

# ELENSIO 200, 250 200H AND 250H

THERMODYNAMIC WATER HEATER OPERATING ON AMBIENT OR OUTDOOR AIR



Made in France

ELENSIO 200

ELENSIO 200H

ELENSIO 250

ELENSIO 250H

## • ELENSIO 200 AND 250:

Thermodynamic water heater on ambient air or on outside air with electrical resistance. A range of thermodynamic water heaters operating on extracted air with electrical backup

## • ELENSIO 200H AND 250H:

Thermodynamic water heater on ambient air or on outside air with heat exchanger for connecting to a boiler or solar, and electrical resistance



Domestic hot water



Air-to-water thermodynamic module



Electricity (energy supplied to the compressor)



Free, natural renewable energy  
An ideal solution for low energy buildings



Refrigerant R290

## OPERATING CONDITIONS

max. operating temperature: 90 °C

max. operating pressure: 10 bar

Air temperature for thermodynamic module  
operation: - 5 to + 35 °C

Floor-standing thermodynamic water heaters with storage:

- 200 and 250 models with 1.8 kW backup electric heater
- 250H and 250H models with exchanger for connection to a solar hydraulic backup or via boiler and 1.8 kW backup electric heater
- A range of thermodynamic water heaters operating on extracted air with electrical backup
- Maximum volume of hot water at 40 °C from 260l for the 200 model up to 338l for the 250 model
- DHW reheating up to 65 °C by the heat pump
- Enamelled tank, protection via impressed current titanium anode
- New very high-performance exchanger
- Controller for a DHW application integrating programming, various operating modes, backup management, anti-legionella function, frost protection mode, automatic defrosting, energy metering estimates, night backup management, optimised or hybrid function.







**De Dietrich**  
SUSTAINABLE COMFORT®



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## AVAILABLE MODELS

### MODELS

FLOOR-STANDING THERMODYNAMIC WATER HEATERS WITH STORAGE		MODEL	REFERENCE	PACKAGE	CAPACITY (L)	MAXIMUM VOLUME OF MIXED HOT WATER AT 40 °C (L)
  <p>EL_Q0004_DD/EL_Q0005_DD</p>	<p>For domestic hot water. With 1.8 kW monophase backup electric heater.</p>	ELENSIO 200	7785383	HK407	196	260
		ELENSIO 250	7785277	HK406	251	337
  <p>EL_EXPORT_Q000V_EL_Q0006_DD</p>	<p>For domestic hot water. With hydraulic backup exchanger for connection to a solar system or via boiler and 1.8 kW monophase backup electric heater.</p>	ELENSIO 200 H	7785382	HK404	188	258
		ELENSIO 250 H	7784992	HK405	243	320

## ECO-SOLUTIONS DE DIETRICH

### ENERGY LABELLING

Each boiler is delivered with an energy label displaying a range of information, including energy efficiency, annual energy consumption, manufacturer name and noise level. By combining your boiler with, for example, a solar system, DHW storage tank, control system or even another generator, you can improve the performance of your installation and generate a corresponding "system" label.

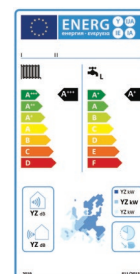
Visit our site "[ecosolutions.dedietrich-heating.com](http://ecosolutions.dedietrich-heating.com)"



De Dietrich ECO-SOLUTIONS give you the latest generation of multi-energy products and systems: simpler, more efficient and more economical to guarantee your comfort and protect the environment.

The energy label associated with the ECO-SOLUTIONS label indicates the product performance.

[www.ecodesign.dedietrich-heating.com](http://www.ecodesign.dedietrich-heating.com)



## ADVANTAGES

### COMPACT

- With a height of 1528 mm for the 200 model, it integrates very easily under sloping or low ceilings.

### DOMESTIC COMFORT

- With a 40°C hot water volume of 260 to 338l, the ELENSIO range can meet the needs of a family of six.

### BOOST MODE

- For permanent DHW comfort.

### RELIABILITY

- Equipped with reinforced titanium anode.



### INSTALLATION

- It can be easily moved and installed thanks to its compactness and integrated handles.

### QUIET OPERATION

- It can be installed in any living room thanks to its reduced sound level (see specifications table).

### ECO-FRIENDLY

- COP up to 3.48.
- R290 refrigerant (propane).
- Recyclable cardboard packaging.

## ELENSIO 200, 250, 200H AND 250H

**40 °C HOT WATER  
VOLUME OF  
260 TO 338 L**



**QUIET**

**MEETS  
THE NEEDS OF A  
FAMILY OF SIX**



**DOMESTIC  
HOT WATER  
UP TO 65 °C**

**TITANIUM ANODE:  
REINFORCED  
PROTECTION**

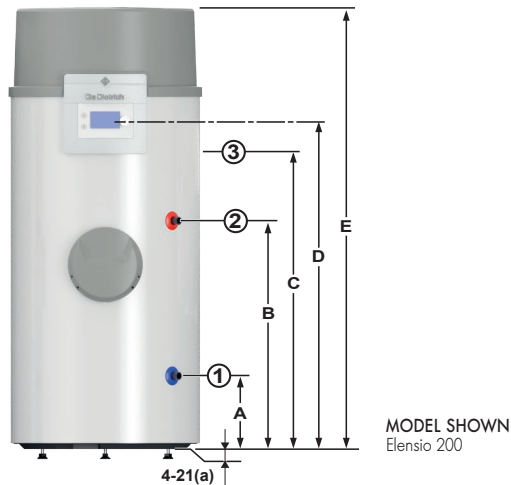
**EASY  
TO INSTALL**

**COP  
UP TO 3.48**

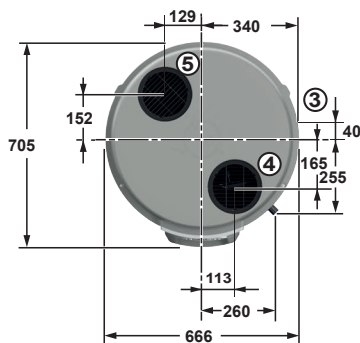
### MAIN DIMENSIONS (mm and inches)

#### • ELENSIO 200/250

Front view



Top view

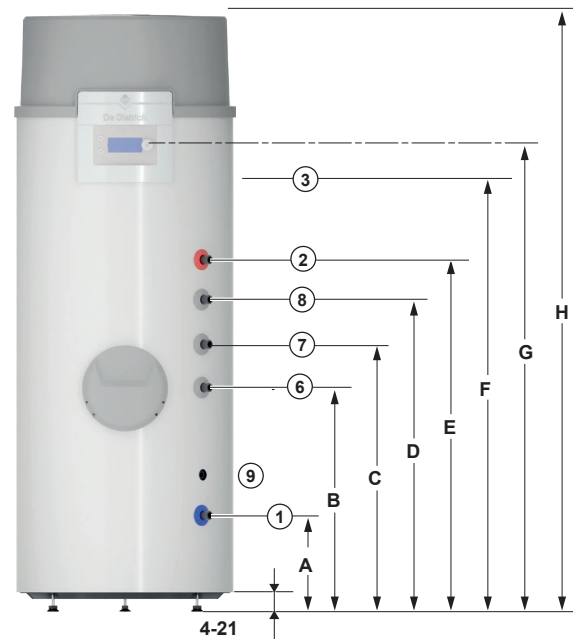


#### KEY

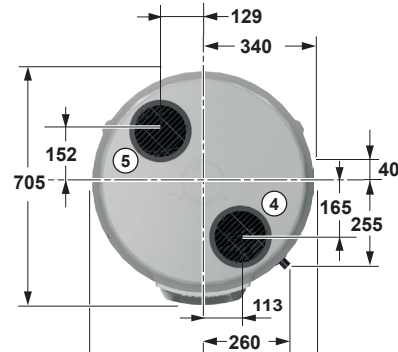
- ① Domestic cold water inlet, G 3/4" connection
- ② Domestic hot water outlet, G 3/4" connection
- ③ Condensate discharge tube
- ④ Ø 160 mm air inlet
- ⑤ Ø 160 mm air outlet
- (a) Feet adjustable from 4 to 21 mm

#### • ELENSIO 200H/250H

Front view



Top view



#### KEY

- ① Domestic cold water inlet, G 3/4" connection
- ② Domestic hot water outlet, G 3/4" connection
- ③ Condensate discharge tube
- ④ Ø 160 mm air inlet
- ⑤ Ø 160 mm air outlet
- ⑥ Hydraulic exchanger inlet, G 3/4 connection (H version only)
- ⑦ Hydraulic exchanger outlet, G 3/4 connection (H version only)
- ⑧ Connection for DHW recirculation (H version only)
- ⑨ Hydraulic backup sensor tube (H version only)
- (a) Feet adjustable from 4 to 21 mm

#### ELENSIO

	200	250	200 H	250 H
A (mm)	254	253	254	253
B (mm)	789	1 018	369	636
C (mm)	1 028	1 257	670	763
D (mm)	1 134	1 257	769	902
E (mm)	1 528	1 760	789	1 018
F (mm)	-	-	1 028	1 257
G (mm)	-	-	1 134	1 363
H (mm)	-	-	1 528	1 760

### PACKAGE AND REFERENCES

#### ELENSIO

	200	200 H	250	250 H
Package	HK407	HK406	HK404	HK405
Ref.	7785383	7785277	7785382	7784992

# TECHNICAL SPECIFICATIONS

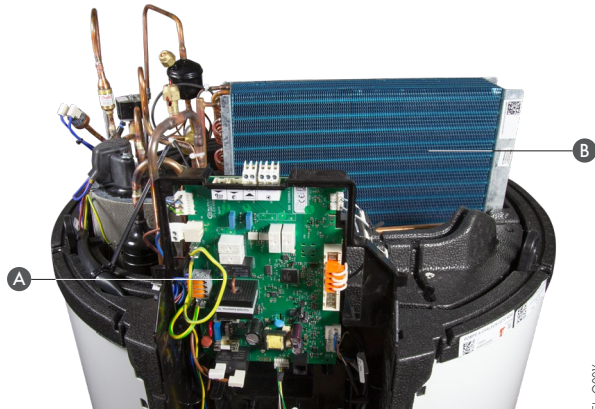
ELENSIO 200-200H-250-250H



## COMPONENTS

### ELENSIO 200/250 ET 200H/250H

Front view

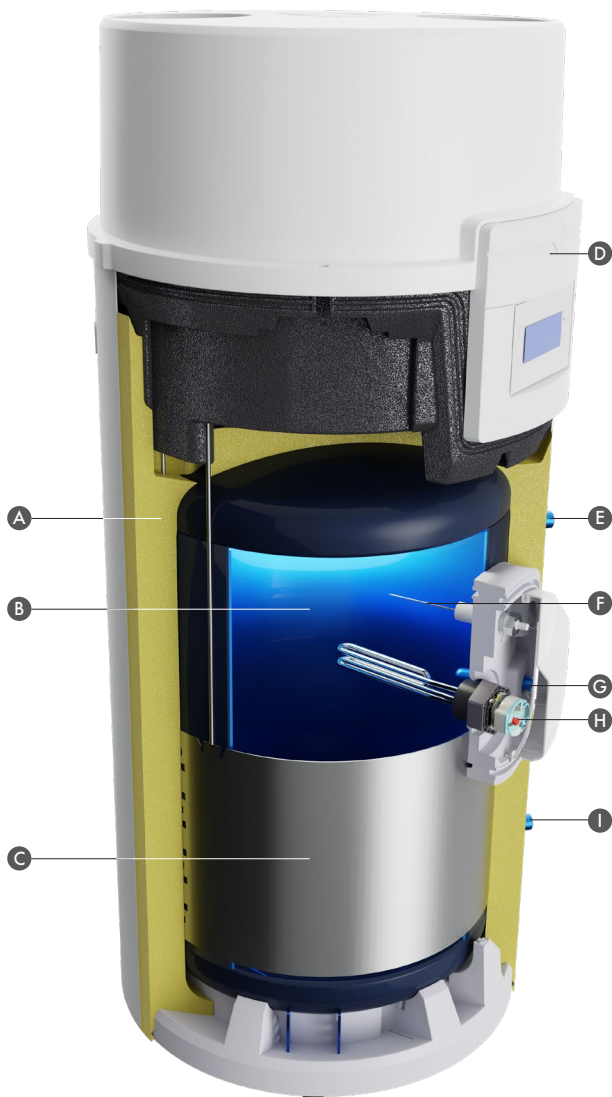


EL\_Q0016

#### KEY

- ① Control electronic circuit board      ② Evaporator

### • ELENSIO 200/250



EL\_Q0050

#### KEY

- A Tank insulation  
B Enamelled tank  
C Aluminium condenser  
D Cover: controller location  
E Domestic hot water outlet  
F Impressed current anode  
G Sensor tube  
H Shielded immersion heater  
I Cold water inlet

Rear view

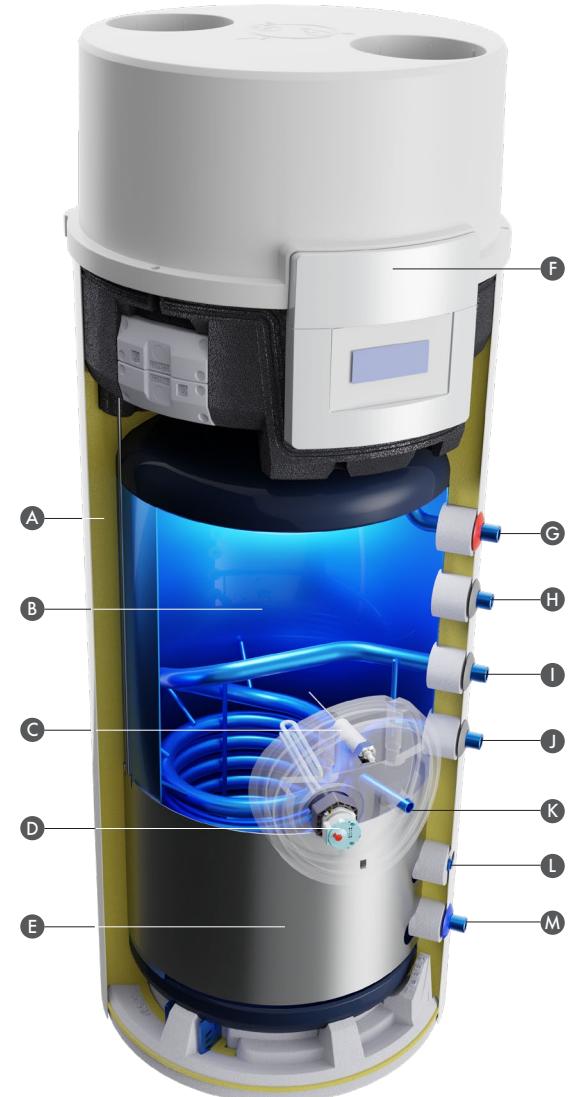


EL\_Q0018

#### KEY

- A Fan  
B Thermostatic expansion valve  
C Compressor

### • ELENSIO 200H/250H



EL\_Q0050

#### KEY

- A Tank insulation  
B Enamelled tank  
C Impressed current anode  
D Shielded immersion heater  
E Aluminium condenser  
F Cover: controller location  
G Domestic hot water outlet  
H DHW recirculation  
I Exchanger outlet  
J Exchanger inlet  
K Sensor tube  
L Sensor tube of hydraulic complement  
M Cold water inlet



### TECHNICAL SPECIFICATIONS AND PERFORMANCES

Max. operating temperature:

- tank: 90 °C
- exchanger: 90 °C

Max. operating pressure:

- tank: 10 bar
- exchanger: 10 bar

Air temperature for heat pump operation:

-5 to +35°C

#### MODEL

	ELENSIO	200		200 H		250		250 H	
Capacity	l	196		188		251		243	
Heat pump output	W	2480		2480		2480		2480	
Electrical power absorbed by the heat pump (min-max)	We	440-680		440-680		440-680		440-680	
Draw-off cycle as per EN16147		M	L	M	L	L	XL	L	XL
COP at +7 °C (outdoor air) (1)		2.56	3.09	2.63	3.15	3.15	3.48	3.00	3.28
Heating time (l)	h	6h36	6h33	6h32	6h29	8h53	8h56	8h34	8h37
COP at temperature air inlet +15°C		-	3.25	-	3.33	-	3.63	-	3.54
Maximum volume of mixed hot water at 40 °C - V40 (1)	l	260	255	258	249	337	338	320	318
Power absorbed at stabilised rate (Pes) (1) (2)	W	23	23	21	22	25	25	30	30
Energy efficiency for DHW Eta <sub>wh</sub>	%	109	128	111	130	131	143	125	135
Exchanger surface area	m <sup>2</sup>	-		0.93		-		0.93	
Maximum air flow rate	m <sup>3</sup> /h	380		380		380		380	
Available air pressure	Pa	50		50		50		50	
Max. length of Ø 160 mm air connector	m	20		20		20		20	
Immersion heater output	W	1800		1800		1800		1800	
Power supply voltage/circuit breaker	V/A	1/N/PE~230V		1/N/PE~230V		1/N/PE~230V		1/N/PE~230V	
Sound power level (int.) (3)	dB[A]	49		49		49		49	
Sound power level in silent mode (3)	dB[A]	47.6		47.6		47.6		47.6	
Sound pressure level *	dB[A]	35		35		35		35	
Refrigerant/Load	kg	R290/0.150		R290/0.150		R290/0.150		R290/0.150	
Weight (empty)	kg	88		102		99		113	

(1) Value obtained with an outdoor air temperature of +7 °C and a water inlet temperature of 10 °C as per LCIE 103-15/C:2018 specifications based on standard NF EN 16147.

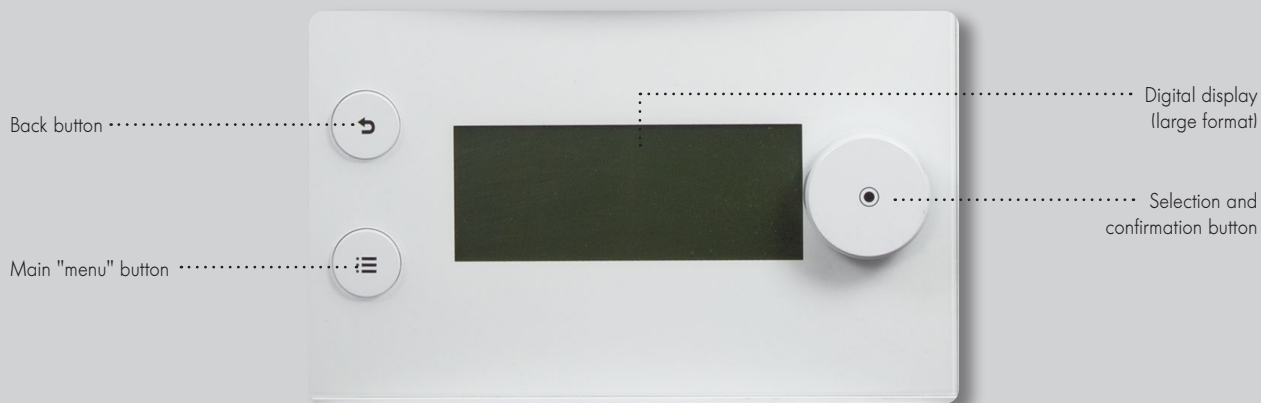
(2) Electrical power consumed without using hot water. \* measured at 2 m.

(3) Value obtained at an average air temperature of 20 °C with heating from 10 to 55 °C.

Values provided for information only: refer to the certifying body's website

## CONTROL PANEL PRESENTATION

The Elensio thermodynamic water heater is delivered with a simple and intuitive user programmable control system. It can be used to select various operating modes (Automatic, Eco, Boost and Holiday). The control system also allows the required domestic hot water volume to be set by managing (screen display) the buffer tank heating mode via the heat pump module, the immersion heater or the various combined modes. It also includes an energy metering estimation function and other functions such as frost protection, anti-legionella function, etc.



EL\_Q0012\_DD



## HYDRAULIC ACCESSORIES



TVH\_Q0041

**SAFETY UNIT CONNECTION KIT - PACKAGE ER208**

## FLUE SYSTEMS ACCESSORIES



PAC\_Q0030

**90° ELBOW Ø 160 mm - PACKAGE EH77**



TVH\_Q0018

**INSULATED FLEXIBLE DUCT Ø 160MM, LENGTH 3 m - PACKAGE EH206**



TVH\_Q0056

**SET OF FIXING CLAMPS Ø 160 mm - PACKAGE EH207**



TVH\_Q0022A

**2 X PPE DUCTS, Ø 160 mm, 1 m (DELIVERED WITH 2 SLEEVES) - PACKAGE EH272**



TVH\_Q0021A

**2 X PPE ELBOWS, Ø 160 mm (DELIVERED WITH 2 SLEEVES) - PACKAGE EH273**



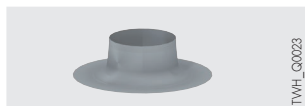
TVH\_Q0020A

**2 X PPE SLEEVES, Ø 160 mm - PACKAGE EH274**



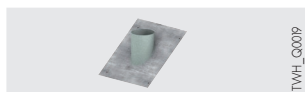
TVH\_Q0024A

**VERTICAL TERMINAL (BLACK) Ø 160 mm - PACKAGE EH275**



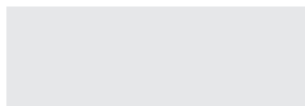
TVH\_Q0023

**WATER HIGHTNESS BED PLATE (Ø 160 mm) FOR FLAT ROOF - PACKAGE EH276**

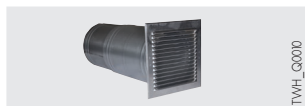


TVH\_Q0019

**WATERPROOF BASE FOR PITCHED ROOFS (25° TO 45°, Ø 160 mm) - PACKAGE EH277**

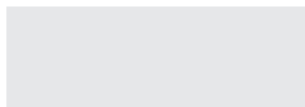


**WATERPROOF KIT FOR GALVANISED ELBOW - PACKAGE HK437**



TVH\_Q0010

**WALL-MOUNTED GRID + FEEDTHROUGH - PACKAGE HK506**



**COMPLETE OUTDOOR AIR CONNECTION KIT Ø 160 mm - PACKAGE HK438**



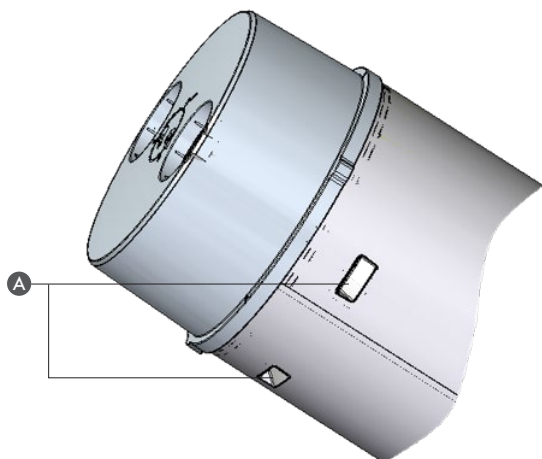
# INFORMATION REQUIRED

FOR INSTALLATION



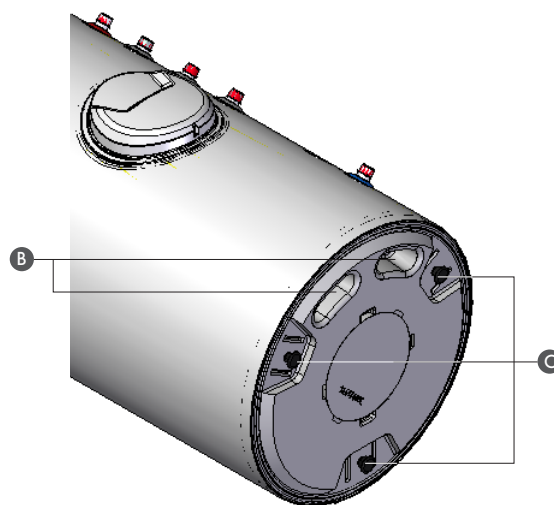
## HANDLING

### SIDE



manipulation 3

### BOTTOM



manipulation 2

#### KEY

A Top handles

B Bottom handles

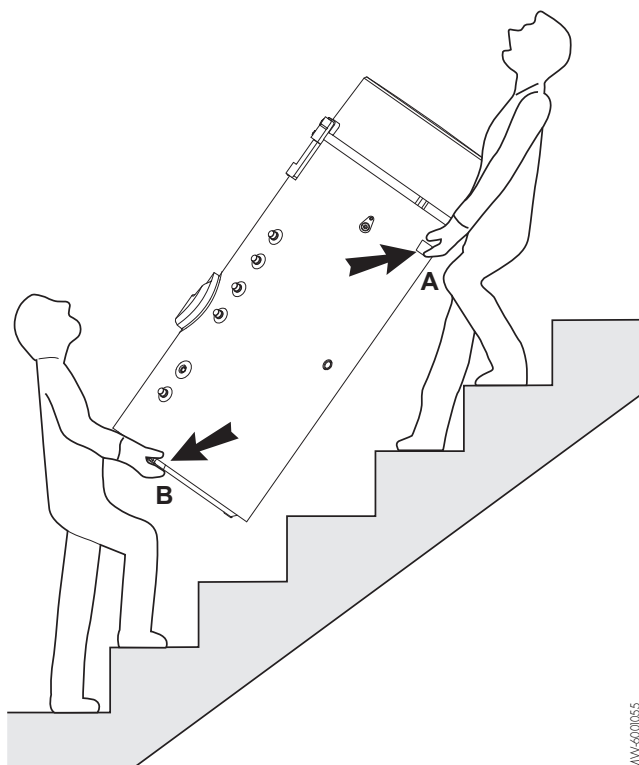
C Adjustable feet



#### CAUTION

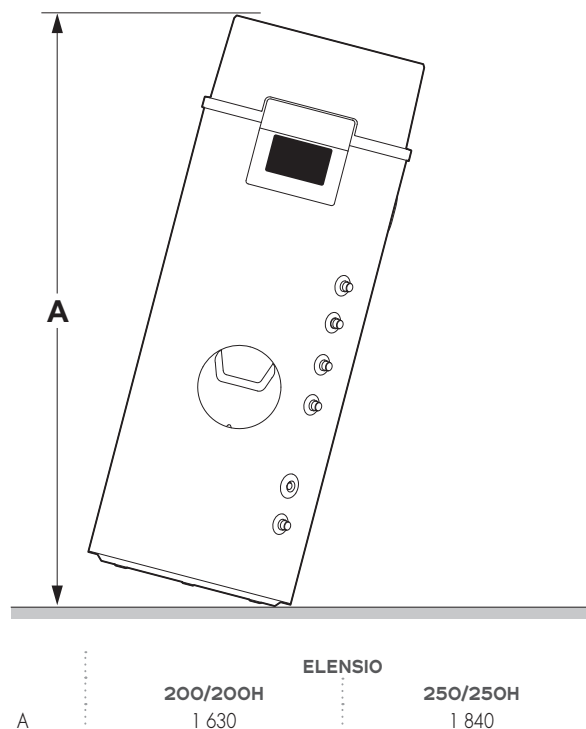
Do not use the top cover for handling.

## HANDLING



MW-600055

## TILT DIMENSIONS

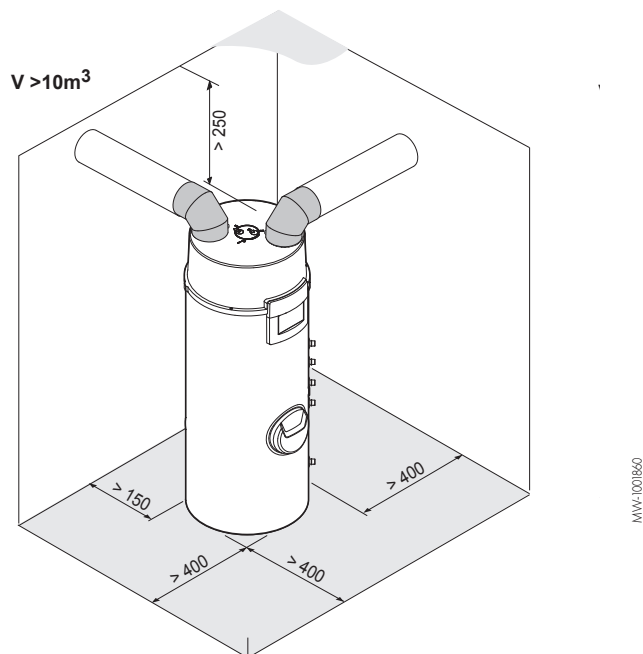


MW-600055

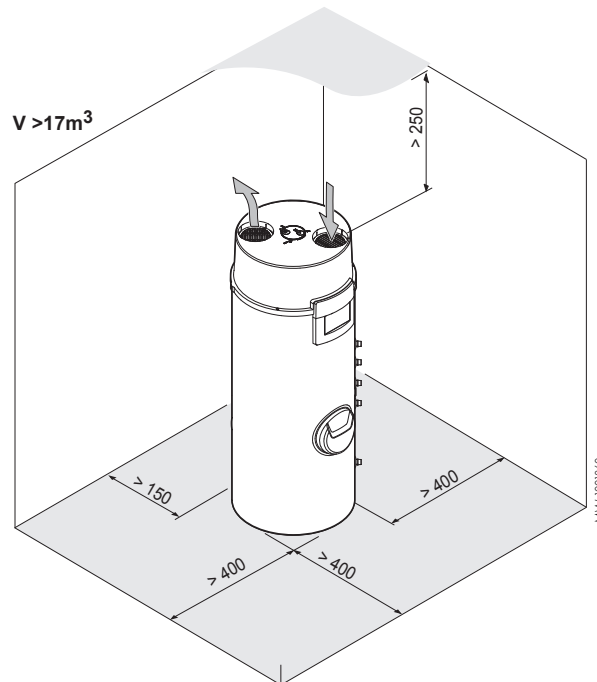
## INSTALLING THE ELENSIO WATER HEATER

The appliance must be installed in a frost-free location and at an ambient temperature between +7 and +35 °C. Caution: the installation of a thermodynamic water heater is incompatible with certain types of heating: open fires, stack effect products). Installing in the heated space reduces the standby consumption. Where possible, it should be positioned away from bedrooms (to prevent noise transmission) and close to draw-off points while minimising the length of the air ducting. Leave sufficient space around the water heater to facilitate access and maintenance.

### • WITH Ø 160 MM DUCTS



### • ON AMBIENT AIR



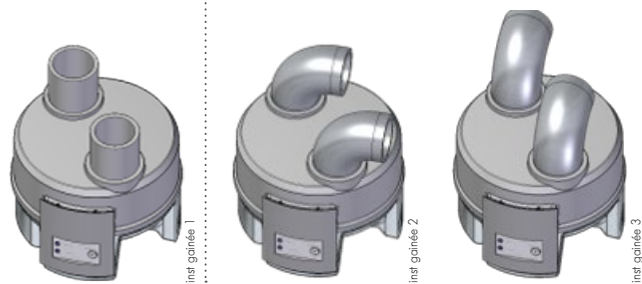
### IMPORTANT

The appliance must be affixed to the floor or a wall.

## OPERATION

### • WITH Ø 160 MM DUCTS

- without elbows
- with adjustable elbows



MAXIMUM AIR CONNECTION LENGTH (IN m)

Ø 160 mm

26

### • ON AMBIENT AIR



### CAUTION

Do not use accessories that could generate significant pressure drops (extraction grid with mosquito screen, partially slack flexible ducting). If the pressure drops are greater, the appliance's performance will be compromised and the charging times increased.

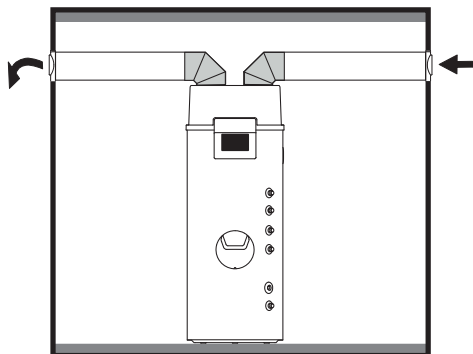
### EXAMPLES OF INSTALLATIONS OF THE ELENSIO WATER HEATER

#### • WITH Ø 160 MM DUCTS

##### • OUTSIDE AIR/OUTSIDE

The appliance draws in and discharges outdoor air.

An outdoor air connection can lead to overconsumption of electricity if the outdoor air temperature is outside the operating range.

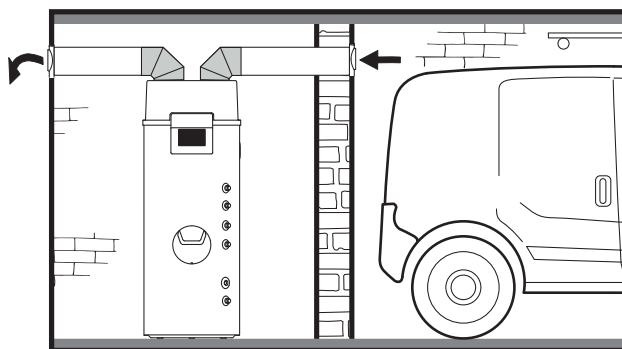


MMW-6070022

##### • INDOOR AIR/OUTSIDE

The appliance draws in room air and discharges it outdoors.

Used to recover free calories released by your vehicle's engine when parked after use or by household appliances in operation.



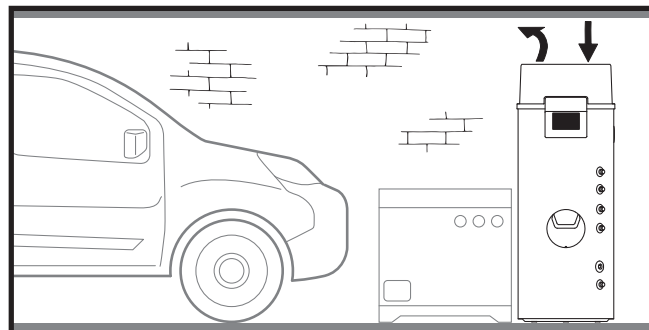
MMW-6070023

#### • ON AMBIENT AIR

##### • GARAGE

The appliance draws in and discharges room air.

Used to recover free calories released by your vehicle's engine when parked after use or by household appliances in operation.

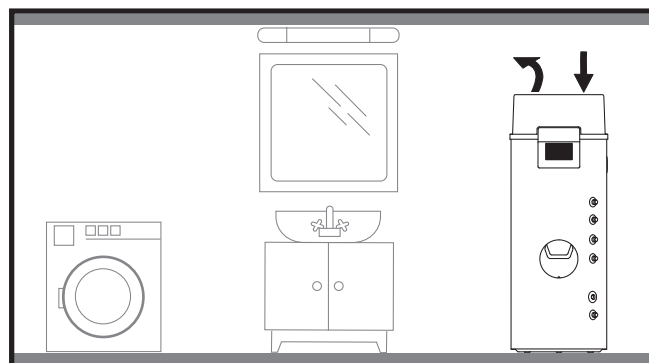


MMW-6070021

##### • LAUNDRY ROOM

The appliance draws in and discharges room air.

Used to dehumidify the room and to recover free calories released by household appliances in operation.



MMW-6070020

# INFORMATION REQUIRED

FOR INSTALLATION



## ELENSIO ELECTRICAL CONNECTION

The thermodynamic water heaters are delivered with a 230 V/50 Hz power supply cable. The electrical connection must conform to local standards. The water heater must be powered by an electrical circuit comprising an omnipolar switch with an opening gap distance of more than 3 mm and protected by a 16 A circuit breaker. ELENSIO appliances are equipped with a "Peak rate/Off-peak rate" contact enabling them to be installed in place of an existing electric water heater with no need to modify the installation. Connecting this contact also allows the user to disable operation of the heat pump module and the electrical backup at peak rate times.

	POWER SUPPLY TYPE	CABLE CROSS SECTION (mm <sup>2</sup> )	CIRCUIT BREAKER K TYPE	MAXIMUM CURRENT OF TYPE A DIFFERENTIAL
Power supply	230V single-phase	3 x 2.5 (included)	16 A	30 mA
Wiring with hydraulic backup (1) (2)	Backup control.	2 x 0.75	-	-
	Backup pump control	3 x 1.5	-	-
Off-peak rate control (3)	230V single-phase	2 x 1.5	-	-
Photovoltaic equipment wiring	230V single-phase	2 x 1.5	-	-
Photovoltaic control wiring	230V single-phase	2 x 1.5	-	-

(1) Two connectors for authorising the backup and controlling the backup pump

(2) Connection between the appliance and other equipment

(3) Cable connecting the off-peak rate signal to the appliance

## HYDRAULIC CONNECTION

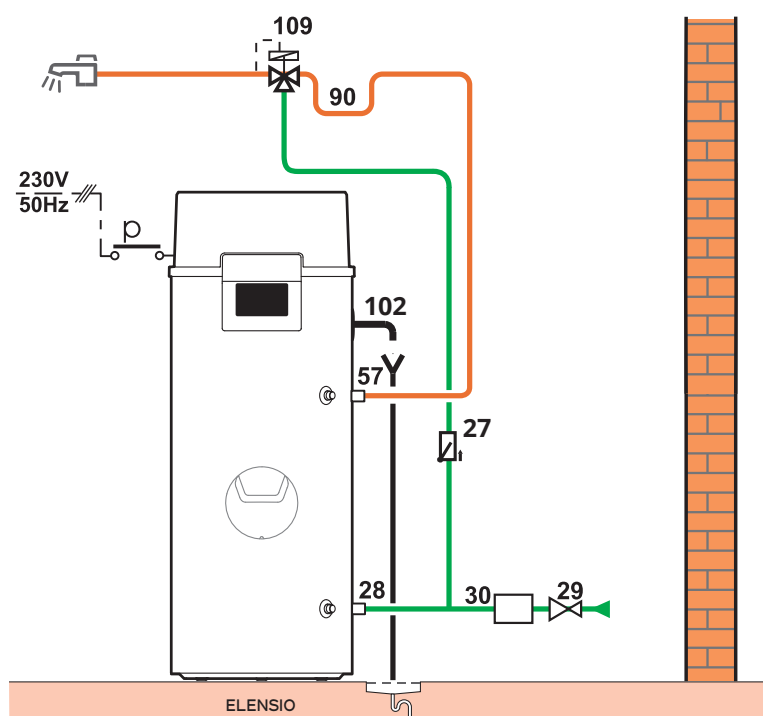


### IMPORTANT

Install a safety unit on the cold water inlet that conforms to NF EN 1487

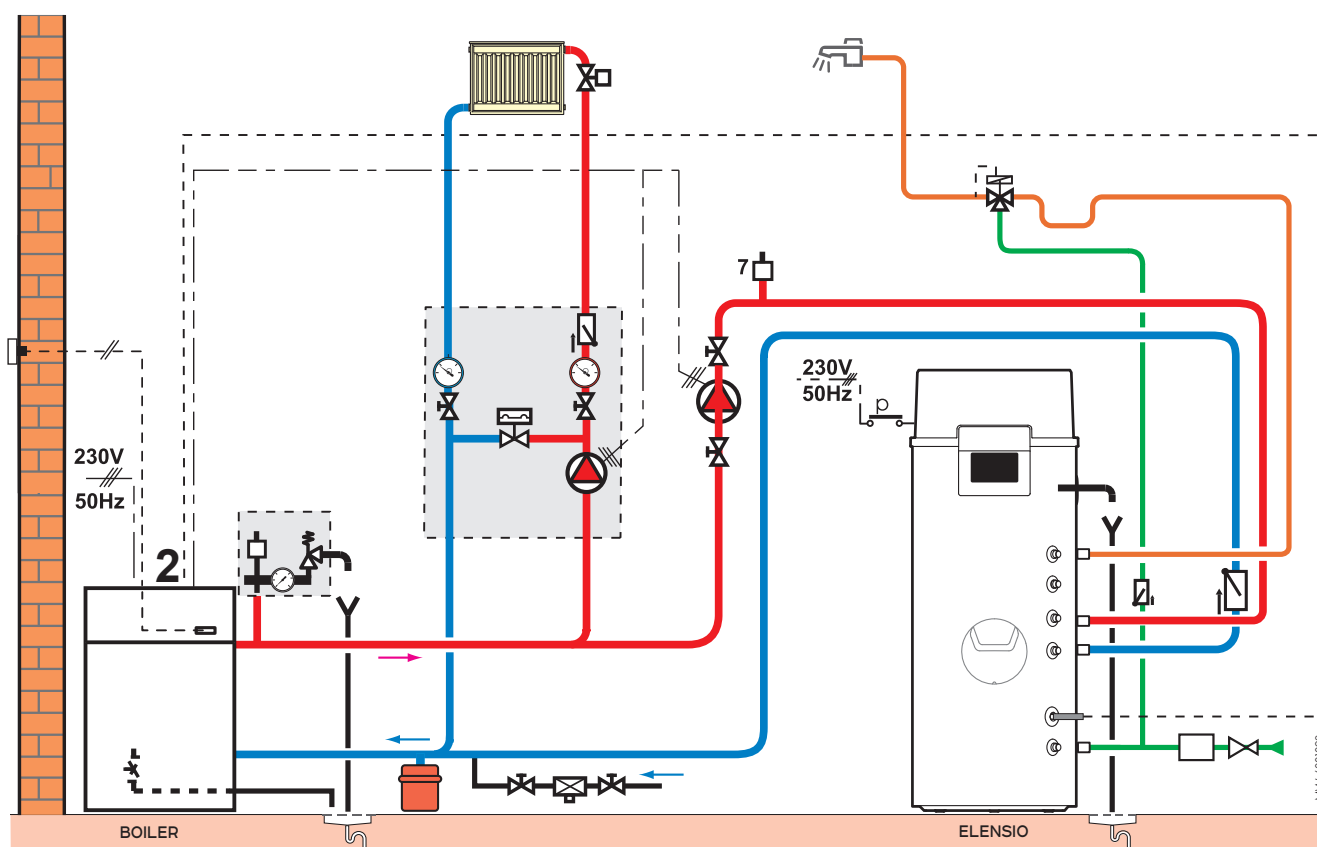
Safety unit not included.

## STANDARD INSTALLATION



MMV-5001091

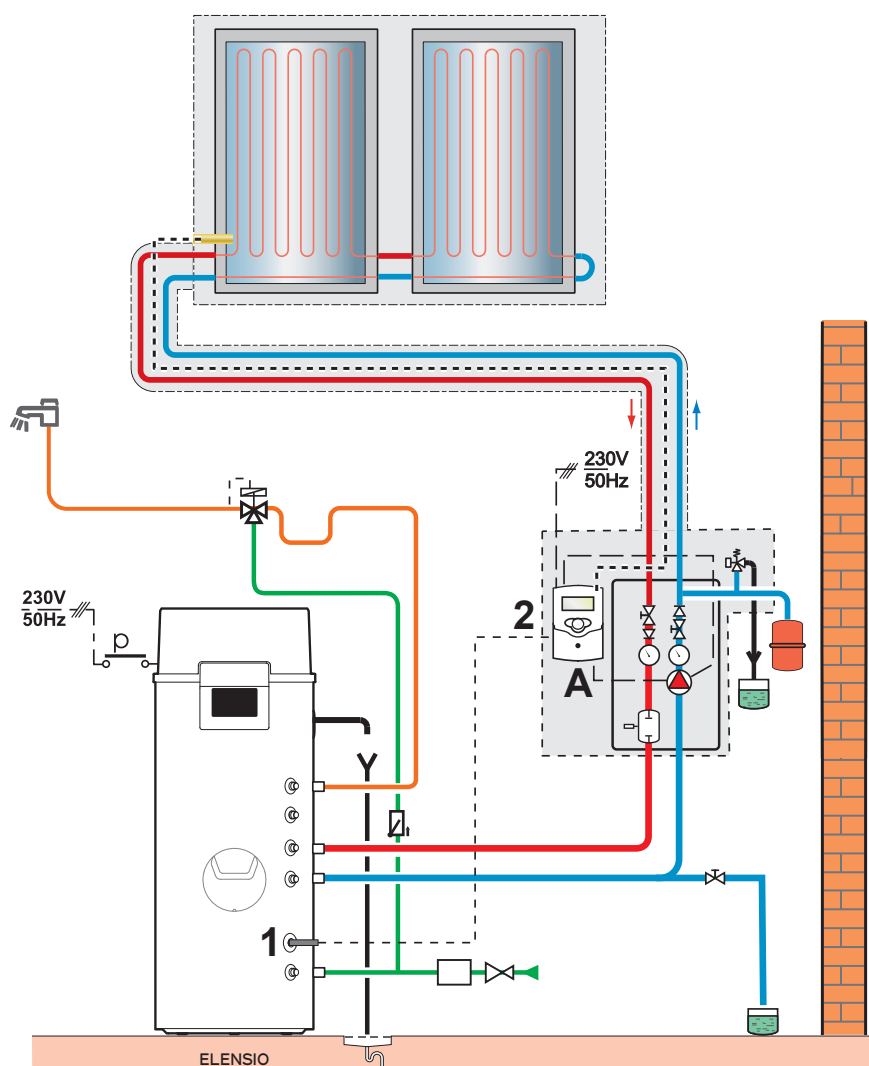
## INSTALLATION WITH BOILER HYDRAULIC BACKUP



MMV-5001093

KEY: see page 14

## INSTALLATION WITH SOLAR PANEL HYDRAULIC BACKUP



### KEY

- A Solar collector controls
- 1 Domestic hot water temperature sensor
- 2 Solar collector control contact

### KEY

- 27 Non-return valve
- 28 Domestic cold water inlet
- 29 Pressure reducer
- 30 Sealed safety device calibrated to 7 bars
- 57 Domestic hot water outlet with dielectric union
- 90 Anti-thermosiphon loop
- 102 Condensate discharge hose
- 109 Thermostatic mixing valve

MW-5001092







**BDR THERMEA France**

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