EN Product information/unwrapping

PAW Delta is a stainless steel indirect water heater. The product is designed for heating domestic hot water and intetded to be connected to a high efficiency external energi source such as heat pump, solar panel, gas boiler, biomass or district heating. The electric immersion heater are intended for backup and supplementary use only. Using immersion heater as the sole heat source should be avoided and will lead to higher energy consumption and higher operating cost.

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' .
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.

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).

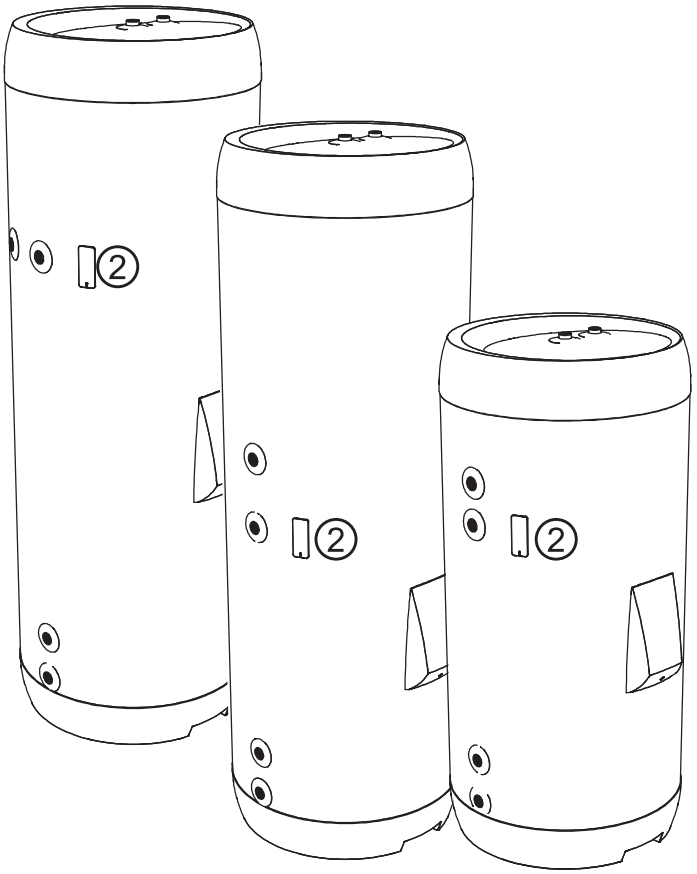
Electrical installation

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.

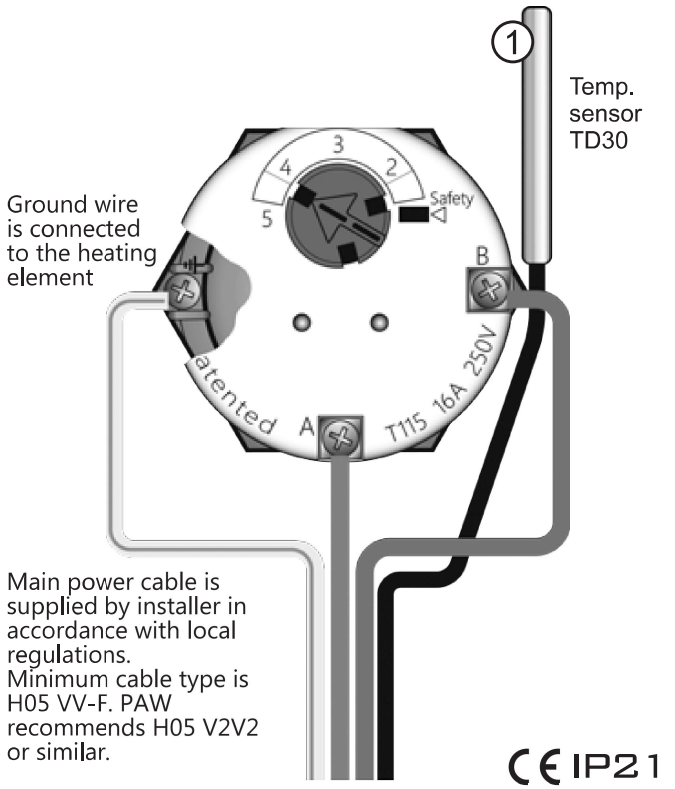
When heating the unit with an external heat source (gas boiler/heat pump/solar panels) the system must be secured with a suitable tempearture limiter and safety cut-out to ensure safe use and compliancy to national regulations.
Note: The power cable must be fitted with an appropriate strain relief at 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.

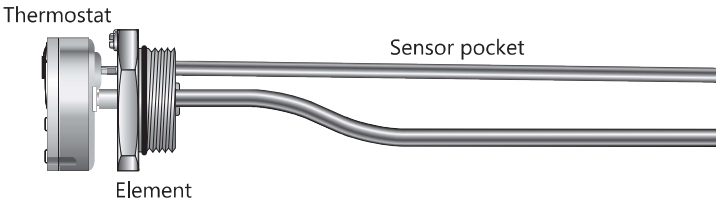
Replacing the thermostat/element:
Turn off power supply and remove electric central cover. Turn off water supply and drain unit. Unscrew wires on thermostat and element. If only the thermostat is being replaced the wire on the element can be left on. The thermostat is removed by pulling it straight out 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.



The temperature sensor (1) can be fitted in the electric junction box as shown below, or in the factory fitted EPP sensor pocket (2). The EPP sensor pocket accepts both 6 and 8 mm. sensors.





Pipe fitting and connections

EN

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
Coil flow/ret: 3/4" BSP female
E-anode / accessory: 3/4" BSP female.
Connection heights and dimensions for all models, see illustration below.

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 uninterruptable and safe from frost, sloping to a dimensioned gully/drain.

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.

Pos.	Description	Height mm		
		PAW-TD20C1E5	PAW-TD30C1E5	PAW-TD30C1E5HI
A	Cold water inlet	155	155	155
B	Coil outlet	266	266	266
C	Coil inlet	866	866	1245
D	Hot water circulation	966	1036	1245
E	HW outlet / Total height	1270	1750	1750
F	E-anode / accessory	1270	1750	1750
G	Sensor pocket	-	-	-

All measures in mm. Tolerance +/-10

Coil is filled when installing external heat source. Follow instructions supplied with external heat source or contact approved installer.

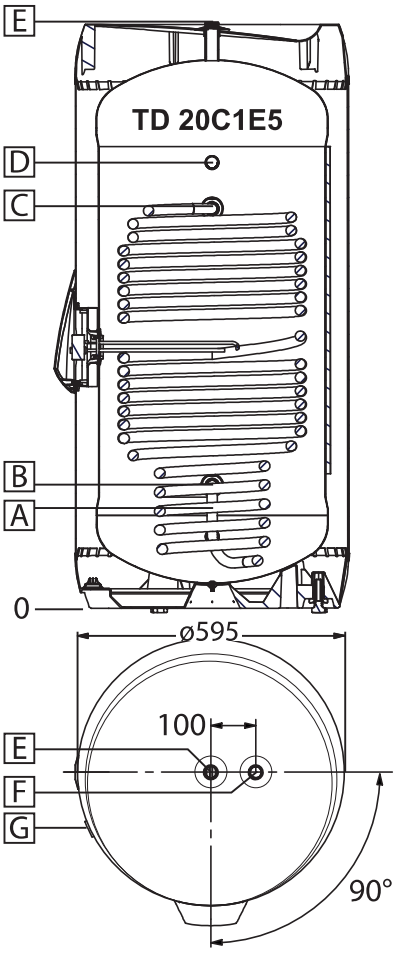
Draining
Turn off power supply. Turn off water supply. Drain unit by disconnecting cold water inlet pipe. Open a nearby hot water faucet to release vaccuum.

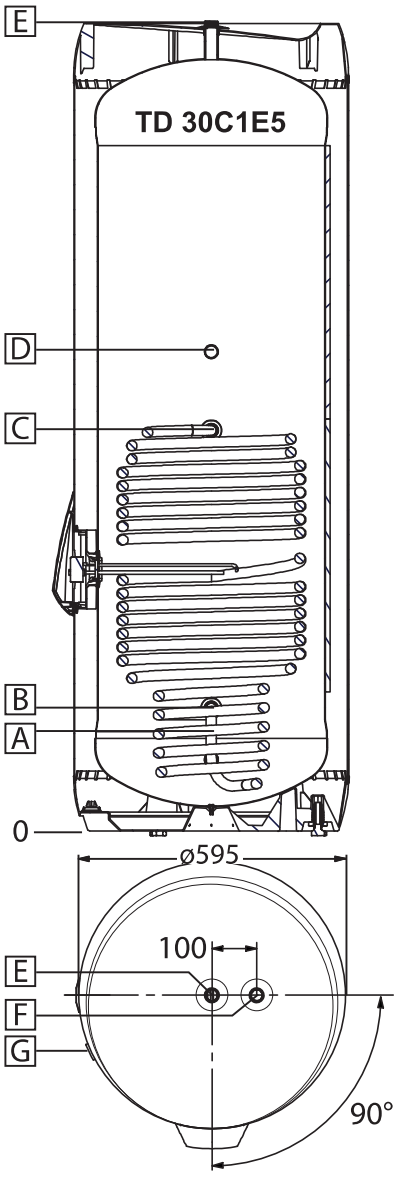
Draining coil: See instructions supplied with external heat source. Disconnect return pipe to empty coil. .

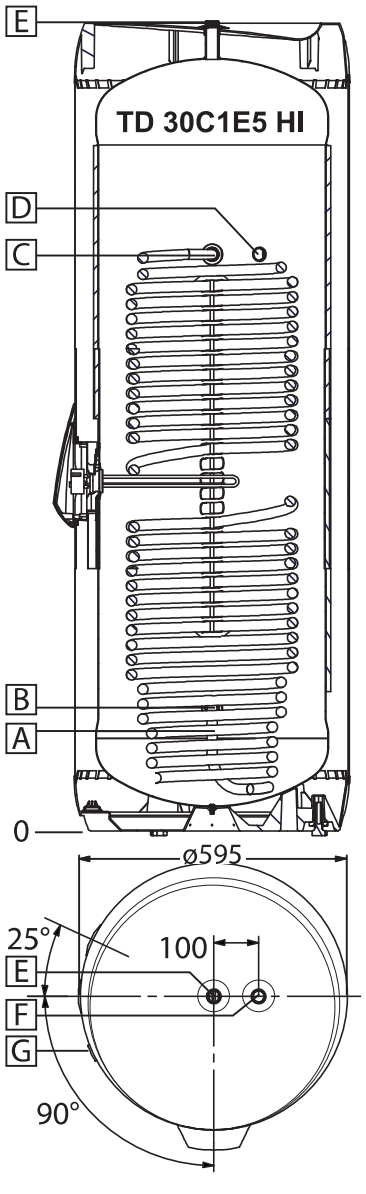
Annual check-up
Perform first time after approx. 3 months in service, then annually.
Check all pipe fittings for leaks. The function of the safety valve must be tested by opening the valve and observing that water flows freely. Close the valve after testing.

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.

Temperature sensor is supplied with unit. Fit as shown.
3-way valve installation: See heat pump installation manual.
3-way valve is not included. Must be purchased separately.







EN Technical data

Description	Unit	PAW-TD20C1E5-1	PAW-TD30C1E5-1	PAW-TD30C1E5HI-1
Actual capacity of cylinder at 20°C	L.	192	284	280
Outer diameter of the appliance	mm	595	595	595
Height of the appliance	mm	1270	1750	1750
Gross weight of the appliance	kg	50	61	65
Net weight of appliance filled with water	kg	241	341	345
Material of electric heating element	-	incoloy 825	incoloy 825	incoloy 825
Thermal insulation material	-	PUR+VIP	PUR+VIP	PUR+VIP
Thermal insulation average thickness	mm	50	50	50
IP classification	-	21	21	21
Standby heat losses / 24 hour	kWh/24h	1.01	1.18	1.18
Standby heat losses	Watts	42	49	49
V40 Hotwater volume	L.	315	465	389
Heating coil HEX surface	m²	1,8	1,8	2,35
Flowrate heating coil	l/h	900	900	900
Heat-up time heating coil	min	18.5	26.08	18,5
Power heating coil	kW	35	32	39,4
Pressure drop heating coil	mbar	120	120	170
Heat up time electric heating element	min	255	464	384
ErP class	-	A	A	A
Pressure information				
Design pressure of cylinder	MPa/Bar	1 / 10	1 / 10	1/10
Design pressure of heating coil	MPa/Bar	1 / 10	1 / 10	1/10
Operating pressure of cylinder (max)	MPa/Bar	0.6 / 6	0.6 / 6	0.6 / 6
Operating pressure of heating coil	MPa/Bar	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Max. operating temperature of cylinder	°C	70	70	70
Max. operating temperature of heating coil	°C	99	99	99
Connections				
Hot water circulation / Secondary return	Inch	3/4”	3/4”	3/4”
Heating coil Flow	Inch	3/4”	3/4”	3/4”
Heating coil Return	Inch	3/4”	3/4”	3/4”
Cold water	Inch	3/4”	3/4”	3/4”
Hot water	Inch	3/4”	3/4”	3/4”
Auxiliary connection / anode	Inch	3/4”	3/4”	3/4”
Electric heating element	Inch	5/4”	5/4”	5/4”
Temperature sensor sleeve diameter	mm	8	8	8
Electrical characteristics				
Supply voltage and frequency	WHz	220-240 VAC	220-240 VAC	220-240 VAC
Power of electric heating element	kW	1.5kW@230V	1.5kW@230V	1.5kW@230V
Electrical installation	-	IEEE regs	IEEE regs	IEEE regs
Thermostat type - electric heating element / cylinder	-	Probe/Probe	Probe/Probe	Probe/Probe
Electric heating element - Phase	Phase	single	single	single
Electric heating element thermostat - temp range	°C	8-70	18-70	18-70
Electric heating element thermostat - set temp	°C	60	60	60
Safety				
Safety valve opening pressure +/- 5%	MPa/Bar	0.8 / 8	0.8 / 8	0.8 / 8
Safety thermostat cutout temp (electric heating element)	°C	87	87	87

Technical Data Sheet

TDS - 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.
OSO	80341810	PAW-TD 20 C1E5-1 - 1,5kW / 1x230V	A	42	192
OSO	80341910	PAW-TD 30 C1E5-1 - 1,5kW / 1x230V	A	49	284
OSO	80341911	PAW-TD 30 C1E5 HI-1 - 1,5kW / 1x230V	A	49	280

Warranty

EN

1. Scope
The Distributor warrants for 2 years from the date of purchase, that the Product will: i) conform to specification, ii) be free from defects in materials and workmanship, subject to conditions below.

The warranty only applies to Products purchased by a consumer, that has been installed for private use and that has been sold by the Distributor or a designated retailer where the Products have been originally sold by the Distributor.

The warranty does not apply to Products purchased by commercial entities or for Products that have been installed for commercial use. These shall be subject only to the mandatory provisions of the law. The conditions and limitations set out below shall apply.

2. Coverage
If a defect arises and a valid claim is received within the statutory warranty period, at its option and to the extent permitted by law, the Distributor shall either; i) repair the defect, or; ii) replace the product with a product that is identical or similar in function, or; iii) refund the purchase price.
Any exchanged Product or component will become the legal property of the Distributor. Any valid claim or service does not extend the original warranty. The replacement Product or part does not carry a new warranty.

3. Conditions
The warranty applies only if the conditions set out below are met in full:
- The Product has been installed by a professional installer, in accordance with the instructions in the installation manual and all relevant Codes of Practice and Regulations in force at the time of installation.
- The Product has not been modified in any way, tampered with or subjected to misuse and no factory fitted parts have been removed for unauthorized repair or replacement.
- The Product has only been connected to a domestic mains water supply in compliance with the European Drinking Water Directive EN 98/83 EC, or latest version. The water should not be aggressive, i.e. the water chemistry shall comply with the following:
- Chloride < 250 mg / L
- Total Dissolved Solids (TDS) < 500 mg / L
- Saturation Index (LSI) @ 80°C < 0,8
- pH level < 9,5 / > 6,0
- The immersion heater is not exposed to hardness levels exceeding 20°dH.
- Any disinfection has been carried out without affecting the Product in any way whatsoever. The Product shall be isolated from any system chlorination.
- Service and/or repair shall be done according to the installation manual and all relevant codes of practice. Any replacement parts used shall be original spare parts supplied by the Distributor.
- Any third-party costs associated with any claim has been authorized in advance by the Distributor in writing.
- The purchase invoice and/or installation and servicing invoice, a water sample as well as the defective product is made available to the Distributor upon request.

Failure to follow these instructions and conditions may result in product failure, and water escaping from the Product.

4. Limitations
The warranty does not cover:
- Any fault or costs arising from incorrect installation, incorrect application, lack of regular maintenance in accordance with the installation manual, neglect, accidental or malicious damage, misuse, any alteration, tampering or repair carried out by a non-professional, any fault arising from the tampering with or removal of any factory fitted safety components or measures.
- Any consequential damage or any indirect loss caused by any failure or malfunction of the Product whatsoever.
- Any pipework or any equipment connected to the Product.
- The effects of frost, lightning, voltage variation, lack of water, dry boiling, excess pressure or chlorination procedures.
- Damage caused during transportation. Buyer shall give the carrier notice of such damage.
- Costs arising if the Product is not immediately accessible for servicing.

These warranties do not affect the Buyer's statutory rights.

Spare parts

Product	Description	Part. No.
Heating element	RG 5/4" single tube w/ sensor pocket	72 080
Thermostat	TSR 00027 thermostat with sensor	80 317
Element tool	KN 5/4" - removing/fitting element	801 51 95
El. box cover	Delta	75 086
Sensor	Temperature sensor	81 809
Plastic top cover	PP, ø595 mm - RAL 7035	75 075