECIFICATIONS

## MAIN DIMENSIONS (MM AND INCHES)

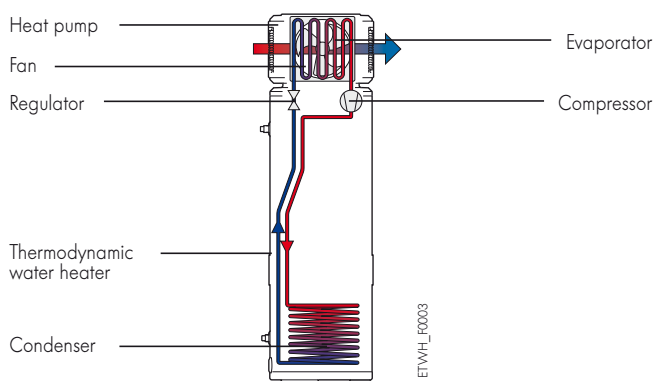
ETWH 180 E - ETWH 230 E



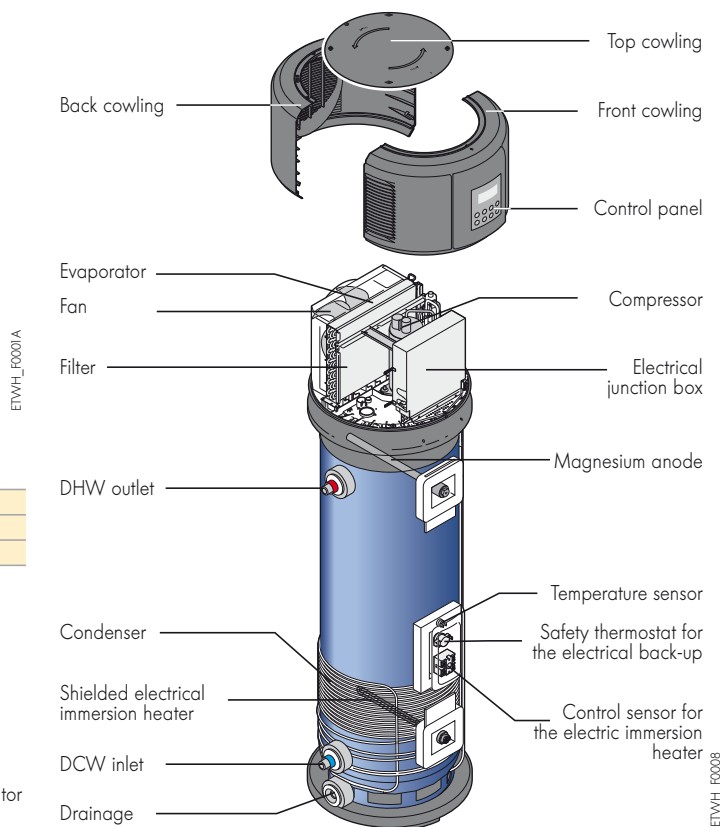
ETWH	180 E	230 E
H (mm)	1670	1990
l (mm)	1050	1390
A (mm)	1308	1628

- ① DHW outlet G 3/4"
- ② Electrical resistance
- ③ DCW inlet G 3/4"
- ④ Magnesium anode
- ⑤ Control panel
- ⑥ Emptying
- ⑦ Condensates evacuation tube
- ⑧ Carrying handles

## OPERATING PRINCIPLE



## COMPONENTS



## OPTION



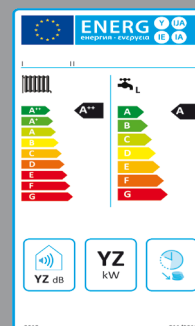
Connecting safety kit - Package ER 208



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# TECHNICAL SPECIFICATIONS

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Max. operating temp. (tank): 70°C

Max. operating pressure (tank): 8 bar

Air temperature for heat pump functioning:  
+5 to +43°C

Thermodynamic water heater	ETWH	180 E	230 E
Capacity	l	180	230
Heat pump output	W	1000 (1)/1500 (2)	1000 (1)/1500 (2)
Absorbed electrical power by the heat pump	W <sub>e</sub>	400 (1)/460 (2)	400 (1)/460 (2)
COP according to EN 16147		2,38 (3)/2,88 (4)	2,51 (3)/3,02 (4)
Electrical resistance output	W	1550	1550
Power supply voltage	V/A	230 V Mono/16 A	230 V Mono/16 A
DHW requirement cycle (l)		L	XL
Water heating energy efficiency (5)	%	119	124
Heating time (10 to 54°C)	h	8 h 39 (3)/6 h 02 (4)	11 h 50 (3)/7 h 54 (4)
Quantity of DHW provided (V <sub>max</sub> )	l	206,9 (3)/ 205,2 (4)	321,2 (3)/318,1 (4)
Power consumption in establish operating (P <sub>es</sub> )	W	370 (3)/25,0 (4)	46,9 (3)/33,6 (4)
Air flow rate	m <sup>3</sup> /h	350	350
Refrigerant R 134 A	kg	0,8	0,8
Sound presure*/ Sound output	dB(A)	46,2/60,2	46,2/60,2
Weight (empty)	kg	102	116

\* at 2 m from the appliance,

(1) Value obtained at an air temperature of + 7°C during a heating from 10 to 54°C

(2) Value obtained at an air temperature of + 15°C during a heating from 10 to 54°C

(3) Value obtained at an air temperature of + 7°C and a water inlet temperature of 10°C

(4) Value obtained at an air temperature of + 15°C and a water inlet temperature of 10°C

(5) Under average temperature

## ENERGY LABELLING DIRECTIVES

Each thermodynamic water heater is delivered with his own energy labelling ; which includes various informations: energy efficiency, energy annual consumption, name of the manufacturer, sound level...

Combining the thermodynamic water heater with for example a boiler, a regulation device or another generator ..., you can improve the performance of your installation and generate a label « system » corresponding: **go on our website** « [ecodesign.dedietrich-heating.com](http://ecodesign.dedietrich-heating.com) »

## PRESENTATION OF THE CONTROL PANEL

The control panel that comes with ETWH thermodynamic water heaters consists of an easy-to-use, intuitive programmable control system. It can be used to select various operating modes:

- **Economic mode:** for operation at an ambient temperature of between +5°C and +43°C, the HP module alone is used.
- **Hybrid mode:** the HP module and the electric immersion heater can operate simultaneously according to the outside temperature-

- **Electrical mode:** the electric immersion heater alone is used for DHW production.

Domestic hot water production can be further optimised thanks to appropriate timer programming. It also incorporates other functions such as frost protection, anti-legionella, etc.



### Warning lights

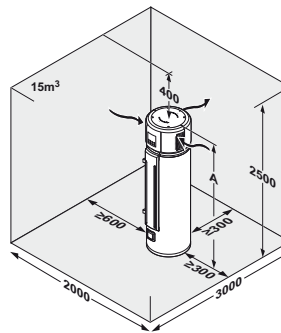
- LA** Ambient temperature outside operating range
- W** Electrical resistor running
- Restart after a shut-down** (cylinder icon)
- Command lock** (lock icon)
- Compressor running** (cylinder icon)
- Anti-legionella mode** (cylinder icon)
- Alarm (in the event of errors)** (speaker icon)

ETWH\_F0007

# INFORMATION REQUIRED FOR INSTALLATION

## POSITION

To ensure sufficient air renewal, the minimum volume of the room must be 15 m<sup>3</sup>. The ETWH must be installed in an unheated room (e.g. garage, boiler room, basement, etc.) which is separate from the home's heated rooms and frost-free at a temperature > 7°C (ideally >10°C all year round). It must be placed on a flat surface capable of bearing the weight of the appliance. A minimum space around the ETWH must be allowed in order to permit access for maintenance (see diagram opposite). No obstacles should hinder air circulation via the air inlet and outlet openings.

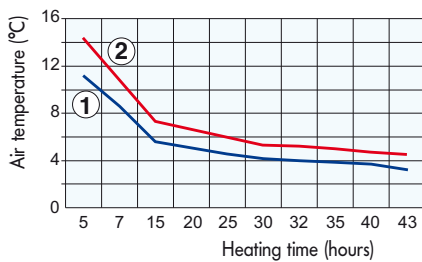


ETWH	180 E	230 E
A (mm)	1 670	1990

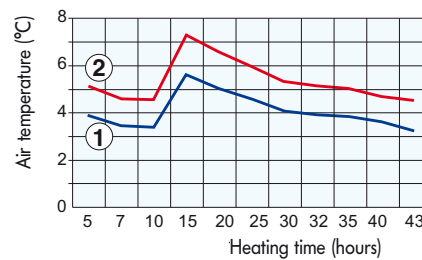
ETWH\_F0004A

## ETWH HEATING TIME ACCORDING TO THE OUTSIDE TEMPERATURE

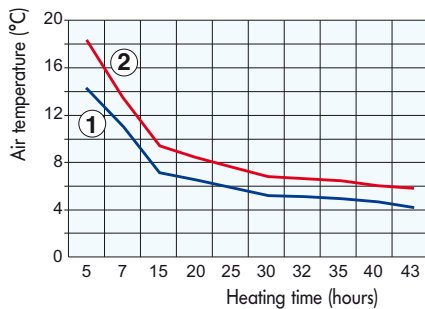
Model ETWH 180 E - Economic mode



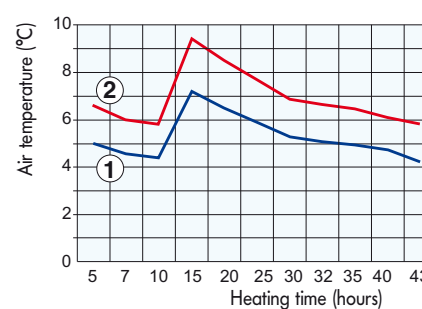
Model ETWH 180 E - Hybrid mode



Model ETWH 230 E - Economic mode



Model ETWH 230 E - Hybrid mode



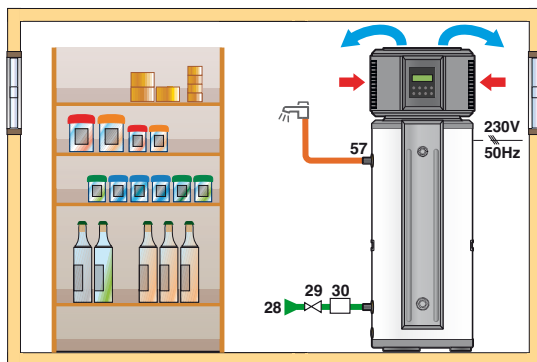
① Heating time for a set point of 55°C ② Heating time for a set point of 65°C

## ELECTRICAL CONNECTION

ETWH thermodynamic water heaters are delivered with one 230 V/50 Hz power cable. The electrical connection must be in compliance with the NFC 15.100 standard. The water heater

must be powered by an electrical circuit comprising an omnipolar switch with an opening gap > 3 mm and protected by a 16 A circuit breaker.

## EXAMPLE OF INSTALLATION



### In a cellar (unheated room)

can be used to recover calories from the room and keep products cool, for example.

### Legends

- 28 Domestic cold water inlet
- 29 Pressure reducer
- 30 Sealed safety device calibrated to 7 bar
- 57 DHW outlet

ETWH\_F0006

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ETWH\_F0009

