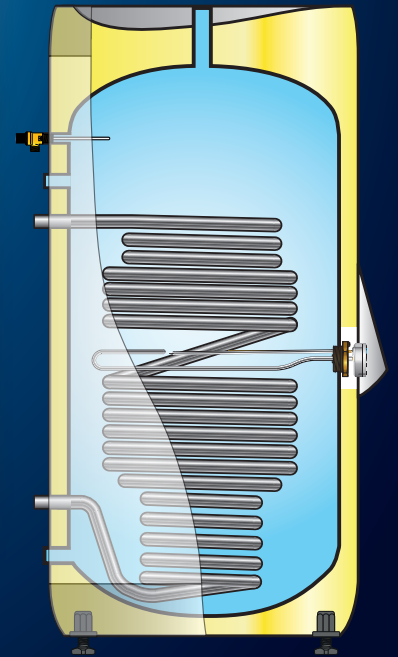




# PAW-TD 20 & 30 C1E5-UK

Installation, maintenance and service manual



145963-00 08-2017

□ CE N IP21

MADE IN NORWAY

AQUAREA  
TANK

# Product information/unwrapping

**Aquarea Delta is a stainless steel indirect water heater. The product is designed for heating domestic hot water from an external heat source such as heat pump, solar panel, gas boiler, biomass etc. Technical data, see table below.**

Unwrap the product carefully to avoid cosmetic damage. Install the product on a flat, even surface designed to carry the full weight of the product when filled with water. Adjust the factory fitted adjustable feet as needed. The product must be installed in an upright, level position. All piping and electrical work must be performed by an authorized installer.

Before filling unit with water it is recommended to fit the electric power cable, see 'Electrical installation' on next page.

**Important:** Fill unit with water before turning power on. Failure to comply will terminate guarantee.

On tilted floors the appliance must be installed upright and level by adjusting the built-in feet. Units 250 l. and larger must be securely fastened to the wall.

The appliance can be positioned with minimal clearance from walls, but it is recommended to leave at least 800 mm. service space in front of the electric central and 300 mm. clearance above unit top.

This appliance is intended to be permanently connected to the main water supply.

All units are CE approved. Only safety valve approved to NBI 06870/387 is allowed for use with this product. All electrical equipment is approved to LVD 2006/95EC (directive for low voltage systems) and EMC 2004/108 EC (electromagnetic compatibility).

Pipe fitting, see next page.

Guarantee, see page 6.

## Electrical installation

All electrical installation and service must be performed by authorized electrician. Thermostat is connected as shown. Ground wire connects directly onto heating element.

The power supply cable is led into the electric central from below. The cable can be fitted in the desired cable slot in the unit base by turning the water heater on its back before installation/filling.

DO NOT turn power on before unit is filled with water. Failure to comply will terminate guarantee.

When heating the unit with an external heat source (gas boiler/heat pump/solar panels) the system must be secured with a suitable thermostat to ensure the water heater thermal cut-off does not operate.

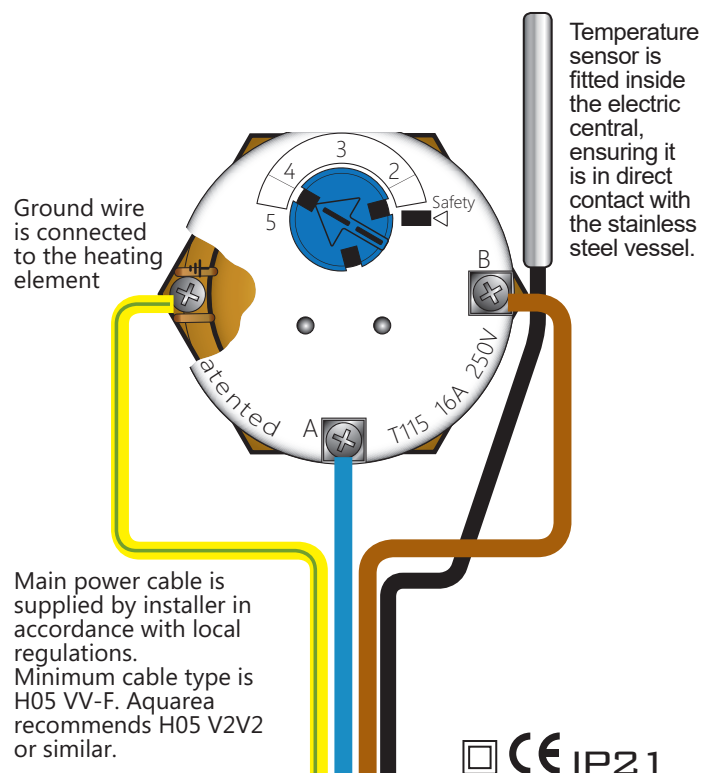
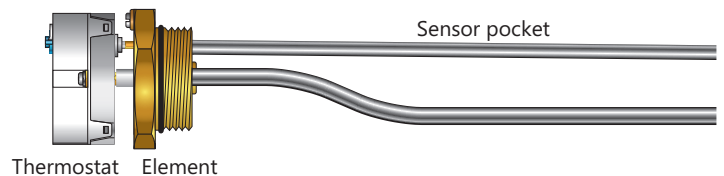
Note: The power cable must be fitted with an appropriate strain relief at the point where it is fed into the electric central. The Delta series is approved to IP 21.

Disconnecting the appliance from the main power grid must be done with electric fuse or an appropriate switch.

### Replacing the thermostat/element:

Turn off power supply and remove electric central cover. Turn off water supply and drain unit. Unscrew wires on thermostat and element. If only the thermostat is being replaced the wire on the element can be left on. The thermostat is removed by pulling it straight out from its sockets on the element. The element can then be removed/replaced by using an element tool, see 'Spare parts'. Ensure the o-ring seal on the element is in place and undamaged before fitting the element. Fill unit completely with water and make sure the element is not leaking. Fit wire to element. Install thermostat by pressing firmly. Fit the electric wires to thermostat. Tighten all wire connections thoroughly. Re-tighten after 3 months.

The electric central cover must be re-fitted and the unit must be filled with water before power is turned on.



CE IP21

# Pipe fitting and connections

### Pipe fitting:

The piping must be fitted in accordance with the current regulations in the area where the product is installed. All pipe fitting must be performed by an authorized installer.

### Pipe connections:

- CW inlet: 3/4" BSP female
- HW outlet: 3/4" BSP female
- HW circulation: 3/4" BSP female
- Coil flow/ret: 3/4" BSP female
- T&P valve connection: 1/2" BSP female
- Connection heights and dimensions, see next page.

It is recommended to install the product in a frost free environment. The product must be installed in a room fitted with a gully. If this is not possible an overflow pipe (min. ø18 mm internal) must be fitted to the P&T/safety valve. The pipe must be installed uninterrupted and safe from frost, sloping to a dimensioned gully/drain.

The G3 valve kit is connected to the unit as shown in the illustration.

### Filling the unit

The unit MUST be filled with water before electric power supply is turned on. Open main water supply. Drain air from vessel through nearby hot water faucet until water flows evenly. Close faucet. Coil is filled when installing external heat source. Follow instructions supplied with external heat source or contact approved installer.

### Draining

Turn off power supply. Turn off water supply. Drain unit by disconnecting cold water inlet pipe. Open a nearby hot water faucet to release vacuum. Draining the coil: See instructions supplied with external heat source. Disconnect return pipe to empty coil.

### Annual check-up

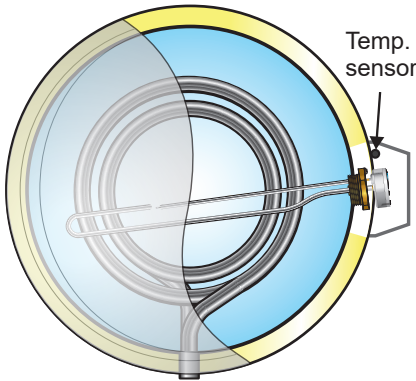
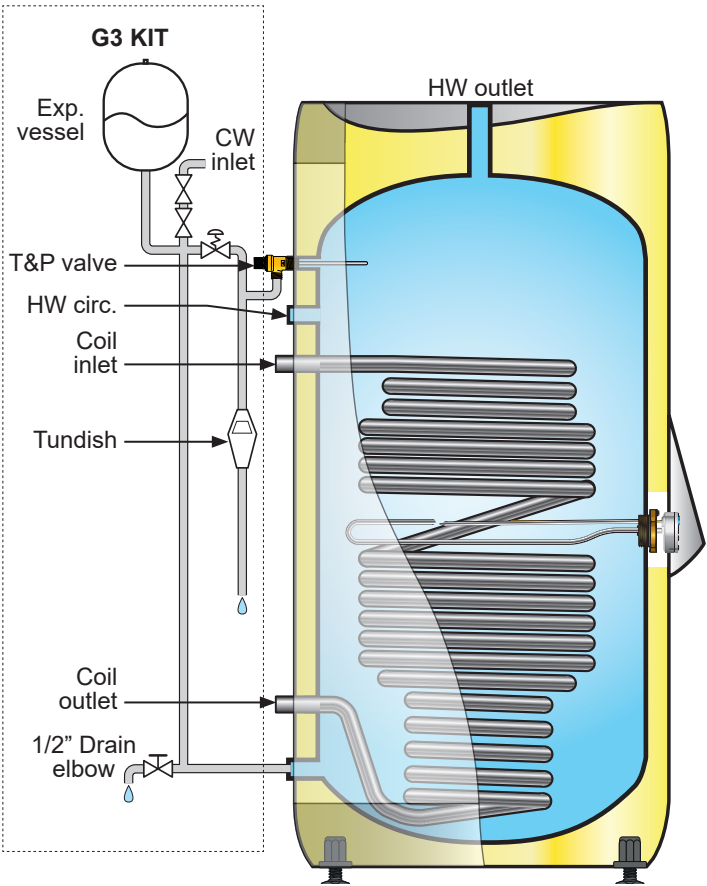
Perform first time after approx. 3 months in service, then annually. Check all pipe fittings for leaks. The function of the safety valve must be tested by opening the valve and observing that water flows freely. Close the valve after testing.

Check electrical connections for any damage. The internal electric central is inspected by turning off the power supply, then removing the el. box cover. Ensure that all internal wiring and components are intact and working. Tighten wire connection points. Fit the el. box cover before turning power supply back on. If needed contact authorized personnel.

### Service, maintenance and inspection

The manufacturer recommends that maintenance and servicing of the unit is performed by authorized personnel in accordance with the information in this manual.

The 5/4" element connection can be used for internal inspection.



Temperature sensor is supplied with unit. Fit as shown (see also 'Electrical installation').

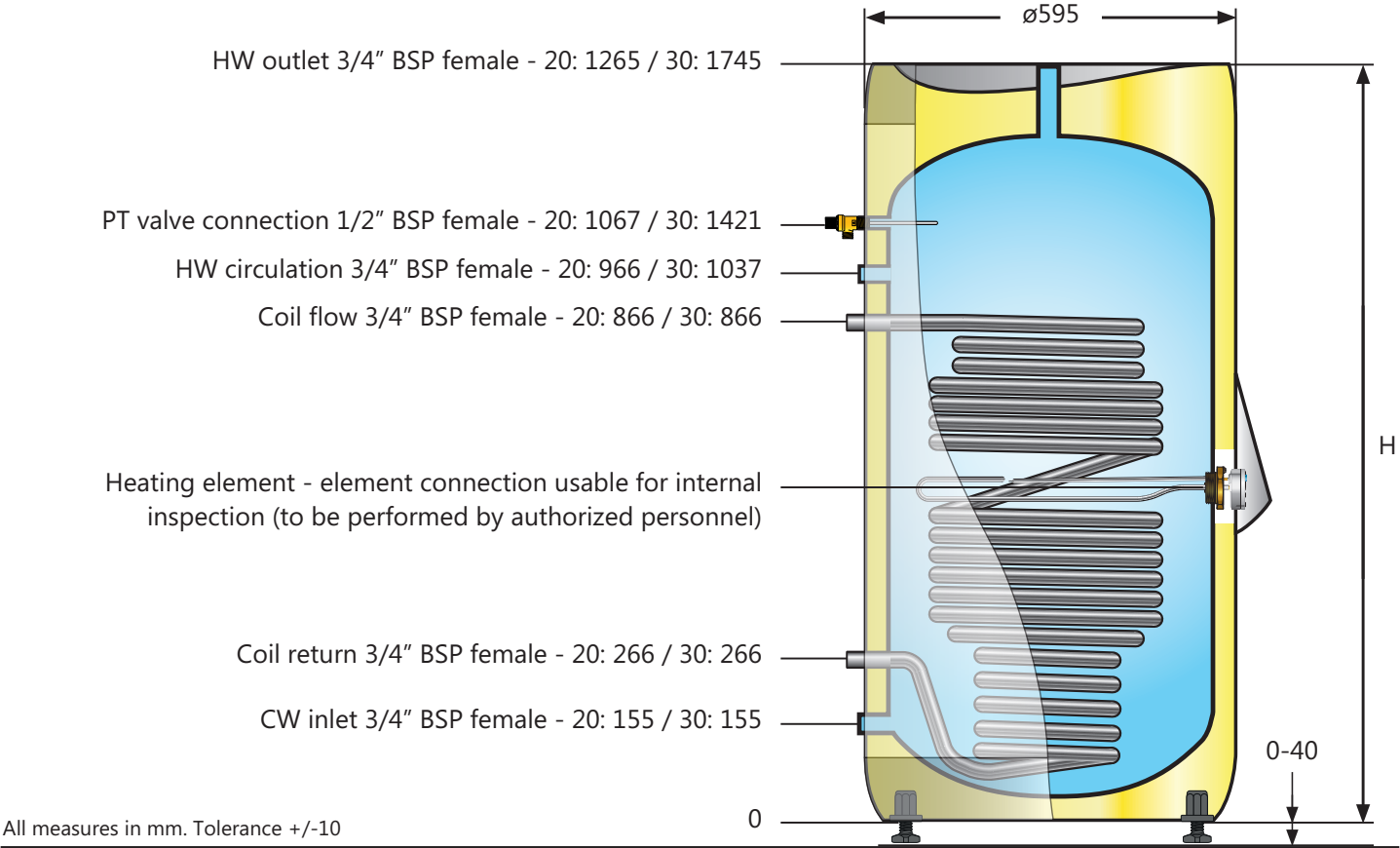
3-way valve installation: See heat pump installation manual.

3-way valve is not included. Must be purchased separately.

# Spare parts

Product	Description	Prod. No.
Heating element	RG 5/4" single tube with sensor pocket	71 234
Thermostat	TSR 00027 thermostat with sensor	80 314
Element tool	KN 5/4" - for removing or fitting the element	801 51 95
El. box cover	Delta	75 086
Sensor	Temperature sensor	81 809

# Connections and dimensions



## Product information

This hot water storage tank is intended to be connected to a high efficiency external energy source such as heat pump, solar device, biomass or district heating. The immersion heaters are intended for backup and supplementary use only. Using immersion heaters as the sole heat source should be avoided and will lead to higher energy consumption and higher operating cost.

Product identification is supplied on the data plate attached to the product. The data plate contains information in accordance with EN 12897:2016 and EN 60335-2-21.

### This product is designed and manufactured in accordance with:

- Pressure vessel standard EN 12897:2016
- Safety standard EN 60335-2-21
- Welding standard EN ISO 3834-2

### The manufacturer is certified in accordance with:

- Quality ISO 9001
- The environment ISO 14001
- Working environment OHSAS 18001

This product is labelled CE and is compliant with relevant directives for this label.

### This product is compliant with directives for:

- Low voltage LVD 2014/35/EU
- Electromagnetic compliance EMC 2014/30/EU
- Pressure equipment PED 2014/68/EU

Safety valve(s) used with this product must be CE marked and be in accordance with PED 2014/68/EU.

Technical Data Sheet - Indirect storage tank - ErP data					
Directive: 2010/30/EU Regulation: EU 812/2013			Directive: 2009/125/EU Regulation: EU 814/2013		
Water heater Efficiency according to standard: prEN50440 : 2015					
TRADE MARK	M.T. ITEM No.	MODEL/IDENTIFIER	Rating ErP	Heat loss - W	Storage vol.
Aquarea	80341850	PAW-TD 20 C1E5-UK - 1,5kW / 1x230V	A	42	194
Aquarea	80341950	PAW-TD 30 C1E5-UK - 1,5kW / 1x230V	A	46	284

This product is manufactured by OSO Hotwater AS, Industriveien 1, 3300 Hokksund, Norway.

Subject to changes without notice

# Technical Data

Specification	PAW-TD 20 C1E5-UK	PAW-TD 30 C1E5-UK
Storage volume - l.	194	284
Accessible volume of 40°C hot water - l.		
Weight - kg.	47	57
Freight volume - m <sup>3</sup>	0,46	0,62
Diameter x height - mm.	ø595 x 1270	ø595 x 1750
Coil surface	1,8 m <sup>2</sup>	1,8 m <sup>2</sup>
Maximum inlet water pressure, vessel - bar	6	6
Maximum water pressure, coil - bar	9	9
Maximum operating temperature - °C	98	98
Corrosion protection	Citric acid treatment	Citric acid treatment
Pressure drop through primary heater - bar		
Primary flow rate - l.		

## Disassembly, recycling and disposal

### Disassembly

1. Disconnect power supply to the product
2. Turn off water supply
3. Drain product of water - see 'Draining' on page 3
4. Disconnect all pipe fittings to product. The product can now be removed.

### Recycling and disposal

This product is fully recyclable and should be disposed of in accordance with local recycling rules and practices.



# Guarantee

The Aquarea stainless steel inner vessel is guaranteed against material defect or manufacturing faults for a period of 10 years from the date of purchase.

**Important:** When installing water treatment equipment adding chemicals (inhibitors) such as hypochlorite the warranty is void. All other parts including, but not limited to factory fitted electrical elements (damage caused by lime scale excluded), thermostats and valves are guaranteed against material defects or manufacturing faults for 2 years from the date of purchase. In the event of a replacement component being required Aquarea will supply such part(s) free of charge and freight paid, on condition that the defective component is delivered, freight paid to Aquarea within 2 weeks of written notice being given to Aquarea of the defect. Such replacement parts shall be guaranteed under the terms of this guarantee to the unexpired period of the aforementioned 2 year period.

This warranty is conditional upon the Aquarea cylinder being installed in compliance with the Aquarea Installation & Maintenance Instructions, all current legislation, codes of practice and regulations governing the installation of unvented hot water cylinders in force at the date of installation and provided that:

1. The water supply to the cylinder shall be in accordance with European Council Directive 98/83 EC at the date of installation and not be fed from a private water supply. Pay special attention to:  
Chloride content: Max. 250 mg/l  
Sulphate content: Max. 250 mg/l  
Combination Chloride/sulphate: Max. 300 mg/l (in total)
2. The Aquarea cylinder is serviced and maintained every 12 months. Invoices for the maintenance work should be kept as proof of regular maintenance. Care should be taken of the invoices as they serve as the guarantee certificate for the cylinder.
3. The Aquarea cylinder is filled with water before turning the electricity supply on to the heater elements.
4. If the newly fitted water heater is not in regular use then it must be flushed through with fresh water for at least 15 minutes (open at least one hotwater tap) once per week, during a period of at least 4 weeks.
5. The mains water supply complies with EU standards current at the date of installation and is not fed with water from a private supply.
6. The Aquarea unvented cylinder has not been modified in any way other than by Aquarea and is only used for the storage of potable water.
7. No factory fitted parts have been removed for unauthorised repair or replacement.
8. Defects caused by frost, excess pressure, salt dehardner process, transient voltage, lightning strikes or incorrect installation, repair or use, are not covered by this warranty. A laboratory evaluation of possible defects can be ordered by the user, however the user must pay for this where the above mentioned conditions have not been fulfilled. Evidence of the purchase date and the date of supply must also be submitted with your claim.

*This guarantee does not confer any rights other than those expressly set out above and does not cover any claims for consequential loss or damage. This guarantee is offered as an extra benefit and does not affect your statutory rights as a consumer.*

## IMPORTANT WHEN FITTING UNIT:

1. The water heater should be installed in a room equipped with gulley. Otherwise a water shut-off valve with sensor must be fitted.
2. Maximum cold water inlet pressure is 6 bar. A pressure reduction valve must be fitted if necessary.
3. The overflow pipe from the safety valve must have an inner diameter of at least 18 mm and must be led to a gulley, at a declining angle if possible.

Please note: Manufacturer responsibility for any consequential damage only applies when the above statements has been followed. OSO recommends that the water heater is fitted by authorized personnell.

## GENERAL USE - IMPORTANT:

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

## Notes

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