LEOV ELECTRICAL WATER HEATER

AD -05 OS/US

MANUFACTURER: LEOV COMPANY

REPUBLIC OF NORTH MACEDONIA

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Product Description

Dear Customer, we are grateful for the purchase of a product from the range LEOV and the confidence in our company.

Advantages of our products:

The quality of the used components grants a long durability under the supposition of a proper maintenance by following the instructions given in this user manual;

Experience of 20 years´ in the production of electrical water heaters;

The electrical water heater is produced on the latest knowledge and state of the art technology;

The tank is made out of high-quality steel; the inner side of the tank is covered with titanium enamel;

There is an MG anode built in, which guarantees the protection of the enamel and prolongs the lifetime of the electrical water heater; in order to protect the appliance this MG anode must be changed every year;

PRIOR TO INSTALLATION AND FIRST USE OF THE ELECTRICAL WATER HEATER PLEASE CAREFULLY READ THIS INSTRUCTIONS!

1. SAFTEY

1.1. Classification of warnings-action related



DANGER!
Imminent danger to Life or risk of severe personal injury



DANGER!
Risk of death from electric shock



WARNING!
Risk of minor personal injury



CAUTION!
Risk of material or environmental damage

1.2. Intended use

There is a risk of injury or death to the user or others, or of damage to the product and other property in the event of improper use or use for which it is not intended.

The product is designed to generate and maintain heated drinking water for households.

Max. hot water temperature: 75 Degrees Celsius

The product is approved exclusively for vertical installation on the wall.

Mounting under pressure: The product must only be operated if a safety group is installed.

Mounting without pressure must be done in connection only with unpressurized faucets

Intended use includes the following:

- Observance of accompanying operating, installation and servicing instructions for the product and any other system components
- Compliance with all inspection and maintenance conditions listed in the instructions.

This product can only be used from children older than 3 years as well as persons with reduced physical, sensorial or mental abilities or lack of experience and knowledge, if they are guided or introduced to the safety handling with understanding the potential risks. Children in the age of 3 to 8 years only are allowed to operate the faucets. Children must not play with the product. Cleaning and maintenance activities must not be done from children without observance.

The use of the product in vehicles, such as mobile homes or caravans, is not classed as intended use.

Any other use that is not specified in these instructions, or use beyond that specified in this document shall be considered improper use. Any direct use in the industrial or commercial processes is also deemed to be improper.

CAUTION: Improper use of any kind is prohibited

1.3. General safety information - risk caused by inadequate usage

Through inadequate usage you can both endanger yourself and others and damage the product and other property.

- Carefully read the instruction manual and all other valid instructions, especially the chapter saftey and warning-hints.
- Only follow the instructions given by this instruction and handling-guide.

1.4. General safety information - risk of death from electric shock

There is a risk of death from electric shock if you touch live components. Work must only be carried out by competent person who are sufficiently qualified to do so.

- Never work by yourself on the connections for the electrical power
- In case the product is connected with the electrical grid any work must be carried out by competent persons, who are sufficient qualified

2. Mounting

Connecting, maintenance and repair must only be done by experts.

The 5L boiler of the brand LEOV Type AD-5 can both be mounted over the sink (OS = over the sink) and under the sink (US = under the sink).

The description for mounting over the sink is described under “over the sink” (OS). The mounting under the sink is described under “under the sink” (US).

The electrical water heater is mounted with rag bolts – nominal diameter of 5mm. Please have a look at the mounting schema.

2.1. Water-Piping connection



WARNING!

ATTENTION: Potential interference to the trinking water and damages to the water heater itself. The waterpiping installation must only be done by experts under fulfillment of DIN 1988!

The pipes for connecting the water heater with the inflow and outflow pipe of the boiler are covered with a plastic protection. This plastic cover must be removed before the installation. The inflow-pipe and the outflow-pipe are marked red and blue. **ATTENTION:** Depending on the way of installation (OS or US) the connection of the inflow-pipe must be done to the blue marked pipe (US) or the red marked pipe (OS). Besides this the water heater may be connected to the water supply in two ways.

First way: Open circuit gravity system (Installation without pressure):

Installation under the sink (US)

ATTENTION: Potential damages to the water heater!

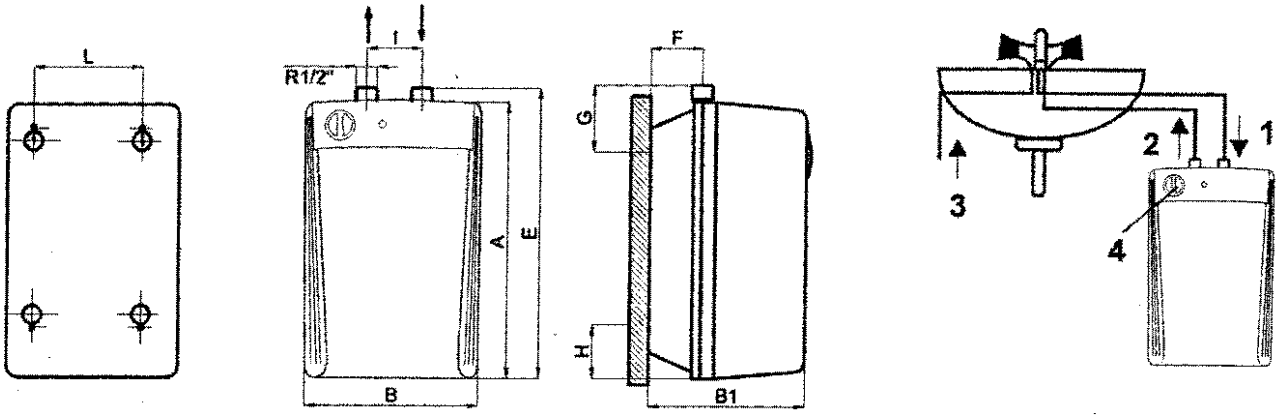
Missing the water-filling of the boiler can lead to overheating and damage to the water boiler. The electrical boiler must be filled up with water before it is connected to the electricity!

This type of installation allows only the installation of one faucet/tab for taking warm water. This type of installation requests the installation of a non-pressure tab/faucet (non-pressure single lever mixer or non-pressure two-handle-faucet).

The outflow-pipe of the boiler, which is marked red, must be connected to the faucet/tab as inflow of the warm water.

Between the electrical boiler (outflow) and the non-pressure tab/faucet you must not install a shut-off valve. This would invalidate the function of the non-pressure faucet/tab.

Installation under the sink (US)



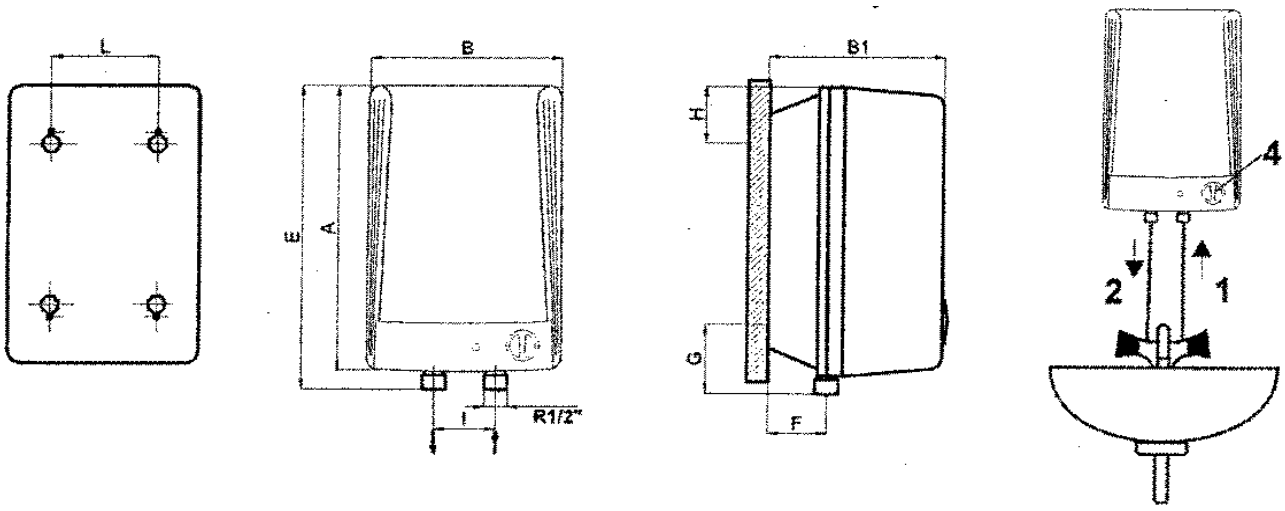
1 BLUE Inflow of the cold water

2 RED Outflow of the warm water

3 Cold Water Supply line

4 Button for temperature control

Installation over the sink (OS)



1 RED Inflow of the cold water

2 BLUE Outflow of the warm water

3 Cold Water supply line

4 Button for temperature control

Typ	Liter(L)	Dimension (mm)									1* (MPa)	2* (W)
		A	B	B1	E	F	G	H	I	L		
AD-5 OS/US	5	380	250	215	410	75	100	72	80	140	0	1000

1* Operating Pressure 2*Power of the heating element

Second way: Closed circuit pressure system

(Installation under pressure):

ATTENTION: Potential damages to the water heater!

Missing the water-filling of the boiler can lead to overheating and damage to the water boiler. The electrical boiler must be filled up with water before it is connected to the electricity!

ATTENTION: Depending of the mounting OS or US please pay attention to the correct connection to the water inflow-pipe and the warm water outflow-pipe.

This type of installation allows the installation of multiply faucets/tabs for taking warm water. You must use a single-lever-mixer or two-handle-faucet, which can be installed under pressure. It is obligatory to install a safety valve, which prevents the nominal pressure not to get higher than 0,6 MPa (6 Bar). A safety valve combination exists of a shut off, test, non-return, drain and safety valve with an expansion water drain and is installed between the cold-water supply line and the cold-water supply (blue) of the storage tank in the order as drawn below. In order to ensure flawless function of the connector fitting, it must only be mounted in frost-protected rooms. The drain of the safety valve must be open and observable or the outlet pipe from the drop collector (expansion water funnel) must lead into the sewer, so that neither frost nor clogging by dirt or anything similar may cause any malfunction. Make sure that the drip cup is not blocked. Furthermore, it must be observed that the drain pipe of the safety valve must be installed with a steady downward inclination. Because of the water expansion during heating the pressure increases in the storage tank up to the limit, which is allowed by the safety valve. Inclines the pressure above this set limit water is released through the safety valve into the drop collector. In case the pressure in the cold-water supply line is higher than 0,6MPa (6 Bar) a pressure reducing valve must be installed. In order to avoid malfunction of the safety valve the test function must be controlled regularly.

No shutoff valve must be installed between the safety-valve and the cold-water supply of the storage tank.

Prior connecting to boiler to the electricity the tank must be filled up with water. To accomplish this, open the warm water handle of the two-handle tab or the warm water side of the single lever mixer. The tank is filled up with water when from the tab water flows out.

2.2. Electrical power connection



DANGER!

ATTENTION: Potential damages to the water-boiler!

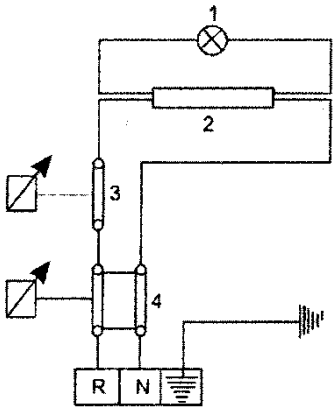
The electrical installation of the water-heater must only be done by experts.

The electrical boiler comes with an electrical cable H05VVF – 3X1,00 mm^2, which must be connected to the electrical grid under observation of the electrical standards valid in the country. In case the delivered electrical cable is damaged or will get damaged during the installation it can only be substituted by a cable, which is authorized through the producer.

ELEKTRICAL SCHEMA

The boiler enables an easy handling. The Thermostat consists out of a regulative thermostat and an integrated protective thermostat.

The protective thermostat shuts the boiler off in case the temperature gets too high. In this case you can reactivate the regulative thermostat by pressing the RESET-BUTTON, which you can find on the outside of the boiler.



1 Control lamp

2 Heating Element

3 Thermostat for temperature regulation

4 Protective thermostat

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3. Handling of the regulative thermostat

Through turning the button for the temperature control at the front of the electrical boiler you can regulate the desired temperature. The regulation can be done between ¾th of a circle.

4. General Information and for maintenance

WARNING!

Attention: Potential damages to the water heater!

In case the water-heater is not mounted in a frost-free surrounding or will be taken out of operating for a longer period damage through freezing can happen to the water-heater. Therefore, the water-heater must be emptied from water entirely.

If the water heater is taken out of operation or unused for a longer period of time, it must be emptied and disconnected from the electrical power grid. The boiler must be emptied from water to avoid damages due to freezing. Before you start the emptying process, the boiler must be disconnected from the electrical power supply. After a waiting period for cooling down the water you must disconnect for the US-installation the connecting pipe between the faucet/tab and the boiler (at the boiler the red marked pipe). After that you can disconnect the blue marked pipe the connection to the cold water. Through this pipe the drain of the boiler takes place. In order to ensure a corrosion protection and be entitled to any claims for warranty, as provided on the side of the manufacturer, the installed magnesium anode requires checking by an expert at intervals of max. 1 years of operation.

Connecting, maintenance and repair must only be done by experts.

5. Technical data

		5L
1	L	5
2	V	230
3	W	1000
4	A	4,3
5	MPa	0
6	kg	4,5
7		OS/US
8		MG Anode
9		½“

1 Volume
2 Voltage
3 Power of the heating element
4 Electricity
5 Operating pressure with gravity system
6 Weight
7 Place of Mounting
8 Anticorrosion
9 Pipes

PL Karta productu/ CZ Produktová karta/ **SK produktová karta/** HU Termékkártya/ **RO Card de produs/** DE Produktkarte/ **EN Product fiche/**

PL Karta produktu ogrzewacza wody (wedlug Rozporzadzenia UE nr 812/2013)/ CZ Karta výrobku pro ohřívač vody (podle nařízení EU č. 812/2013)/ **SK Karta výrobku pre ohrievač vody (podľa nariadenia EÚ č. 812/2013)/** HU A vízmelegítő termékkatalógusa (a 812/2013 EU rendelet szerint)/ **RO Card de produs pentru încălzitorul de apă (în conformitate cu Regulamentul UE nr. 812/2013)/** DE Produktkarte für den Warmwasserbereiter (gemäß EU-Verordnung Nr. 812/2013)/ **EN Product card for the water heater (according to EU Regulation No. 812/2013)/**

1	**PL Znak towarowy:**/ CZ Ochranná známka:/ **SK Ochranná známka:/** HU Védjegy:/ **RO Marca comercială:**/ DE Warenzeichen:/ **EN Trademark:/**			
2	**PL Identyfikator modelu dostawcy:/** CZ Identifikátor modelu dodavatele:/ **SK Identifikátor modelu dodávateľa:/** HU A szállító modellazonosítója:/ **RO Identificatorul modelului furnizorului:/** DE Modellbezeichnung des Lieferanten:/ **EN Supplier's model identifier:/**		5	10
3	**PL Deklarowany profil obciaszen:/** CZ Prohlášený profil zatížení:/ **SK Deklarovaný profil zaťaženia:/** HU A terhelések bejelentett profilja:/ **RO Profilul declarat al încărcăturilor:/** DE Erklärtes Lastprofil:/ **EN Declared profile of loads:/**		3XS	XXS
4	**PL Klasa efektywnosci energetycznej:/** CZ Třída energetické účinnosti:/ **SK Trieda energetickej účinnosti:/** HU Energiahatékonysági osztály:/ **RO Clasa de eficiență energetică:/** DE Energieeffizienzklasse:/ **EN Declared profile of loads:/**		B	B
5	**PL Efektywnosc energetyczna podgrzewanija wody:/** CZ Energetická účinnost topné vody:/ **SK Energetická účinnosť vykurovacej vody:/** HU A fűtővíz energiahatékonysága:/ **RO Eficiența energetică a apei de încălzire:/** DE Energieeffizienz von Warmwasser:/ **EN Energy efficiency of heating water:/** η=		34 %	33 %
6	**PL Roczne zuzycie energii elektrycznej:/** CZ Roční spotřeba elektřiny/ **SK Ročná spotreba elektrickej energie/** HU Éves villamosenergia-fogyasztás/ **RO Consumul anual de energie electrică/** DE Jährlicher Stromverbrauch:/ **EN Annual electricity consumption:/** AEC =		93 kWh/annum	527 kWh/annum
7	**PL Ustawianie termostatu i temperatury podgtrzewacza wody:/** CZ Nastavení termostatu a teploty ohřívače vody:/ **SK Nastavenie termostatu a teploty ohrievača vody:/** HU A termosztát és a vízmelegítő hőmérsékletének beállítása:/ **RO Setarea termostatului și a temperaturii încălzitorului de apă:/** DE Einstellen des Thermostats und der Temperatur des Warmwasserbereiters:/ **EN Setting the thermostat and the temperature of the water heater:/** T out		10^0C-75^0C	10^0C-75^0C
8	**PL Poziom mocy akustycznej:/** CZ Hladina akustického výkonu:/ **SK Hladina akustického výkonu:/** HU Hangteljesítményszint:/ **RO Nivelul de putere sonoră:/** DE Schallleistungspegel:/ **EN Sound power level:/** L wa =		15 dB	15 dB

PL Informacije o ogrzewaczu wody (wedlug Rozporzadzenia UE nr 814/2013)/ CZ Informace o ohřívači vody (podle nařízení EU č. 814/2013)/ **SK Informácie o ohrievači vody (podľa nariadenia EÚ č. 814/2013)/** HU A vízmelegítővel kapcsolatos információk (a 814/2013 EU rendelet szerint)/ **RO Informații despre încălzitorul de apă (conform Regulamentului UE nr. 814/2013)/** DE Informationen zum Warmwasserbereiter (gemäß EU-Verordnung Nr. 814/2013)/ **EN Information about the water heater (according to EU Regulation No. 814/2013)/**

1	**PL Identyfikator modelu dostawcy:/** CZ Identifikátor modelu dodavatele:/ **SK Identifikátor modelu dodávateľa:/** HU Szállító modellazonosítója:/ **RO Codul de identificare al furnizorului:**/ DE Modellkennung des Lieferanten:/ **EN Supplier's model identifier:/**		5	10
2	**PL Dzienne zuzycie energii elektrycznej:/** CZ Denní spotřeba elektrické energie:/ **SK Denná spotreba elektrickej energie:/** HU Napi villamosenergia-fogyasztás:/ **RO Consumul zilnic de energie electrică:/** DE Täglicher Stromverbrauch:/ **EN Supplier's model identifier:/** Qelec =		2.4 kWh	3.7 kWh
3	**PL Deklarowany profil obciazen:/** CZ Deklarovaný profil zatížení:/ **SK Deklarovaný profil zaťaženia:/** HU Bejelentett terhelési profil:/ **RO Profil încărcat declarat:/** DE Deklariertes Lastprofil:/ **EN Declared load profile:/**		3XS	XXS
4	**PL Woda zmieszana przy:/** CZ Voda se mísí:/ **SK Voda zmiešaná:/** HU Víz keverte:/ **RO Apă amestecată de:/** DE Wasser gemischt von:/ **EN Mixed water:/** 40^0C:/ V_{40} =/		12 L	20 L
5	**PL Maksymalna temperatura:/** CZ Maximální teplota:/ **SK Maximálna teplota:/** HU Maximális hőmérséklet:/ **RO Temperatura maximă:/** DE Maximale Temperatur:/ **EN Maximum temperature:/** T max =/		75^0 C	75^0 C
6	**PL Ustawianie temperatury termostatu po wyjeciu z opakowania:/** CZ Nastavení teploty termostatu po vyjmutí obalu:/ **SK Nastavenie teploty termostatu po vybratí obalu:/** HU A termosztát hőmérsékletének beállítása a csomag eltávolítása után:/ **RO Setarea temperaturii termostatului după scoaterea ambalajului:/** DE Einstellen der Temperatur des Thermostats nach dem Entfernen der Verpackung:/ **EN Setting the thermostat temperature after removing the package:/** T out of box =		10^0C	10^0C
7	**PL Efektywnosc energetyczna podgrzewania wody:/** CZ Energetická účinnost topné vody:/ **SK Energetická účinnosť vykurovacej vody:/** HU A fűtővíz energiahatékonysága:/ **RO Eficiența energetică a apei de încălzire:**/ DE Energieeffizienz von Warmwasser:/ **EN Energy efficiency of heating water:/** η=		34 %	33 %

ATTENTION! 

The packaging is recyclable. Therefore, the packaging can be brought to the recycling process;

After the guideline 2014/68/UE; 2014/35/UE

After the guideline 89/336/WE

The Norm EC 60335-1:2010 Safety for electrical appliances for household usage and simular purposes: Part 1: General Requirements, modified: + COR1:2010 + COR2:2011 + A1:2013, modified A1:2013/COR1:2014 + A2:2016 + A2:2016/COR1:2016); German version: EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A2:2019 +A14:2019.

The Norm IEC 60335-2-21:2012 Safety for electrical appliances for household usage and simular purposes: Part 2-21: Special requirements for waterheaters (Warm-Water-Storager und Warm-water heater and boiler), Modified:+ COR1:2013 + A1:2018); Deutsche Fassung EN 60335-2-21:2021 + A1:2021

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