HOTWATER

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Nano - N 51.

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1. SAFETY INSTRUCTIONS

1.1 General information

- Read the following safety instructions carefully before installing, maintaining or adjusting the water heater.
- Personal injury or material damage may result if the product is not installed or used in the intended manner.
- Keep this manual and other relevant documents where they are accessible for future reference.

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The manufacturer assumes compliance (by the end-user) with the safety, operating and maintenance instructions supplied and (by the installer) with the fitting manual and relevant standards and regulations in effect at the date of installation.





Symbols used in this manual:

A WARNING Co	A WARNING Could cause serious injury or death
A CAUTION CO	\triangle CAUTION Could cause minor or moderate injury or damage to property
	DO NOT
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1.2 Safety instructions for users

\otimes	The overflow from the safety valve must NOT be sealed or plugged.
\oslash	The product must NOT be covered over the cover on the front.
\oslash	The product must NOT be modified or changed from its original state.
\otimes	Fitting an external control unit managing the power supply to the product is NOT allowed without approval from the manufacturer.
\otimes	Children must NOT play with the product or go near it without supervision.
•	The product shall be filled with water before the power is switched on.
•	Maintenance/settings shall only be carried out by persons over 18 years of age, with sufficient understanding

\otimes	\otimes	
Maintenance/settings shall not be carried out by persons of diminished physical or mental capacity, unless they have been instructed in the correct use by someone responsible for their safety.	The product must not be exposed to frost, over-pressure, over-voltage or chlorine treatment. See warranty provisions.	A CAUTION

1.3 S	1.3 Safety instructions for installers
	🛆 WARNING
0	The overflow from the safety valve must NOT be sealed or plugged.
\otimes	Fitting an external control unit managing the power supply to the product is NOT allowed without approval from the manufacturer.
•	Any overflow pipe from the safety valve MUST be >1/2 mm inside, clear, undamaged and frost-free with a fall to the drain.
•	Fixed electric fittings shall be used for installation in new homes or when changing an existing electrical setup in accordance with regulations.
•	The mains cable shall withstand 90°C. A strain reliever must be fitted.
0	The product shall be filled with water before the power is switched on.
•	The relevant regulations and standards, and this installation manual, must be followed.
	A CALITION

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\blacksquare The product shall be mounted to allow access to the junction box when needed.	The product shall be properly aligned vertically and horizontally, on a floor or wall suitable for the total weight of the product when in operation. See type plate.	The product shall be fitted in accordance with Part G3 of building regulations. Liability for consequential damage will only apply if this is followed.	

2. PRODUCT DESCRIPTION

2.1 Product identification

www.osohotwater.co.uk for more information. other useful data. See Declaration of Conformity at with EN 12897:2016 and EN 60335-2-21, as well as plate contains details of the product in accordance on the type plate fixed to the product. The type Identification details for your product can be found

accordance with: OSO products are designed and manufactured in

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

OSO Hotwater AS is certified for

•	•	(
 Environment 	Quality	
ISO 1400	ISO 9001	

Work environment

ISO 45001 \leq

2.2 Intended use

lengths of pipe etc. water, and to reheat water where there are long The Nano is designed to supply homes with hot

The product is designed to be mounted on a wall

2.3 UKCA marking

with the relevant Directives. See Declaration of information. The UKCA mark shows that the product complies Conformity at www.osohotwater.co.uk for more

The product complies with Directives for: LVD 2014/35/EU

- Low voltage
- Electromagnetic compatibility EMC 2014/30/EU
- Pressurised Equipment Directive PED 2014/68/EU

and comply with the PED 2014/68/EU. Any safety valve(s) used should be CE-marked

2.4 Technical data

1080 6051 N 5 - 2.8 kW 1x230V	NRF no. Product code:
0.5	Capacity persons
12	Weight kg.
200x234x500	WxDxH mm.
0.03	Freight vol. m ³
IP44	IP class
0.1	Heating time hours ∆t 65°C
13	Heat loss W

2.5 ErP data - Technical Data Sheet

Efficiency-tested ac	Directive: 2010/30/EU Regulation: EU 812/2013	OSO Hotwater AS	Brand
cording to s	U Regulat	1080 6051	Model-no.
Efficiency-tested according to standard: EN 50440: 2015		OSO Hotwater AS 1080 6051 Nano - N 5 - 2.8 kW 1x230V	Model name
	ctive: 20	XXS A 35	Tap profile
	09/125	A	ErP Rating
	5/EC	35 5	Energy eff. %
	Directive: 2009/125/EC Regulation: EU 814/2013	525	Tap ErP Energy AEC - kWh/a Thermo- Volume profile Rating eff. % AEC - kWh/a tata set- 40°C ting °C water ting °C water ting °C tata set-
	EU 814/	60	Thermo- stat set- ting °C
	2013	7	Volume 40°C water

3. INSTALLATION INSTRUCTIONS

800 0051 3.1 Products covered by these instructions Nano - N 5

3.2 Included in delivery

2 1 Heating element	3 2 -	4 3 2 - 4 1 H	5 4 3 2 - 5 4 1 1 - 1 N
(the document)	ווואמוומעטוו ווומוועמו (נוווא עטכעווופווע)	Mounting band with 2 screws + washers	Mounting band with 2 screws + wash Water heater

3.3 Product dimensions

All dimensions in mm.

Z 5	Product.
200	d. A
234	в
500	C

Tolerance +/- 5 mm

3.3.1 Delivery

The product shall be transported carefully, with packaging.

3.3.2 Removing the insulation

tion are not damaged ensure that the locking mechanisms and insulaapart and put together without the use of tools cap with quick-fit locks that can easily be pulled The product is Care should be taken when fitting/dismantling to fitted with a four-port insulation

Removing the insulation cap

- recess by the pipe joint; see illustration. (K). out by gripping it with your fingers in the Pull one of the wedge-shaped end pieces
- Ņ end. Repeat with the end piece at the opposite
- ω now accessible. tion box with screw holes for wall fittiing are and pulling straight out. Inner tank and junc-Pull off the front piece by gripping the edges

Fitting the insulation cap:

- Press the front piece into the fasteners
- $\sim -$ (red/blue) indicating HW and CW are posiother correctly and that the coloured rings that the locking mechanisms slide into each Press the two end pieces into place. Ensure

IMPORTANT: If the insulation is not correctly and tioned correctly in the slots





while the work is in progress. be disconnected and secured against activation Before any work is done, the power supply must



sumption of the product could increase the specified ErP energy rating. The energy concompletely fitted, the product will not achieve

3.3.3 Wall fitting

access to the screw holes (D). When the insulation cap is removed, there is easy The product is designed to be mounted on a wall

screw holes deforms slightly. on the insulation parts. Use a torx type bit (T25) supplied. Ensure that the connectors do not press holes in the insulation, using the screws/washers dle of the tank and fixed to the wall through the plied fastening metal band (V); see illustration Tighten the screws until the insulation around the The Nano is attached to the wall with the sup The metal band is bent/placed around the mid-

3.3.4 Reversing the inner tank

nected can only be done when the electricity is not conconnections for ease of fitting. Important: This reversed if it is desirable to swap the CW and HW For horizontal mounting, the inner tank can be

- <u>.</u> Remove the insulation (see 3.3.2).
- Ν for the mains cable (F) and remove the electhe nut (E). Then unscrew the strain reliever Remove the electrical cover by loosening
- ω reliever (K). Material in the recess should be opening the alternative fixing for the strain The electrical cover (I) may be modified by trical cover. removed and the strain reliever with cable

fitted into the new channel

4

- points (H). out so the connections clear the attachment Remove the fastening band (V). Pull the tank tastening band. back into the attachment points. Refit the . Turn the tank 180° and push it
- ъ rings (red/blue) indicating HW and CW are positioned correctly in the slots. Ensure that connections and the coloured
- 6 fit the insulation cap. The end-parts of the Fit the electrical cover with the nut (E), ther insulation must now swap places.
- \sim mains cable at the back of the product. back (J) for simple and tidy routing of the The product has built-in channels in the





3.4 **Requirements for installation location and positioning**

e product stiality	f the product side ecommended th ess of the metho f the product is	If the product shall be recommended the less of the metho If the product is The product shall he can be placed in the laid where it is not
Section 3.5.2. The product shall be placed in a dry and permanently frost-free position. The product shall be mounted on a wall suitable for the total weight of the product in operation	all be placed in a dry and permanently frost-free positi all be mounted on a wall suitable for the total weight off t is fitted horizontally, the pipe connectors must t that the product be screwed tight to the wall or a thod chosen; use the screw holes (D). t is fitted vertically, the electric box must face u	all be placed in a dry and permanently frost-free positi all be mounted on a wall suitable for the total weight of a t is fitted horizontally, the pipe connectors must I that the product be screwed tight to the wall or a thod chosen; use the screw holes (D). t is fitted vertically, the electric box must face u all be mounted to allow access to the junction box who n the channels in the back of the product. Mains cable not exposed to any mechanical or chemical influence.
The product shall be placed in a dry and permanently frost-free position. The product shall be mounted on a wall suitable for the total weight of the	t shall be placed in a dry and permanently frost-free position t shall be mounted on a wall suitable for the total weight of the duct is fitted horizontally, the pipe connectors must p ided that the product be screwed tight to the wall or a su method chosen; use the screw holes (D). duct is fitted vertically, the electric box must face upv	It shall be placed in a dry and permanently frost-free position t shall be mounted on a wall suitable for the total weight of the duct is fitted horizontally, the pipe connectors must ided that the product be screwed tight to the wall or a s method chosen; use the screw holes (D). duct is fitted vertically, the electric box must face up it shall be mounted to allow access to the junction box wher red in the channels in the back of the product. Mains cable for it is not exposed to any mechanical or chemical influence.
The product shall be mounted on a wall suitable for the total weight of the product in operation.	duct shall be mounted on a wall suitable for the total weight of the product is fitted horizontally, the pipe connectors must p nended that the product be screwed tight to the wall or a su the method chosen; use the screw holes (D). product is fitted vertically, the electric box must face upw	duct shall be mounted on a wall suitable for the total weight of th product is fitted horizontally, the pipe connectors must nended that the product be screwed tight to the wall or a s the method chosen; use the screw holes (D). product is fitted vertically, the electric box must face up product is fitted vertically, the electric box must face up duct shall be mounted to allow access to the junction box when placed in the channels in the back of the product. Mains cable for placed in the channels in the back of the product influence. are it is not exposed to any mechanical or chemical influence.
	If the product is fitted horizontally, the pipe connectors must point straight up. It is recommended that the product be screwed tight to the wall or a suitable surface regardless of the method chosen; use the screw holes (D). If the product is fitted vertically, the electric box must face upwards. See page 8.	If the product is fitted horizontally, the pipe connectors must point straight up. It is recommended that the product be screwed tight to the wall or a suitable surface regardless of the method chosen; use the screw holes (D). If the product is fitted vertically, the electric box must face upwards. See page 8. The product shall be mounted to allow access to the junction box when needed. Mains cable can be placed in the channels in the back of the product. Mains cable for wall socket should be laid where it is not exposed to any mechanical or chemical influence.

3.5 Pipe installation

The product is designed to be permanently connected to the mains water supply. Approved pipes of the correct size should be used for installation. The relevant standards and regulations must be followed.

1/2" outside thread	ø15 mm	ø15 mm	N 5
Overflow (4)	HW (2)	CW (1)	Product.

3.5.1 Incoming water pressure

The efficiency of the product depends on the incoming cold water pressure. The water pressure should be min. 2 bar and max. 6 bar throughout the day. Excessive water pressure can be adjusted by installing a pressure reduction valve.

3.5.2 Fitting cold and hot water pipes (CW-HW), safety valve and overflow pipe

A) Place product in the desired position. If the product is fitted horizontally, the pipe connectors must point straight up. It is recommended that the product is secured to a wall or a suitable surface regardless of the method chosen; use the screw holes D, see page 7.

If the product is fitted vertically, the electric box MUST face upwards. See pt. 3.5.7.

- B) CW (1)/HW (2) fit pipes of suitable size to the connections, tighten according to table 3.5.3.
- For larger pipe sizes, a reducer can
- C) The safety valve supplied (3) must
- be fitted to the incoming CW supply pipe. D) Any overflow pipe (5) \geq 1/2" inside should be
- run to the overflow on the safety valve (4);
 Connect to 1/2" outside thread. Ring clamp
- connector may be used (not included) Clear, undamaged and frost-free with
- a fall to the drain.

3.5.3 Torque settings

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Component	Torque
Connection to CW/HW (ø15)	40 Nm (+/- 3)
Ring clamp connection to safety valve 40 Nm (+/- 3)	40 Nm (+/- 3)
Screws for mounting band	Depending on surface*

* Fastening band for wall mounting fitted as described in section 3.3.3. Screws for wall mounting tightened until the insulation material starts to deform slightly.

The product must be fitted to a wall surface designed to withstand the weight of the product in operation.







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Any overflow pipe from the safety valve MUST be >1/2 mm inside, clear, undamaged and frost-free with a fall to the drain.	The product shall be filled with water before the power is switched on.	∆ WARNING

•	•	0	
If the product is fitted horizontally, the pipe connectors must point straight up. It is recommended that the product is fastened to a wall or suitable surface regardless of the method chosen; use the screw holes D, see page 7. If the product is fitted vertically, the electric box must face upwards. See illustration below.	The product shall be properly aligned vertically and horizontally, on a wall or floor suitable for the total weight of the product when in operation. See type plate.	Fixed electric fittings shall be used for installation in new homes or when changing an existing electrical setup in accordance with regulations.	

3.5.6 Installation recommendation

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The product shall be mounted in a way that allows access to the junction box when needed

RECOMMENDATION
igoplus The safety valve supplied must be fitted to the incoming cold water supply pipe. See section 3.5.2.
If a non-return valve is fitted a reduction valve and expansion vessel shall be fitted to avoid

- dripping from the safety valve overflow.
- . If the maximum water pressure exceeds 6 bar in a 24-hour period, a reduction valve and expansion vessel shall be fitted.
- 3.5.7 Installation positions

















3.6 Electrical installation

Fixed electric fittings shall be used for installation in new homes or when changing an existing electrical setup in accordance with regulations. A mains cable with plug for wall socket can be used when replacing the product without changing the electrical setup. Any fixed electric fittings must be installed by an authorised electrician.

Fitting or retrofitting an external power supply control unit to the product or its power supply must only be performed by an authorized electrician. The control unit must be approved by the product manufacturer.

The relevant standards and regulations must be followed.

3.6.1 Electrical components

Component	Note
Safety thermostat	85°C thermal cut-out
Work thermostat	40-70°C adjustable
Heating element	1-phase 230 V
Mains cable with plug	Heat-resistant
Internal wires	Heat-resistant

3.6.2 Electrical connections in the junction box

A WARNING

Constant voltage present at terminals R and S. Before any electrical work is done, the power supply must be disconnected and secured against activation while the work is in progress.

- A) Blue wire (L) Neutral connected to point '1' on the safety thermostat.
- B) Brown wire (N) Live connected to point '3' on the safety thermostat.
- C) Yellow wire with green stripe = Earth connected to the earth terminal on the attachment for the thermostat.
- D) Internal wires from the element to the thermostat are connected to point '4' on the safety thermostat and point '2' on the work thermo-

3.6.3 Changing the capacity

stat. See illustration

The capacity of the element can be halved to 1.5 kW by removing the jumpers (5) connecting the two heating pipes on the element The product can then be connected to a 10A fuse. Must be performed by an authorized electrician.



Electrical connection, diagram

3.6.4 Torque settings

Component	Torque
1" heating element	60 Nm (+/- 5)
Thermostat screws	2 Nm (+/- 0.1)
Screw on the element head	2 Nm (+/- 0.1)

	🛆 WARNING
\otimes	Fitting an external control unit managing the power supply to the product is NOT allowed without approval from the manufacturer.
	\bullet The product shall be filled with water before the power is switched on.
	Fixed electric fittings shall be used for installation in new homes or when changing an existing
e	electrical setup in accordance with regulations.
•	The mains cable shall withstand 90°C. A strain reliever must be fitted.

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The product must have a clearance for servicing of 40 cm in front and side.	A CAUTION

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	ססס דונוווע ובכטחווחבווטמוטח
	RECOMMENDATION
I	- The mains cable supplied shall be used with fixed electric fittings.
I	- Mains cable for wall socket shall be laid where it is not exposed to harmful contact.
	For products with \leq 3kW capacity, The unit must be permanently connected to a 20amp DP Switch (BS3455) with minimum 3mm separation and 2.5mm Flexible Cable HR to 85c (HOFR)

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to BS 6141 Table 8), installation shall comply with current IEE Regulations. Immersion Heater rating is 230V x 3kW. All internal wiring is factory fitted.

4. INITIAL COMMISSIONING

4.1 Filling with water

First check that all pipes are connected correctly. Then proceed as follows:

- A) Open a hot tap leave it open
- B) Open the cold water supply to the product.

Check that the water from the open hot water tap is flowing freely, without any bubbles or air locks. A) Close hot tap.

4.2 Turning on the power

When the cylinder has been filled with water, the power can be switched on.

 A) Insert plug into specified wall socket or turn on switch/breaker.

4.3 Control points

- A) Check that all pipe connections to/from the product are tight and not leaking.
- B) Check that the power supply to the product is not at risk of exposure to mechanical, thermal or chemical damage, and is not connected to a non approved power supply control unit.
- C) Check that any overflow pipe from the safety valve is uninterruptable, undamaged and frost-free with a fall to the drain.
- D) Check that the product is standing firmly vertically and horizontally.

4.4 Emptying of water

The water temperature in the product may exceed 75°C and could cause scalding. Before emptying, a hot tap should be opened to the max. pressure/ temperature for min. 3 minutes.

- A) Disconnect the power supply.
- B) Shut off incoming cold water supply.
- C) Disconnect the pipe connections to the cold and hot water feeds on the product.
- D) Remove the insulation cap and loosen the wall mounting band.
- E) Bring the heater to a drain, sink or other suitable place and empty the tank by turning the pipe connections upside down. Keep in mindthat both the water and the product may be very hot.

When the heater is to be put into operation again, it must be filled with water and the tank

vented by opening a hot water tap to the maximum pressure until the water flows in an even stream. The power supply must not be switched on until this is done. Check that the pipe connections for CW and HW are still tight and not leaking after 3-4 hours of operation.



4.5 Handover to end-user

THE INSTALLER MUST:

Brief the end-user on safety and maintenance instructions.

Brief the end-user on settings and emptying the product.

Hand this installation manual over to the enduser.

Enter contact details on the type plate on the product.

5. USER GUIDE

5.1 Settings

5.1.1 Thermostat setting The thermostat on the product is adjustable from 40-70°C. The thermostat should not be set lower than 60°C to prevent bacteria growth. To adjust the temperature:

- A) Disconnect the power supply.
- B) Dismantle the electrical cover on the heater by removing the insulation cap (see section 3.3.4) and then unscrew the cover with a suitable tool.
 C) Adjust the temperature on the thermostat (7)
- C) Adjust the temperature on the thermostat (7) with a screwdriver.

Fit electrical cover and insulation before the power supply is connected.

A WARNING

Changing the temperature setting on the thermostat will change the temperature of the water at the tap, and may carry a risk of scalding. Where necessary, a mixer valve should be fitted (not included).

5.1.2 Resetting the safety thermostat

The safety thermostat on the product cuts out when there is a risk of overheating. This is reset by removing the cover (see 5.1 A and B) and pressing the red 'RESET' button (6). If the thermostat cuts out repeatedly, contact the installer.

A WARNING

Constant voltage present in the junction box. Before any electrical work is done, the power supply must be disconnected and secured against activation while the work is in progress.



5.2 Maintenance

 Maintenance shall be carried out by persons over 18 years of age, with sufficient understanding. Annual inspection of safety valve: Open valve for 1 min. by turning the knob (2) approx. 90 degrees to the open position. Visually check that the water is flowing freely to the drain. YES = OK. Close the valve by turning the knob (2) a further 90 degrees to the open the characteristics.
MAINTENANCE INSTRUCTIONS Maintenance shall be carried out by persons over 18 years of age, with sufficient understanding. Annual inspection of safety valve: Open valve for 1 min. by turning the knob (2) approx. 90 degrees to the open position. Visually check that the water is flowing freely to the drain. YES = OK. Close the valve by turning the knob (2) a further 90 degrees to the closed position.

6. TROUBLESHOOTING

6.1 Faults and fixes

If problems arise when the product is in use, check for possible faults and fixes in the table. If the problem is not shown in the troubleshoot-

ing table or you are unsure what is wrong, contact the installer (see type plate on the product) or OSO Hotwater AS - see section 7.1.

	TROUBLESHOOTING	
Problem	Possible cause of fault	Possible solution
	Pressure reduction valve, water meter or blocked non-retum valve on the water intake.	Fit AX expansion vessel with absorbs ex- pansion during heating, and fit pressure reduction valve for stable water pressure inside the home. The pressure reduction
There is leakage/dripping	Water pressure into the home is too high.	valve is adjusted in according to the pres- sure in the expansion vessel. Contact auth. installer.
from the safety valve/ there is often water on the floor by the cylinder in the morning	The safety valve is worn or there are particles stuck between the mem- brane and the valve seat because the water is dirty	Flush with water through the safety valve. Open valve for approx. 1 minute. See sec- tion 5.2. If the valve still leaks, it must be replaced. Contact auth. installer.
	Leak from heating element.	Verify as follows: a) cut the electric sup- ply, b) unscrew the cover, c) visually check whether there is a leak from the heating element. If so, replace the gasket/heating element. Contact auth. installer.
	Power supply interrupted.	Verify that the fuse is on / the plug is plugged in to the wall contact / the earth breaker has not tripped.
	Thermostat has cut out.	Press the 'RESET' button on the safety ther- mostat, see 'User guide'.
NO NOT WATER	Heating element is defective.	Replace heating element. Contact auth. installer.
	Leak in hot water pipe	Check the hot water pipes and taps in the house for leaks. If a leak is detected: Con-tact auth. installer.
Not enough hot water	High consumption in the home	Raise the temperature on the thermostat to the maximum; see 'User guide'.
		Switch to a larger OSO water heater. Con- tact auth. installer.
Not high enough tem-	The thermostat is set for low tempera- tures.	Raise the temperature on the thermostat to the maximum; see 'User guide'.
perature	Change from cold to hot water in taps.	Contact auth. installer.
Fuse/earth breaker trips repeatedly	Possible fault in the heater's electrical system.	Verify as follows: a) cut the electric supply, b) unscrew the cover, c) visually check the junction box for any problems. If so, con- tact auth. installer to check. Fit the cover.
Knocking in the pipes when the hot tap is closed	Large pressure increase when the tap is closed quickly.	Completely normal. Fit AX expansion ves- sel if troublesome. Contact auth. installer.

7 WARRANTY CONDITIONS applies to UK only

subject to conditions below. All components carry a 2-year warranty. The warranty is voluntarily extended by OSO to 25 years for the 1. Scope OSO Hotwater UK Ltd. (hereinafter called OSO) warrants for 2 years from the date of purchase, that the Product will: i) conform to OSO specification, ii) be free from defects in materials and workmanship

standess steel inner tank. This extended warranty only applies to Products purchased by a consumer, that has been installed for private use and that has been distributed by OSO or by a distributor where the Products have been originally sold by OSO.

commercial use. These shall be subject only to the mandatory provisions of the law. The conditions and limitations set out below shall apply The extended 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

warranty period has expired, but within the extended warranty period. OSO will supply a product that is identical or similar in function. OSO will in such cases not cover any other associated costs. In addition warranty period, at its option and to the extent permitted by law, OSG shall either, i) repair the defect, or, ii) replace the product with a product that is identical to similar in function, or, iii) refund the purchase price. If a defect arises and a valid claim is, received after the statutory 2. Coverage If a defect arises and a valid claim is received within the statuton

for every year after the statutory warranty period, the claimant must contribute 4% of the list price of the cylinder in question to CSO. Any exchanged Product or component will become the legal property of OSO. Any valid claim or service does not extend the original warranty. The replacement Product or part does not carry a new warranty.

there are uncertainties regarding water quality, the local water supply The Product is manufactured to suit most public water supplies. However, there are certain water chemistries (outlined below) that 3. Conditions The Product authority can supply the necessary data. can have a detrimental effect on the Product and its life expectancy. It

- 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 been connected to the public power grid and it has not been connected to an external power supply control unit not approved by OSO.
- 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 tollowing be aggressive, i.e. the water chemistry shall comply with the
- Chloride - pH level -Saturation Index (LSI) @80°C < 750 uS / cm > - 1,0 / < 0,8 > 6,0 / < 9,5 < 250 mg / L < 750 uS / cm

7.1 Customer service

this installation manual, with the aid of the troubleshooting guide in In case of problems that cannot be contact either: resolved

œ REMOVING THE PRODUCT

8.1 Removal

- ≥ Disconnect the power supply.
- В Shut off incoming cold water supply
- 0 Empty the product of water – see section 4

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- D) Disconnect all pipesE) The product can nov The product can now be removed

- recommended in such cases. The immersion heater has not been exposed to hardness levels exceeding 5°dH (180 ppm CaCO3). A water softener is
- Product in any way whatsoever. The from any system chlorination. Any disinfection has been carried out without affecting the hatsoever. The Product shall be isolated
- or more, it must be drained. installation. If the Product is not intended to be used for 60 days The Product has been in regular use from the date ç,
- The immersion heater element must be removed for inspection on service after 5 years. The threads must be checked for corrosion. If signs of corrosion are evident, the element must be replaced. Subsequently the element must be removed and be replaced. Subsequently the element must be removed and examined every 3 years. Failure to do so in areas of aggressive with consequential escape of water. water may result in the element separating from the cylinder
- 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 OSO spare parts.
- The Service record / Benchmark logbook has been completed and updated after each annual service. Invoices should be kept as proof of service
- The Commissioning Checklist / Benchmark certificate has been completed at the time of installation.
- Any third-party costs associated with any claim has been authorized in advance by OSO in writing.
- The OSO upon request sample as well as the defective product is made available purchase INVOICE and/or installation invoice, മ water ರೆ

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

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. removal of any factory fitted safety components or measures non-professional, any fault arising from the tampering with or misuse, any alteration, tampering or repair carried out by മ
- 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, votage variation, lack of water,
- connecting to a non approved external power supply control
- unit, dry boiling, excess pressure or chlorination procedures. The effects of stagnant (de-aerated) water if the Product has been left unused for more than 60 days consecutively.
- Damage caused during transportation. Buyer shall carrier notice of such damage. give the
- servicing Costs arising if the Product is not immediately accessible for

These warranties do not affect the Buyer's statutory rights

- ⊵ The installer who supplied the product
- В OSO Hotwater AS: oso@oso.no / www.oso.nc Tel:: +47 ω2 225 8 8

8.2 Returns scheme

product is to cycling installer to the This product is recyclable and should be environmental recycling can take the old cylinder away for re be replaced with a new one, centre. If taken the the

HOTWATER

OSO Hotwater AS Industriveien 1 3300 Hokksund - Norway Tel: + 47 32 25 00 00 oso@oso.no www.osohotwater.com

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