COR-EMAIL/CEB

ELECTRIC WATER HEATERS

COR-EMAIL **THS**, with steatite electrical resistance and « Integral Anti-Corrosion System » anode

- Vertical wall-hung **THS**: from 50 to 200 L
- Horizontal **THS**: from 100 to 200 L
- Floor-standing **THS**: from 150 to 300 L

COR-EMAIL « Unit » and CEB, with armored electrical resistance and magnesium anode

- Unit: under sink or above sink, from 10 to 30 L
- Vertical wall-hung: from 50 to 200 L
- Floor-standing: from 250 to 500 L

MPLC, mixed calorifiers

- Vertical or horizontal wall-hung: 150 and 200 L



COR-EMAIL « Unit »



COR-EMAIL Vertical wall-hung THS



COR-EMAIL Horizontal THS



COR-EMAIL Floor-standing THS



CEB Vertical wall-hung



Domestic hot water



Electricity

CE EN 60 335

The COR-EMAIL THS range of electric water heaters is fitted as standard with a steatite electrical resistance, an electronic thermostat incorporating the full anti-corrosion function using a hybrid titanium anode overmoulded with magnesium. They are designed for 240 V single phase mains connection and can be easily converted to 400 V three phase with the Easytri kit (optional).

COR-EMAIL «Unit» small capacity water heaters and the one in the CEB range on the other hand, are fitted with an armored electrical resistance, a magnesium anode for anti-corrosion protection and an electromechanical thermostat.

NB: we also offer mixed water heaters, **MPLC** range (see page 12).

Conditions of use

Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

Thermostat:

- Wall-hung THS, Horizontal THS, Floor-standing THS from 150 to 300 L models: electronical adjustable from 50 to 65°C, pre-set 65°C,
- « Unit » models: adjustable from 8 to 70°C, pre-set 65°C,
- CEB models: adjustable from 35 to 75°C, pre-set 65°C.

Protection index

- Unit under sink, Horizontal and Floor-standing model: IP 24,
- Unit above sink, Vertical wall-hung model: IP 25

PRESENTATION OF THE RANGES

All of our electric water heaters have a food quality standard, high quartz content enamelled steel tank, an outer casing in white sheet steel and efficient insulation in polyurethane foam injected between the tank and the casing. The top and bottom covers in white ABS give a perfect finish to the product and will look quite at home in a kitchen or bathroom. The wall-hung models come equipped with a wall-hanging bracket. The floor-standing models are fitted with 3 feet. Installation in a cupboard is possible for all models. We further offer a range of accessories to facilitate commissioning of our various water heaters.

COR-EMAIL THS RANGE

TITAN HYBRID SYSTEM

⇨ Protective devices to make your water heater last twice as long


8971Q0035


CEE_Q0013

- Hybrid anode with the combined action of magnesium and impressed current, which protects the water heater from the moment it is filled with water: it allows magnesium deposits on the critical zones susceptible to corrosion, kept in place over time by the impressed current of 500 mA released by the titanium anode in the centre of the water heater.
- Electronic thermostat providing water at a constant storage temperature to combat the risk of legionella and over consumption of energy at all times. It incorporates the ACI function (Integral Anti-Corrosion) with impressed current control and recharge of the storage battery for « peak hour » running. The storage battery voltage increased to 6 V is optimal even for low conductivity water and guarantees its long life.
- Dry heating protection and steatite electrical resistance to protect the heating element against accidental overheating and scaling guarantee the long-term performance of the water heater.

⇨ Innovations for optimised performance


CEE_Q0011

- Insulation in CFC-free injected polyurethane foam limiting heat loss and preventing the storage water from cooling down.
- Tap swirl optimising water stratification and therefore performance during draw-off
- Vitrified lining in the made-in-France tank, a guarantee of quality.

⇨ Solutions for straightforward use


CEE_Q0010

- Hinged cover with integrated cable clamp for quick, easy, safe connection.


CEE_R0006

- Clear display of operational status and any errors with LEDs.


CEE_Q0014

- Easy switch from single phase to three phase connection by replacing the existing board with an « Easytri » board.

CEB AND COR-EMAIL "UNIT" RANGES


CEE_Q0012

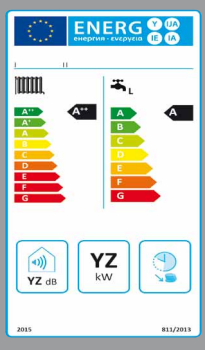
They meet the needs of entry-level buyers for relatively soft or non-aggressive tap water. They incorporate an armored electrical resistance in direct contact with the water and a magnesium anode for anti-corrosion protection. The resistance is controlled by a single phase 240 V electromechanical thermostat which can be converted to 400 V three phase by replacing the complete heating unit.

ECO SOLUTIONS
De Dietrich

Created by De Dietrich, the **ECO-SOLUTIONS** label guarantees you a range of products compliant with the European Eco-design and Energy Labelling directives. These directives apply from 26 September 2015 to heating and domestic hot water appliances.

With De Dietrich **ECO-SOLUTIONS**, you can benefit from the latest generation of multi-energy systems, easier to use, with better performance and energy savings, designed to give you greater comfort while caring for the environment. **ECO-SOLUTIONS** also mean expertise, advice and a wide range of services from the De Dietrich professional network.

The energy label, together with the **ECO-SOLUTIONS**, shows you the performance of your chosen product. More info at **www.ecodesign.dedietrich-heating.com**



THE PROPOSED MODELS

Electric water heaters range		Electrical resistance	Declared load profile	Water heating energy efficiency class	Draw-off volume L/day	Max. draw-off temperature °C	Annual energy consumption kWh (1)
COR-EMAIL THS: Electric water heaters range with steatite electrical resistance and « Integral Anti-Corrosion » anode							
Wall-hung vertical  CEE_Q0002	50 L	steatite	M	C	200	55	< 1500
	75 L	steatite	M	C	200	55	< 1500
	100 L	steatite	L	C	350	55	< 3000
	150 L	steatite	M	C	200	55	< 1500*
	200 L	steatite	L	C	350	55	< 3000*
Floor-standing  CEE_Q0001	150 L	steatite	M	C	200	55	< 1500*
	200 L	steatite	M	C	200	55	< 1500*
	250 L	steatite	L	C	350	55	< 3000*
	300 L	steatite	L	C	350	55	< 3000*
Horizontal  CEE_Q0004	100 L	steatite	L	C	350	55	< 3000
	150 L	steatite	L	C	350	55	< 3000
	200 L	steatite	L	C	350	55	< 3000
CEB: Electric water heaters range with armored electrical resistance and magnesium anode							
Wall-hung vertical  8971Q010A	50 L	armored	M	C	200	55	< 1500
	75 L	armored	M	C	200	55	< 1500
	100 L	armored	L	C	350	55	< 3000
	150 L	armored	M	C	200	55	< 1500*
	200 L	armored	L	C	350	55	< 3000*
Floor-standing	250 L	armored	L	C	350	55	< 3000*
	300 L	armored	L	C	350	55	< 3000*
	500 L (CEB500MT)	armored	XL	C	600	55	< 5500*
COR-EMAIL « Unit »: Electric water heaters range with armored electrical resistance and magnesium anode							
 8971Q014	under sink 10 L	armored	XXS	B	+/- 190	55	< 600
	under sink 15 L	armored	XXS	B	+/- 190	55	< 600
	above sink 10 L	armored	XXS	A	+/- 190	55	< 600
	above sink 15 L	armored	XXS	B	+/- 190	55	< 600
	above sink 30 L	armored	S	C	+/- 70	55	< 610

* Powered up in off-peack hours.
(1) According to the load profile.

THE PROPOSED MODELS

Choosing the electric water heater

The choice of a water heater depends on the energy needs to be met to produce enough hot water in a home: showers, baths, washing, cooking…
It is dependent:
- On the number people in the home and their consumption habits
- On the home's electricity contract: basic tariff or double/peak hours/off-peak hours or day/night tariff
- On the nature of the water: aggressive or hard water.

The installation of electric water heaters with armored electrical resistance (CEB) is conditional on the nature of the water, which must have a TH > 12°F and < 20°F. A water treatment device must be fitted with CEBs if this is not the case. This is why De Dietrich has developed its « COR-EMAIL » ranges, so that they can be installed anywhere, irrespective of the nature of the water, thanks to the steatite electrical resistance which eliminates any contact of the water with a coating or material other than enamel.
The anti-corrosion protection of the enamelled areas is guaranteed by the hybrid TAS anode with display of the protection status for COR-EMAIL **THS** and a magnesium anode (must be checked periodically) for CEBs and COR-EMAIL « Unit ».
In general, domestic hot water needs increase very quickly as soon as the user gets used to this major comfort factor. There should be no hesitation therefore in recommending a capacity markedly higher than current needs.

Heating time

The heating time of a water heater is determined according to the formula below:

$$\frac{\text{Capacity (L)} \times \Delta \text{ temperature (°C)}}{\text{Electrical resistance output (kW)} \times 86} = \text{Heating time (h)}$$

where Δt (°C) = 50 max. (cold water 10°C/hot water 60°C)

Choosing the electric water heater

Station to be supplied	Number of people	Daily DHW needs (L at 60°C)	Recommended appliance
Kitchen	1-4	30 50	10, 15 or 30 L
Apartment	1-2 3-6	75 to 95 120 to 190	100 L 150 or 200 L
Studio	1-2 3-4	50 to 75 80 to 120	75 or 100 L 100 or 150 L
House	1-3 4-5 6	90 to 150 200 to 300 340	150 L or 200 L 200, 250 or 300 L 500 L

NB: these tables do not cover multi-jet showers or « spa » type bathtubs

Special cases: domestic hot water requirements in the tertiary sector

⇨ Hotels with no restaurant

Hotel category	No ★	1★	2★	3★	4★
DHW needs at 60°C (L/room)	50	70	100	120	150

⇨ Restaurants

Restaurant	collective (1)		private (1) (2)	
Number of place settings	100	200	40	60
DHW needs at 60°C (L)	500	1000	480	520

(1) 5 L/place setting with dishwashing for 1 h
(2) 12 L/place setting with dishwashing for 1 h

⇨ Camp sites

Number of shower cabins	5	10
DHW needs at 60°C (L) Seaside	1200	2400
Not seaside	1000	1900

⇨ Hairdressing salons

Number of basins	DHW needs at 60°C (L)
3	700
4	1000

⇨ Others

Offices: 6 L at 60°C per occupant per day
Schools: 5 L at 60°C per pupil per day
Gymnasiums: 16.5 L at 60°C per person with timed shower

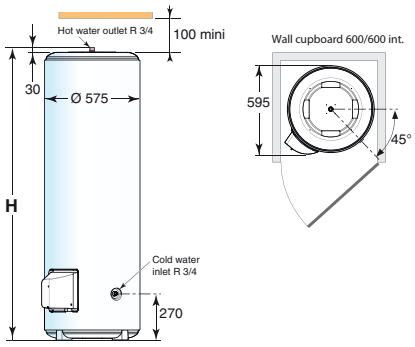
Choosing the location

Electric water heaters should be located in a place which is not exposed to freezing, as close as possible to the various drawing points, so that the piping is kept to a minimum length. If the tapping points are very far from each other, it may be better to use two water heaters.

While selecting the location of the heater, make sure that the cold and hot water pipes are accessible and easy to connect.
In new build, the location of the water heater must satisfy the requirements of the regulations governing energy consumption levels in the home.

COR-EMAIL FLOOR-STANDING THS WATER HEATERS

Main dimensions (mm and inches)



CEE_F0003A

Dimensions mm	H
150 L	1005
200 L	1260
250 L	1500
300 L	1760

Installation

Floor-standing water heaters are designed so that it is possible to install them in a cupboard measuring 600 x 600 mm. If this is the case, they are positioned at 45°: see diagram opposite.

Technical specifications

Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

Electronical thermostat adjustable from 50 to 65°C (pre-set 65°C)

Floor-standing models			150 L	200 L	250 L	300 L
Nominal capacity		L	150	200	250	300
Nominal power		W	1800	2400	3000	3000
Power supply			Easytri	Easytri	Easytri	Easytri
Intensity	- 230 V single phase	A	7.8	10.4	13.0	13.0
	- 400 V three phase	A	2.6	3.5	4.3	4.3
Actual heating time (1) (2)		h	4 h 29	4 h 34	5 h 09	6 h 19
Quantity of water provided at 40°C V_{40}		L	265	375	440	526
Standby consumption Qpr (2)		kWh/24h	1.64	1.95	2.20	2.49
Tare weight		kg	40	51	69	73

(1) According to EN 60379 (15°C to 65°C)
(2) Results obtained on appliances taken on the day of manufacture, according to the protocol described by the EN 60379 standard, with a thermostat trigger temperature at 62°C and a differential of 5K

Description

Hot water outlet pipe (stainless steel)

Thick metal tank (test pressure 12 bar)

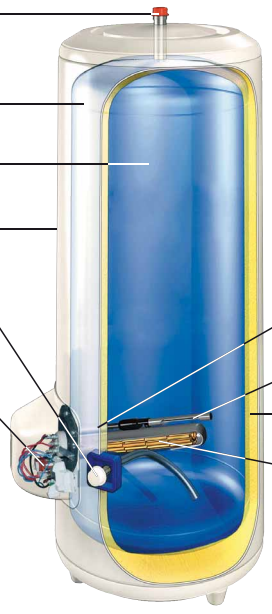
Vitreous enamel with a high quartz content

Casing in white enamelled sheet metal

Cold water inlet pipe (stainless steel)

Hinged electronic circuit, incorporating the thermostat and ACI (Integral Anti-Corrosion) functions, with "240 V ~ single phase" clip-on module

NB EASYTRI 240/400 V : for operation on 400 V ~ three phase, this module can be replaced with the optional "Easytri" module – see below



CEE_Q0006

Location thermostat sensor

Titanium impressed current anode overmoulded with magnesium

Injected polyurethane foam insulation (0% CFC)

Steatite electrical resistance, inserted into an enamelled sheath, accessible without requiring drainage of the water heater

Shown heater: 300 L

Product advantages:

- Titan Hybrid System: Immediate, lasting protection by protective magnesium deposit, kept in place over time thanks to the impressed current that automatically adapts to water quality
- Combined action of a consumable magnesium anode and wear-resistant titanium
- Dry heating protection and guaranteed temperature over time against the risk of legionella

Electrical and hydraulic connections

See pages 10 and 11.

Options



8971Q013

« Easytri » transformation kit 240 V/400 V - Ref. 100001495

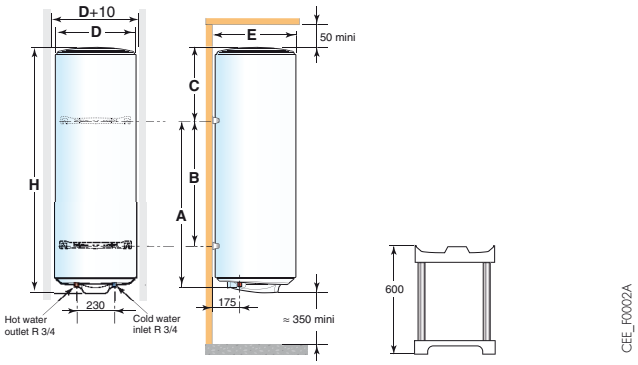
This kit is used to switch voltage from 240 V ~ single phase to 400 V ~ three phase in a record time: simply unclip the "240 V ~ single phase" board in place, after disconnecting the electrical harness on the electrical resistance, and replace it with the "Easytri" kit.

COR-EMAIL VERTICAL WALL-HUNG THS WATER HEATERS

TITAN HYBRID SYSTEM

EASYTRI 240/400 V (from 150 L)

MAIN DIMENSIONS (mm and inches)



CEE_F0002A

Dimensions mm	A	B	C	Ø D	E	H
50 L	370	-	155	505	530	575
75 L	570	-	120	505	530	740
100 L	750	-	115	505	530	910
150 L	1050	800	145	505	530	1240
200 L	1050	800	475	513	540	1570

NB: should you need to replace the heating element, allow a clearance of ≃ 350 mm underneath the water heater

Fastenings

The vertical, wall-hung water heaters are hung on the wall (4 bolts* Ø 10 mm sealed in the wall). Two notched brackets (delivered with the package) make it easy to hang the water heater, even in a cupboard.

* **NB:** the 50 L, 75 L and 100 L water heaters are simply held in place with 2 bolts, the bottom bracket being replaced by an abutment. For non-bearing partitions, the water heater must be placed on a tripod (optional – see p. 10) and sealed to the wall.

TECHNICAL SPECIFICATIONS

Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

Electronical thermostat adjustable from 50 to 65°C (pre-set 65°C)

Vertical wall-hung models			50 L	75 L	100 L	150 L	200 L
Nominal capacity		L	50	75	100	150	200
Nominal power		W	1200	1200	1200	1800	2400
Power supply			single phase	single phase	single phase	Easytri	Easytri
Intensity	230 V single phase	A	5.2	5.2	5.2	7.8	10.4
	400 V three phase	A	-	-	-	2.6	3.5
Actual heating time (1) (2)		h	2h36	4h11	5h19	5h11	5h17
Quantity of water provided at 40°C V_{40}		L	-	139	187	278	375
Standby consumption Qpr (2)		kWh/24h	0.82	1.02	1.25	1.59	1.94
Tare weight		kg	22	27	32	41	52

(1) According to EN 60379 (15°C to 65°C)
(2) Results obtained on appliances taken on the day of manufacture, according to the protocol described by the EN 60379 standard, with a thermostat trigger temperature at 62°C and a differential of 5K

DESCRIPTION

Hot water outlet pipe (stainless steel)

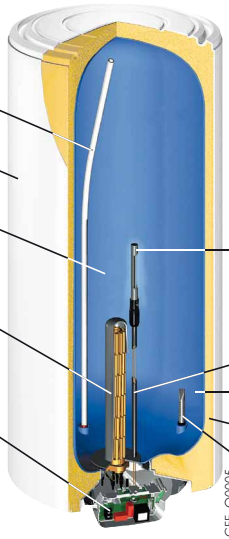
Casing in white enamelled sheet metal

Thick metal tank (test pressure 12 bar)

Steatite electrical resistance, inserted into an enamelled sheath, accessible without requiring drainage of the water heater

Hinged electronic circuit, incorporating the thermostat and ACI (Integral Anti-Corrosion) functions, with "240 V ~ single phase" clip-on module

NB EASYTRI 240/400 V : for operation on 400 V ~ three phase, this module can be replaced with the optional "Easytri" module – see below



CEE_Q0005

Product advantages:
- Dynamic tank protection by **THS** – Titan Hybrid System
- Self-adapting to variations in water quality
- Lifespan doubled with reduced consumption

TITAN HYBRID SYSTEM Titanium impressed current anode overmoulded with magnesium

Location thermostat sensor

Vitreous enamel with a high quartz content

Injected polyurethane foam insulation (0% CFC)

Cold water inlet pipe with tap swirl (stainless steel)

ELECTRICAL AND HYDRAULIC CONNECTIONS

See pages 10 and 11.

OPTIONS



8971Q013

« Easytri » transformation kit 240 V/400 V - Ref. 100001495

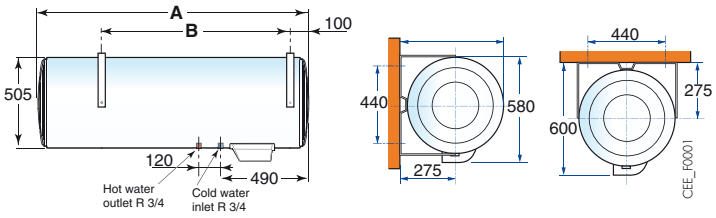
This kit is used to switch voltage from 240 V ~ single phase to 400 V ~ three phase in a record time: simply unclip the "240 V ~ single phase" board in place, after disconnecting the electrical harness on the electrical resistance, and replace it with the "Easytri" kit.

OTHER OPTIONS

Trivet, centre of gravity transfer kit: see page 10.

COR-EMAIL HORIZONTAL THS WATER HEATERS

Main dimensions (mm and inches)

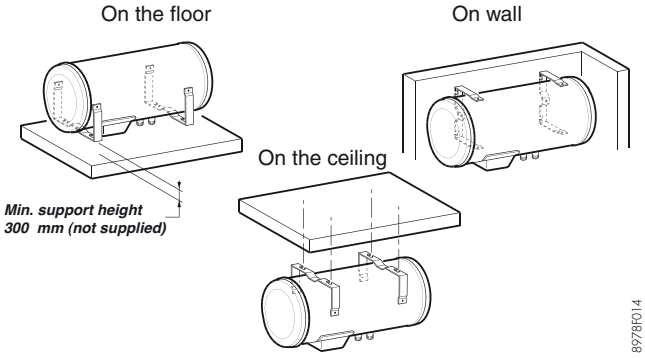


Dimensions mm	A	B
100 L	860	600
150 L	1180	800
200 L	1510	1050

NB: should you need to replace the heating element, allow a clearance of ≃ 400 mm underneath the water heater

Fastenings

The horizontal water heaters are hung on the wall (4 bolts Ø 10 mm sealed in the wall).
Horizontal water heaters can be fitted either to the wall or to the ceiling and, in both cases, the connections can be placed either to the right or left, but always downwards.



Technical specifications

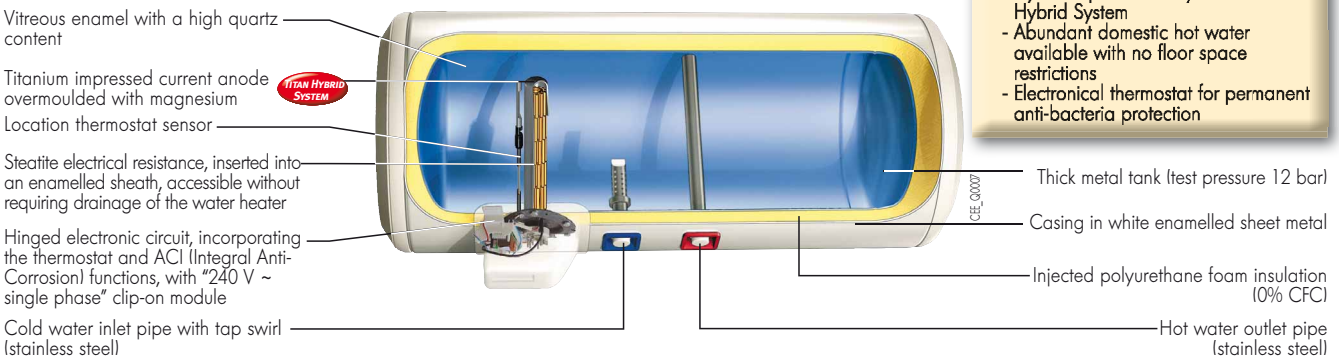
Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

Electronical thermostat adjustable from 50 to 65°C (pre-set 65°C)

Horizontal models			100 L	150 L	200 L
Nominal capacity		L	100	150	200
Nominal power		W	1800	1800	2100
Power supply			Easytri	Easytri	Easytri
Intensity	230 V single phase	A	7.8	7.8	9.1
	400 V three phase	A	2.6	2.6	3.0
Actual heating time (1) (2)		h	3 h 07	4 h 39	5 h 13
Quantity of water provided at 40°C V_{40}		L	184	266	354
Standby consumption Qpr (2)		kWh/24h	1.28	1.60	2.06
Tare weight		kg	34	43	54

(1) According to EN 60379 (15°C to 65°C)
(2) Results obtained on appliances taken on the day of manufacture, according to the protocol described by the EN 60379 standard, with a thermostat trigger temperature at 62°C and a differential of 5K

Description



Product advantages:
- Dynamic protection by **THS** – Titan Hybrid System
- Abundant domestic hot water available with no floor space restrictions
- Electronical thermostat for permanent anti-bacteria protection

NB EASYTRI 240/400 V : for operation on 400 V ~ three phase, this module can be replaced with the optional "Easytri" module – see below

Electrical and hydraulic connections

See pages 10 to 11.

Options



« Easytri » transformation kit 240 V/400 V - Ref. 100001495

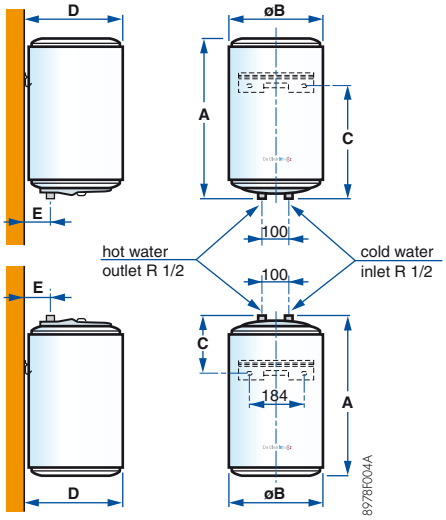
This kit is used to switch voltage from 240 V ~ single phase to 400 V ~ three phase in a record time: simply unclip the "240 V ~ single phase" board in place, after disconnecting the electrical harness on the electrical resistance, and replace it with the "Easytri" kit.

COR-EMAIL « UNIT » WATER HEATERS

Main dimensions (mm and inches)

Under sink

Above sink



Dimensions mm		A	Ø B	C	D	E
Under sink	10 L	456	255	218	262	64
	15 L	496	287	218	294	70
Above sink	10 L	456	255	289	262	64
	15 L	496	287	327	294	70
	30 L	623	338	463	345	81

Fastenings

Unit water heaters are hung in a sink unit to be attached to the wall using 2 bolts Ø 8 mm.

Technical specifications

Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

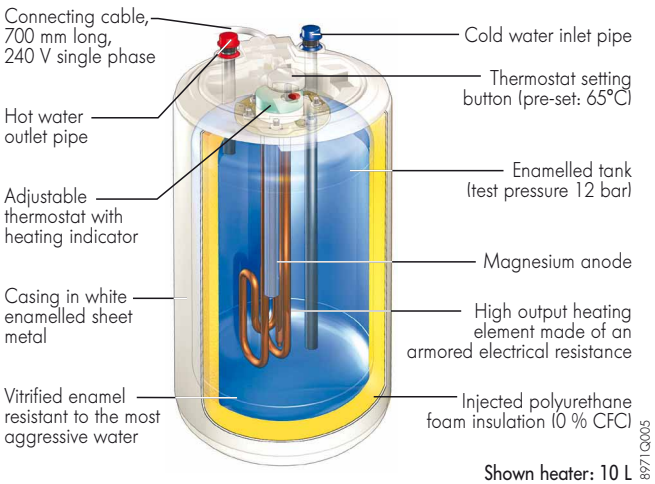
Thermostat adjustable from 8 to 70°C (pre-set 65°C)

Unit models		Under sink		Above sink		
		10 L	15 L	10 L	15 L	30 L
Energy efficiency class		B	B	A	B	C
Nominal capacity	L	10	15	10	15	30
Nominal power	W	2000	2000	1600	2000	2000
Power supply		single phase	single phase	single phase	single phase	single phase
Intensity in 230 V single phase	A	8.7	8.7	7.0	8.7	8.7
Actual heating time (1) (2)	min	18	27	24	26	57
Standby consumption Qpr (2)	kWh/24h	0.63	0.66	0.44	0.54	0.78
Tare weight	kg	7.5	9.5	7.5	9.7	13

(1) According to EN 60379 (15°C to 65°C)
(2) Results obtained on appliances taken on the day of manufacture, according to the protocol described by the EN 60379 standard, with a thermostat trigger temperature at 62°C and a differential of 5K

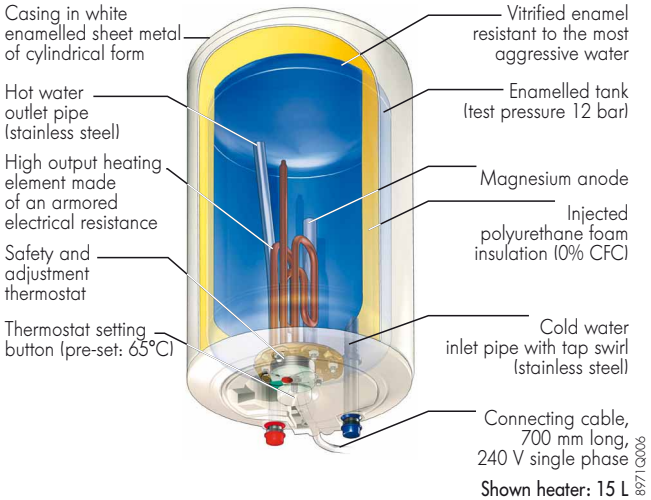
Description

Under sink



Shown heater: 10 L

Above sink



Shown heater: 15 L

Electrical and hydraulic connections

See pages 10 and 11.

Option: mixing tap fittings for free flow

Two types of valve are available as options, one for the "over sink" models and the other for the "under sink" models.



Mixing tap for free flow -
Ref. 89718950
Under sink models

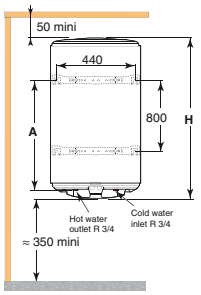


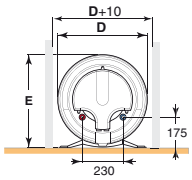
Mixing tap for free flow -
Ref. 89788901
Above sink models

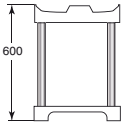
CEB WATER HEATERS RATES

Main dimensions (mm and inches)

Vertical wall-hung water







CEE_F0004B

Dimensions mm	H	A	Ø D	E
CEB 50 L	570	370	505	530
CEB 75 L	735	570	505	530
CEB 100 L	910	700	505	530
CEB 150 L	1240	1050	505	530
CEB 200 L	1570	1050	513	540

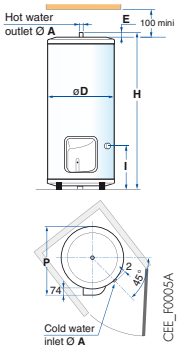
Fastenings

The vertical, wall-hung water heaters are hung on the wall (4 bolts* Ø 10 mm sealed in the wall). Two notched brackets (delivered with the package) make it easy to hang the water heater, even in a cupboard.

* **NB:** the 50 L, 75 L and 100 L water heaters are simply held in place with 2 bolts, the bottom bracket being replaced by an abutment. For non-bearing partitions, the water heater must be placed on a tripod (optional – see p. 10) and sealed to the wall.

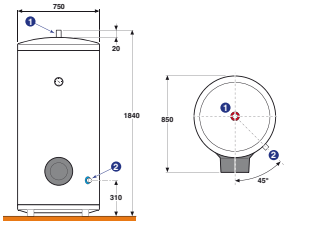
Floor-standing water heater

CEB 250 and 300



CEE_F0005A

CEB 500 MT



CEE_F0008

Dimensions mm	Ø A	Ø D	E	H	I	P
CEB 250	R 3/4	575	30	1500	270	590
CEB 300	R 3/4	575	30	1760	270	590

Installation

Floor-standing water heaters (except CEB 500) are designed so that it is possible to install them in a cupboard measuring 600 x 600 mm. If this is the case, they are positioned at 45°: see diagram above.

Technical specifications

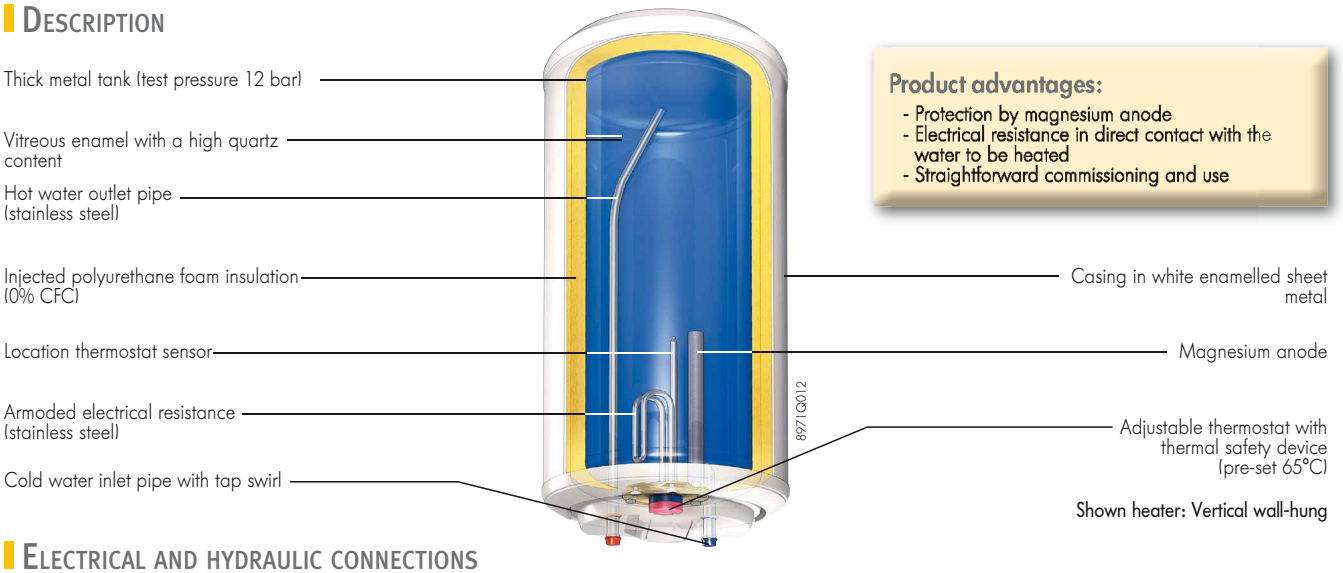
Maximum operating temperature: 95°C
Maximum operating pressure: 7 bar

Thermostat adjustable from 35 to 75°C (pre-set 65°C)

Models		Vertical wall-hung					Floor-standing		
		CEB 50	CEB 75	CEB 100	CEB 150	CEB 200	CEB 250	CEB 300	CEB 500 MT
Nominal capacity	L	50	75	100	150	200	250	300	500
Nominal power	W	1200	1200	1200	1600	2200	3000	3000	5000
Intensity in 230 V single phase	A	5.2	5.2	5.2	7	9.6	14.3	14.3	21.0
Power supply		single phase	single phase	single phase	single phase	single phase	single phase	single phase	single/ three phase
Actual heating time (1) (2)	h	2h26	4h07	5h29	6h00	6h01	4h32	5h43	5h50
Quantity of water provided at 40°C V_{40}	L	-	137	179	275	376	443	531	880
Standby consumption Qpr (2)	kWh/24h	0.71	1.05	1.24	1.61	1.92	2.18	2.50	2.60
Tare weight	kg	22	27	32	41	54	69	73	154

(1) According to EN 60379 (15°C to 65°C) (2) Results obtained on appliances taken on the day of manufacture, according to the protocol described by the EN 60379 standard, with a thermostat trigger temperature at 62°C and a differential of 5K

Description



Product advantages:
- Protection by magnesium anode
- Electrical resistance in direct contact with the water to be heated
- Straightforward commissioning and use

Shown heater: Vertical wall-hung

Electrical and hydraulic connections

See pages 10 to 11.

Options



8980Q239

Electrical resistance kit 400 V three phase for:
- **CEB wall-hung electric water heaters 200 L -** Ref. 100020099
- **CEB floor-standing electric water heaters 250 and 300 L (except CEB 500) -** Ref. 7605060

Other options

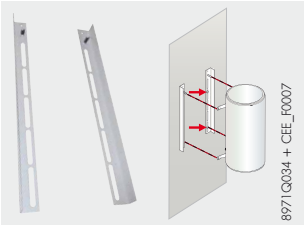
Trivet for standing vertical wall-hung models on the floor and centre of gravity transfer kit: see page 10.

OPTIONS



Trivet for wall-hung electric water heaters (COR-EMAIL and CEB) - Ref. 89788949

Installation of a vertical wall-hung water heater on a trivet can only be done if the trivet can also be secured to the wall using the hanging bracket to ensure that the entire unit is stable.



Universal centre of gravity transfer kit - Ref. 100019794

If replacing an existing water heater with a water heater from this range with different distances between the hanging brackets, using this kit will obviate the need to drill new locating holes.

The kit comprises 2 brackets with oblong holes to accommodate existing fastenings.

INFORMATION REQUIRED FOR INSTALLATION

Recommendations for enhancing user safety

We recommend respecting the following temperature levels for domestic hot water production and distribution equipment in new installations (new build or major renovation):

- **A maximum temperature at the draw-off points to limit the risk of scalding** (50°C in rooms intended for ablutions, 60°C in other rooms, up to 90°C in certain special cases likes restaurants or canteens).
- **A temperature kept constantly at least equal to 50°C at all points in the distribution system** where the water volume between the tank outlet and the most distant draw-off point is more than 3 litres (approximately 20 m of pipes Ø 14 mm).

Electrical connections

The electrical connection must comply with the prevailing standard.

- All water heaters are fitted to operate on 240 V ~ single phase;
- 150 and 250 L COR-EMAIL vertical wall-hung water heaters, 150 to 300 L horizontal water heaters and floor-standing water heaters can also operate on 400 V ~ three phase: to this end, an optional "Easytri" conversion kit is available; see p. 6;
- 200 to 300 L CEB water heaters can be converted for connection to 400 V three phase by replacing the complete heating unit with the optional kit available (see p. 9);
- The 500 L CEB 500 MT water heater is 240 V single phase or 400 V three phase.
- Electric water heaters should be located in a place which is not exposed to freezing, as close as possible to the various drawing points, so that the piping is kept to a minimum length. If the tapping points are very far from each other, it may be better to use two water heaters. While selecting the location of the heater, make sure that the cold and hot water pipes are accessible and easy to connect.

NB: The heaters must necessarily be connected to a fixed piping system. In principle, power will be supplied to the heater at night, manually or automatically with the help of a clock supplied by the electricity company. In this way, the water is heated when the reduced off-peak rate is charged for electricity. The unit may be fitted with a switch for supplying power in the daytime, when the full rate is charged.

Electrical connections		Water heater range					
		COR-EMAIL THS		COR-EMAIL Unit	CEB		
		50 to 150 L	200 to 300 L	10 to 30 L	50 to 150 L	200 to 300 L	500 L
240 V single phase	Wire section mm²	1.5	2.5	2.5	1.5	2.5	4
	Fuse A	10	15	10	10	15	20
400 V three phase	Wire section mm²	1.5	1.5	-	-	2.5	2.5
	Fuse A	10	10	-	-	10	10

INFORMATION REQUIRED FOR INSTALLATION

Hydraulic connections

The connections are marked with blue (cold water) and red (hot water) discs. Fitting a stop valve on the cold water supply pipe is compulsory.
Safety rules require that a lead-sealed safety valve calibrated to 7 bar must necessarily be fitted on the cold water supply pipe (for the guarantee to operate).

Important

For "Unit" water heaters with free flow connection, installation of this kind of safety valve is not necessary.
A pressure reducing valve must be fitted if the supply pressure is greater than 5.5 bar.

The essential rules to follow



Insulating connection delivered with the water heaters (except "Unit" models)

Connecting a water heater to copper pipes must always be done with the intercalation of this insulating connection or reduced or equal male/female sleeves in cast iron.
The connection provided is intended to be connected to the hot water outlet and obviates the creation of a galvanic couple, which causes corrosion on the connection threading if the water heater is directly connected using copper or brass fittings. The safety unit on the other hand is connected directly to the water heater's cold water inlet pipe. If this is not the case and copper mains pipes form the junction between the cold water pipe and the safety control unit, it is essential that a sleeve is also intercalated. If the threading on pipes not fitted with this protection is corroded, our warranty may not apply.

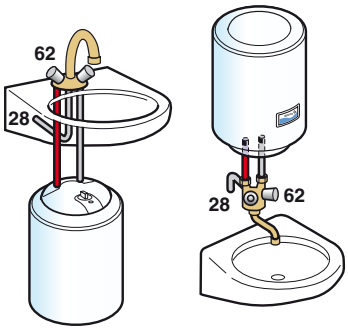
Water heater electrical connection

Water heater model		10 to 15 L	30 to 150 L	200 to 300 L	500 L
Copper pipe dimensions	mm	10 x 12	10 x 12 or 14 x 16	14 x 16 or 16 x 18	20 x 22

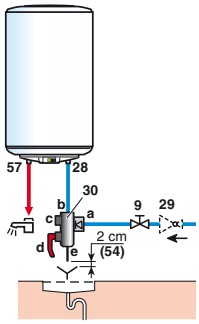
Examples of installation

➪ **« Unit » electric water heaters**

Free flow mounting



Pressurised mounting

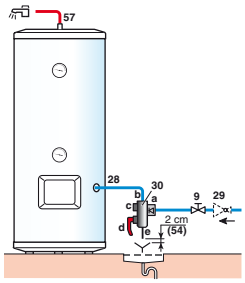


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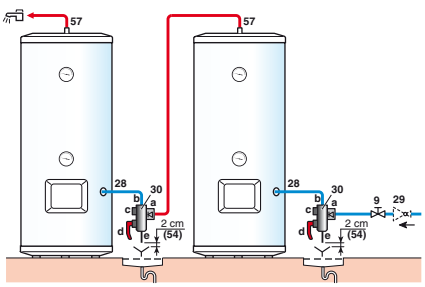
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➪ **Wall-hung, Horizontal or Floor-standing electric water heaters**

Pressurised mounting



Serial mounting is possible



8978F010

8978F011

Key

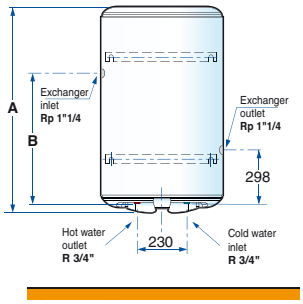
a Cold water inlet including a non-return valve
b Connection to the water heaters's cold water inlet
c Stop valve
d Manual drainage and safety valve
e Drainage hole
9 Stop valve
28 Domestic cold water inlet
29 Pressure reducer if mains pressure >5.5 bar
30 Safety unit calibrated at 7 bar
54 YA-type load break (health regulations)
57 Domestic hot water outlet with intercalation of insulating connection
62 Mixing tap for free flow

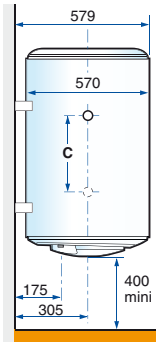
MIXED WALL-HUNG DOMESTIC HOT WATER CALORIFIERS MPLC

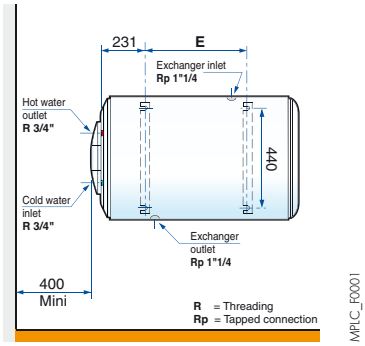
De Dietrich also offers mixed water heaters in its catalogue: these are efficient dual-energy DHW tanks that can be connected to a central heating boiler and which, outside periods when heating is required, handle the production of domestic hot water using electricity. Below are the principal specifications of these water heaters.

MAIN DIMENSIONS (mm and inches)









ⓐ and ⓑ can both be used for the cold water inlet (plug the opening not used)

Dimensions mm	A	B	C	E	Height with trivet
MPLC 150	1002	638	340	500	1542
MPLC 200	12577	758	460	700	1707

TECHNICAL SPECIFICATIONS

Max. operating temperature:
- primary (exchanger): 90°C
- secondary (tank): 90°C

Max. operating pressure:
- primary (exchanger): 6 bar
- secondary (tank): 6 bar

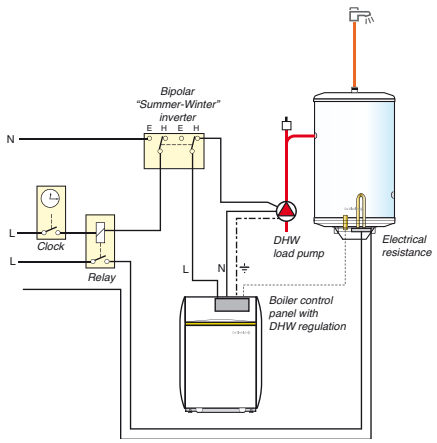
Vertical or horizontal fitting
For installation with load pump or thermosiphon

Models		MPLC 150	MPLC 200	MPLC 150	MPLC 200
		forced circulation		thermosiphon	
Capacity	L	150	200	150	200
Electrical power "Summer"	W	2200	2200	2200	200
Intensity in 230 V single phase	A	6.8	10.9	6.8	10.9
"Electrical" heating time 10-65°C	h	3h35	4h45	3h35	4h45
"Electrical" heating time 10-60°C	h	0h30	0h30	0h50	0h50
Exchanger capacity	L	7.7	10	7.7	10
Nominal primary flow at Pn	m^3/h	2	2	-	-
Primary water resistance at nominal flow	kPa	2.0	2.4	-	-
Primary temperature	°C	90	90	90	90
Exchanged power at $\Delta t = 35$ K	kW	26	29	17.5	19.2
Quantity of water provided at 40°C	L	250	350	-	-
Flow per hour a $\Delta t = 35$ K	L/h	640	710	430	470
Flow over 10 min	L/10min	235	302	217	282
Standby consumption at 65°C	kWh/24 h	1.62	2.16	1.62	2.16
DHW losses through the outer casing at $\Delta t = 45$ K	W	110	115	110	115
Shipping weight	kg	51	62	51	62

Domestic performances at room temp.: 20°C. cold water temp.: 10°C. storage temp.: 60°C.

EXAMPLE OF ELECTRICAL INSTALLATION

NB: The bipolar "Summer-Winter" inverter enables alternating operation on electric heating (summer) or boiler (winter). If the user wishes to retain the option of ordering both heating modes separately, simply replace the inverter with two independent ON/OFF switches.



OPTIONS

Trivet for securing MPLC calorifiers on the floor - Ref. 89788949
Strengthening kit for horizontal fitting - Package BE5
SLA2 control unit for controlling the load pump - Package EC320

DE DIETRICH THERMIQUE
S.A.S. with corporate capital of 22 487 610 €
57, rue de la Gare - F-67580 MERTZWILLER
Tel. +33 3 88 80 27 00 - Fax +33 3 88 80 27 99
www.dedietrich-heating.com

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