



***KDO***  
***30l***

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Dear customer, we thank you for having purchased our product.  
Please read these operating instructions carefully before installing and operating the water heater.

**ADULTS AND CHILDREN WITH LIMITED PHYSICAL AND MENTAL ABILITIES OR WITH LITTLE EXPERIENCE OR KNOWLEDGE MAY NOT OPERATE THE UNIT, UNLESS THEY ARE SUPERVISED OR IF THEY HAVE BEEN TAUGHT HOW TO USE THE UNIT BY A PERSON RESPONSIBLE FOR THEIR SAFETY.  
CHILDREN MAY NOT PLAY WITH THE DEVICE.**

The water heater has been manufactured in accordance with the applicable standards and officially tested. The security certificate and the EMC certificate (electromagnetic compatibility) were also issued. The technical properties are specified on the nameplate attached between the connecting pipes. All repairs to the device may only be performed by a specialist or customer service.

## INSTALLATION

The water heater is to be installed as close as possible to delivery points. The requirements of standard IEC 60364-7-701 (VDE 0100, part 701) must be observed for installation in a room with a bath or shower. It is to be fastened to the wall with wall screws with a nominal diameter of at least 8 mm. It may only be secured in a vertical position. When fastening to walls with a lower load carrying capacity, a suitable type of fastener must be chosen by the installer.

## TECHNICAL CHARACTERISTICS

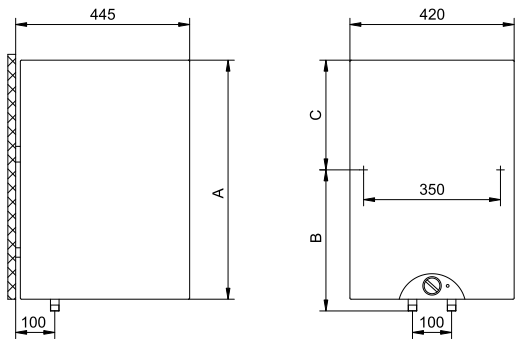
Type	KDO 302
Volume [l]	30
Nominal pressure [MPa (bar)]	0.6 (6)
Weight / full [kg]	19/49
Corrosion protection of the boiler	annealed / magnesium protection anode
Output of the electric heating element [W]	2000
Connection voltage [V~]	230
Protection class	I
Type of protection (protection level)	IP24
Heating time to 75 °C <sup>1)</sup> [h]	1 <sup>05</sup>
Mixed water quantity at 40 °C [l]	50
Energy consumption <sup>2)</sup> [kWh/24h]	0.69

1) Heating time of the entire volume of the water heater by the electric heating element with an input water temperature of 15 °C.

2) Energy consumption at a permanent temperature of the water of 65 °C and at an ambient temperature of 20 °C measured according to EN 60379.

	A	B	C
KDO 302	510	310	235

Connection and assembly dimensions of the water heater [mm]



## WATER CONNECTION

The connections of the storage water heater are colour coded. The cold water inlet is blue and the hot water inlet is marked in red.

The connection of the water heater can be done in two ways. The closed system (pressure-resistant system) supplies several taps while with the open system (pressure-free system) the water withdrawal can only occur in one place. Depending on the selected system, corresponding mixed taps are also to be installed.

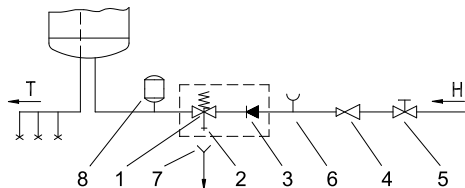
With an open (pressure-free) system, a non-return valve must be installed on the water heater, which prevents the water leaking out of the boiler. If the water within the unit is heated, its volume expands accordingly. This results in the outlet pipe of the fitting starting to drip. A strong tightening of the fitting can or may not prevent this expansion and dripping, but rather may result in damage to the fitting.

With a closed (pressure-resistant) system, pressure taps must be used at the tapping points. At the inlet connecting piece, a safety relief valve or a safety group must be installed for functional safety, which prevents a pressure increase in the boiler by more than 0.1 MPa (1 bar) above the nominal value. The outlet nozzle at the safety relief valve must have an outlet for the air pressure.

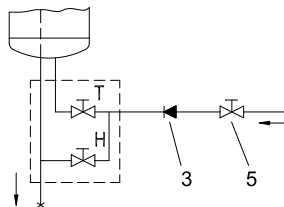
When heating the water, the pressure in the boiler increases until it reaches the value set at the safety relief valve. Since the water return line back into the water line is prevented, it may occur that water drips from the outlet opening of the safety relief valve. The dripping water may be directed into the drain through the collection base. The drain pipe below the outlet of the safety relief valve must be attached in the direction straight down and in a freeze-free environment.

If the already completed installation provides no way of directing dripping water from the safety relief valve into the drain, the dripping can also be prevented by the 3-litre expansion vessel. Mount the vessel to the inlet pipe of the water heater.

You must check the proper functioning of the safety relief valve at regular intervals and, if necessary, remove the limescale and eliminate any blockage of the valve. When checking, the outlet is to be opened from the safety relief valve by moving the lever or by unscrewing the valve nut (depending on the valve type). The water must flow out of the outlet nozzle of the valve, which confirms the proper functioning of the valve.



Closed system (pressure-resistant system)



Open system (pressure-free system)

Legend:

- 1 - Safety relief valve
- 2 - Drain pipe
- 3 - Backflow preventer
- 4 - Pressure reducer
- 5 - Shut-off valve

- 6 - Test connection
- 7 - Drain siphon
- 8 - Expansion vessel
- H - Cold water
- T - Hot water

**No shut-off valve may be installed between the water heater and safety relief valve, as otherwise the function of the safety relief valve may be inhibited.**

The water heater can be connected to the household water line without a reducing valve if the pressure in the line is lower than the nominal pressure. If the pressure in the line should exceed the nominal pressure, you must then install the reducing valve.

Before connecting the device to the mains, it must be filled with water. During the first filling, the hot water lever on the mixed tap is to be opened. The water heater is full if the water flows out of the escape pipe of the mixed tap.

## ELECTRICAL CONNECTION

Before connecting to the mains, a proper connection cable with a minimum average of 1.5 mm<sup>2</sup> (H05VV-F 3G 1.5 mm<sup>2</sup>) must be installed. The protective cover is to be unscrewed for this purpose.



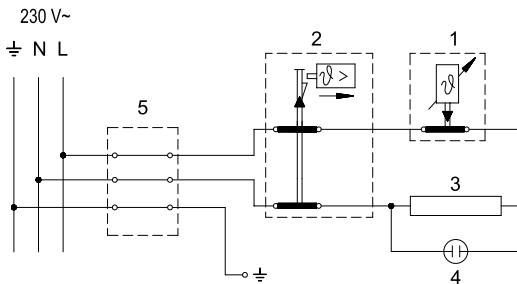
The water heater connection to the mains must occur in accordance with the applicable standards. An all-pole isolating device must be connected upstream of the unit, which interrupts all feed poles according to national installation regulations.

Legend:

- 1 - Thermostat
- 2 - 2-pole bimetal safety
- 3 - Heating element
- 4 - Control lamp
- 5 - Connecting terminal

L - Phase conductor  
N - Neutral conductor

- Protective conductor



Electric diagram

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**NOTE: De-energise the water heater before any intervention!**

It should be noted that in case of failure (body circuit / leakage) it can trigger the RCD (Residual Current Device) come. This means that all electrical equipment is energized in this circuit.

Therefore, a separate RCD must be provided for the operation of the small memory should other electrical equipment to be used, in which an uninterruptible power supply must be guaranteed, as Freezers, refrigerators for medicines, emergency lighting, etc.

**USE AND MAINTENANCE**

After connection to the water line and the mains, the water heater is ready for use. By turning the thermostat knob on the front of the protective cover, you can select the desired water temperature between 25 °C and 75 °C. We recommend setting the knob on the "e" position. This is the most efficient setting. The water temperature is about 55 °C and the calcification and heat loss are less than at higher temperatures. The function of the electric heating element is shown by the control lamp. The bimetallic thermometer is attached to the front side of the heating element and the indicators move clockwise when the hot water is in the heating element. If the heating element is inactive for a longer period of time, prevent its contents from freezing by placing the thermostat knob on the "0" position, but the heating element remains connected. In this setting, the unit keeps the water at a temperature of about 10 °C with minimum energy consumption. If you turn off the heating element, you have to drain the water if there is a risk of freezing. Accordingly, the hot water valve at one of the connected fittings can be opened. The water is drained through the cold water inlet or via the safety relief valve so that the lever or cap of the safety relief valve is rotated just like when checking its proper functioning. During assembly, it is useful to install a special reducing nipple (T-piece) or a discharge valve between the safety relief valve and the supply pipe.

The remaining water in the unit can be drained by turning the heat flange.

The surfaces of the water heater can be cleaned by wiping them with a damp cloth and with a mild detergent solution. Do not use any solvents or coarse cleaning agents.

Regular service ensures proper functioning and a long service life of the water heater.

At regular intervals no longer than 36 months, the correct functioning of the protective anode is to be checked by a designated expert to be able to claim the warranty against perforation corrosion of the boiler. Limescale residue is to be removed. The protective anode can easily be checked by measuring the anode current.

When heating the water, limescale deposits in the tank cannot be entirely avoided. These can be removed by customer service. The amount of lime inside the water tank depends on the water quality and the set hot water temperature.

After inspecting the water heater, customer service will recommend the date of the next inspection based on the established condition.

**Please do not try to correct any unit errors yourself. Instead, please contact the nearest authorised customer service representative.**

## Warranty, guarantee and product liability

The warranty will be fulfilled in accordance with the current legal provisions of the Republic of Austria as well as with those of the EU.

1. A condition for the operation of guarantee services by the product manufacturer (hereinafter referred to as the PM) is the presentation of the paid invoice for the purchase of the device for which the guarantee service is being invoked, whereby the identity of the device in terms of type and serial number must be taken from the invoice and must be evidenced by the claimant.
2. To the extent required by law and/or the installation and operating instructions, the assembly, installation, connection and commissioning of the device in question must have been carried out by a licensed electrician and/or installer with due regard to the necessary instructions for this.
3. The area in which the device is operated must be frost-free. The installation of the device must be carried out in a place where one might reasonably expect it to be, i.e. the device must be easily accessible in case of servicing, repairs or in case it needs to be replaced. When setting up, installing and operating the water heater in unusual places (e.g. lofts, living quarters with water sensitive flooring, store rooms etc.) potential water leakage must be taken into consideration and therefore a device for capturing and draining off any leaked water must be provided in order to prevent secondary damage in the sense of the product liability provisions.
4. The following shall not entitle you to recompense under the guarantee and warranty: Improper transportation, normal wear and tear, deliberate damage or damage through negligence, any application of force whatsoever, mechanical damage or damages due to frost or resulting from exceeding the operational pressure stated on the rating plate even once, the use of connection fittings that do not comply with the applicable standards or non-functioning storage tank connection fittings, as well as unsuitable and non-functioning operating fittings. Glass and plastic components breakage, any colour differences there may be, damage resulting from improper use, especially resulting from a failure to comply with the installation and operating instructions (Operating and Installation Instructions), damage due to external factors, connections to the wrong voltage, corrosion damage due to aggressive waters not suitable as drinking water in accordance with national guidelines (e.g. The Austrian Drinking Water Ordinance TWV-BGBl II no. 304/2001) natural scaling, lack of water, fire, flooding, lightning strike, voltage overloading, power outages or other acts of God. the infiltration of foreign bodies or electro-chemical influences (e.g. mixed installations), failure to pay due care and attention to the planning documentation, failure to renew the in-built protective anode on time and to document it, lack of or unprofessional cleaning and operation, as well as any divergences from the norm that even slightly reduce the value or the functional capability of the unit. In addition, as a matter of basic principle, all regulations set out in ÖNORM B 2531 or DIN 1988 (EN 806) or the corresponding national regulations and legislation must be complied with.
5. In case of a justifiable claim, this must be reported to the nearest customer services centre of the manufacturer. They shall reserve the right to decide whether a faulty component should be replaced or repaired and/or whether a faulty device will be exchanged for a fault-free device of the same value. In addition the manufacturer expressly reserves the right to demand that the customer return the device to which the claim applies.
6. Repairs carried out under the guarantee may only be carried out by people licensed to do so by the manufacturer. Exchanged parts shall become the property of

manufacturer. Should any repairs to the water heater be required following necessary service works these shall be invoiced to the customer as repair and pro-rata materials costs.

7. In case of third-party interference without our express instruction, any and all claims shall be null and void, even if this is done by a licensed installation technician. The acceptance of costs arising from repairs carried out by third-parties shall be subject to the manufacturer having been requested to fix the fault and having either failed to meet their exchange or repair obligations or not having done so within a reasonable period.
8. The guarantee period shall neither be renewed nor extended as a result of the services in response to claims under the guarantee or warranty, or service and maintenance works.
9. Transport damage shall only be inspected and perhaps recognised if these are reported to the manufacturer in writing within one working day of delivery.
10. To the extent permissible by law, any claims over and above provisions made in the guarantee, such as in particular those relating to compensation for damages and consequential losses are excluded. Pro-rata labour hours for repairs, as well as the costs of restoring the system to its original condition must be paid by the customer at the full rate. The guarantee offered shall only cover the repair or replacement of this device in accordance with this guarantee statement. The provisions of the manufacturer's sales and delivery conditions shall continue to apply in full provided that they are not modified through these guarantee conditions.
11. Services not provided within the framework of these guarantee conditions shall be invoiced to the customer.
12. A precondition for the fulfilment of these guarantee provisions by the manufacturer is that, on the one hand the device has been fully paid for and, on the other hand, that the claimant has fully complied all of his obligations towards the reseller.
13. An additional guarantee shall be provided for the annealed internal boiler for water heaters, with no diminution of the guarantee provisions in accordance with Points 1 to 11 or a period of 2 years following delivery. If the guarantee conditions are not met then the legal warranty conditions of the country to which the goods have been delivered shall apply.
14. For the attainment of claims in accordance with Austrian product liability legislation it should be noted that: Any possible claims from the product liability stated above which deal with damage caused by a failure of a product are only justified when all the prescribed measures and requirements which are needed for error-free and standard compliant operation of the device have been fulfilled. This includes for example the mandatory and documented replacement of the anode, connection to the correct operating voltage, damages arising from improper operation are to be avoided etc. These requirements are all derived from the fact that, if all regulations (standards, installation and operating instructions, general guidelines, etc.) are observed, then the secondary damage would not occur from a casual error on the device or the product. Furthermore it is indispensable that the necessary documentation, such as for example the designation and manufacturer number of the storage tank, the seller's invoice and the incensed installation company that carried out the installation as well as a description of the fault are submitted for the inspection of the allegedly faulty storage tank in the technical laboratory (absolutely necessary as a trained professional will inspect the storage tank and analyse the cause of the fault). To avoid any confusion regarding the storage tank during transportation, it must be provided with a clearly legible label (preferably with the address and signature of the end user). A corresponding photographic record is required showing the extent of the damage, the installation details (cold water input, hot water output, safety fittings) as well as the faulty area of the storage tank. In addition, the manufacturer reserves the right to

require the submission of the required documents and devices or parts of devices from the purchaser. A prerequisite for the provision of services resulting from product liability is that the victim must prove that the damage was caused by the product. Claims made in line with the Austrian Product Liability Act are only valid for the sums above the first EUR 500 (excess). Until all the facts and circumstances have been determined and the causal error-triggering reason has been identified, the possible fault of the producer is expressly excluded. Any failure to comply with the operating and installation instructions as well as the applicable standards shall be regarded as negligence and shall result in an exclusion of liability in relation to compensation for damages.

The illustrations and data are non-binding and may be changed without comment in relation to technical improvements.

Subject to technical alterations, errors and misprints excepted.