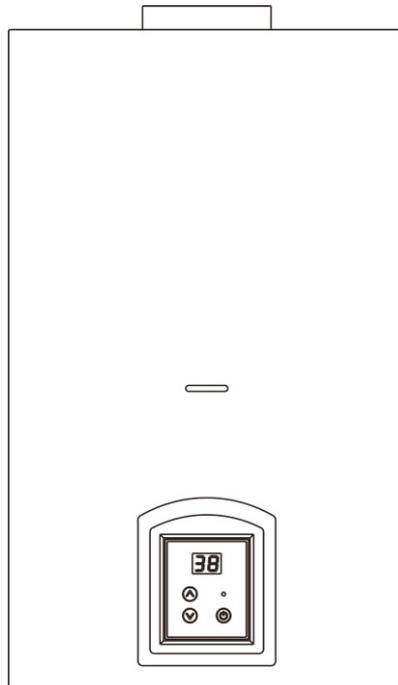
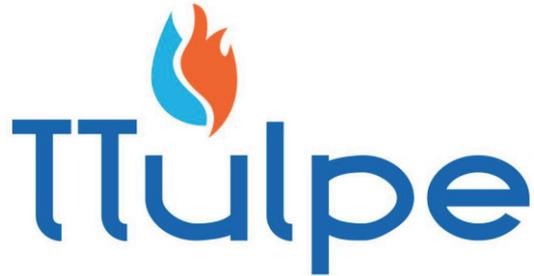


148.00 mm



210.00 mm

TTulpe Indoor B-10 N20 Eco
TTulpe Indoor B-10 N20-E Eco
TTulpe Indoor B-10 N20/N25Eco
TTulpe Indoor B-10 B30/37/50Eco
TTulpe Indoor B-10 P30/37/50Eco

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

148.00 mm

The device is well built in accordance with the current legislation.

The CE sign positioned on the product indicates that it conforms to the following European Directives and Regulation:

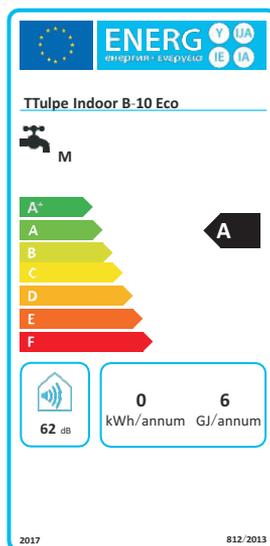
- Regulation Gas Appliance (UE) 2016/426
- European Standard: gas-fired instantaneous water heaters for the production of domestic hot water EN 26:2015
- Directive 2009/125/ECEco-design requirements for energy-related products
- Regulation (EU) 2017/1369 setting a framework for energy labelling
- Delegated regulation (EU) no. 812/2013
- Delegated regulation (EU) no. 814/2013



The appliance complies with the Regulation (EU) 2017/1369.

The energy label carries the information regarding the product's energy efficiency characteristics.

In this way the end consumer can identify and compare similar products and can make informed choices regarding high efficiency appliances.



210.00 mm

PRODUCT DATASHEET		
TTulpe		Indoor B-10 N20 Eco Indoor B-10 N20-E Eco Indoor B-10 N20/N25Eco Indoor B-10 B30/37/50Eco Indoor B-10 P30/37/50Eco
Declared load profile		M
Indoor sound power level	dB(A)	62
Water heating energy efficiency class		A
Water heating energy efficiency class	%	72
Annual fuel consumption	GJ	6
Annual consumption of electrical energy	kWh	0

WARNING

This booklet contains information relevant to the user as well as the installer.
The user must read the following chapters: General safety, Flue gas device and Operation.



In parts of the manual the following symbols are used:

-  **WARNING** = for actions that require caution and adequate preparation
-  **PROHIBITED** = for actions that **MUST NOT** be performed

When the product has reached the end of its serviceable life, it shall be disposed of in an environmentally friendly way and disposed of according to the regulations in force.

Separate collection and recycling of the product avoid negative impact for environment and health, and allows recovery of materials, to obtain energy and resources saving

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Packing List:

- | | |
|----------------------------------|----------------------------|
| 1.gas instantaneous water heater | 6. Screws and plastic plug |
| 2.Instruction Manual | 7. Rubber |
| 3.Gas connector | 8. Washer |
| 4.Expansion screw | 9. PTFE Tape |
| 5.Stainless steel water hose | |

148.00 mm

GENERAL SAFETY WARNINGS

The Operation Manual is an integral part of the product and so must be carefully preserved to accompany the product; if it is lost or damaged another copy can be requested from the Technical Assistance Centre.

The installation of the device and any other repairs or maintenance must be performed by qualified personnel according to the law in force, in compliance with the installing regulations including any revisions.

It is recommended that trained personnel install the device.

The device must be used according to the manufacturer specifications. The manufacturer cannot be held contractually or otherwise responsible for damage caused to persons, animals, or objects because of incorrect installation, repair or maintenance or improper usage.

The product's safety or automatic regulation devices must not be modified unless performed by the manufacturer.

This device is intended for heating water and therefore must be connected to a water distribution network whose load and settings are compatible with the product.

If water spills, turn off the water supply and advise the qualified personnel at the Technical Assistance Centre.

If the machine is not used for prolonged periods turn off the gas supply. If there is a risk of the water freezing, empty the water heater.

If the machine breaks down or does not function properly, deactivate it, do not attempt to perform any repairs.

The machine's maintenance must be performed at least once a year. Book a maintenance session with the Technical Assistance Centre ahead of time to save wasting time and money afterwards.

When the product has reached the end of its serviceable life, it shall be disposed of in an environmentally friendly way; ensuring that the majority of the product is fully recycled in compliance with the installing regulations including any revisions.

When using the device, the following safety rules must be applied:

Do not use the machine for purposes other than those intended by the manufacturer.

Do not block the intake and dissipation grills or the ventilation openings in the area where the device is installed with rags, paper, or any other materials.

If a gas leak is detected, do not switch on any electrical devices, telephones or any other objects that could produce a spark. Ventilate the area by opening the doors and windows and switch off the gas supply.

Do not place objects on top of the device.

Do not leave flammable containers or substances in the area where the device is installed.

Do not attempt to repair the machine if it breaks down and/or works incorrectly.

Children or inexperienced persons are prohibited from using the device.

It is prohibited to open sealed elements. T

To maintain the proper functioning of the device:

Periodically clean the devices exterior with soapy water, this improves its appearance as well as preserving it from corrosion in the long term.

Do not use solvents, powders, or abrasive sponges.

Do not clean the device and/or its parts with flammable materials (e.g. petrol, alcohol, diesel etc.).

DESCRIPTION OF THE APPLIANCE

NOx identifies the group of the two most important nitrogen oxides:

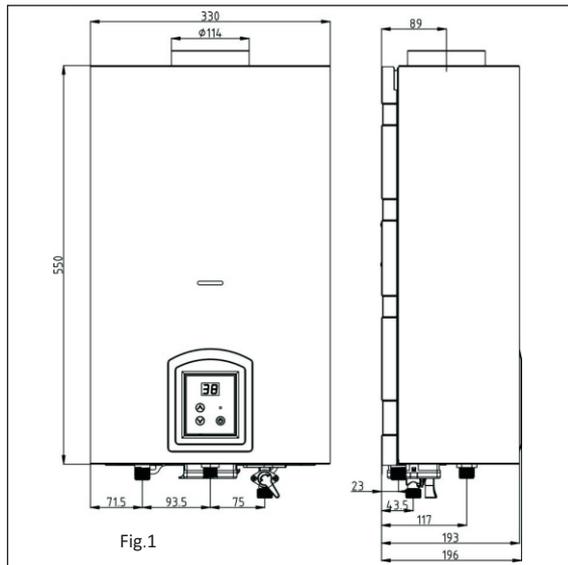
- NO Nitrogen monoxide (not harmful to humans)

- NO₂ Nitrogen dioxide (very harmful to humans and the environment).

NOx is formed during combustion processes at high temperatures. To reduce NOx emissions, it is necessary to cool the flame.

The water inside the water heater, after having been heated by heat exchanger, gets in the burner, cools the flame, and gets out to the final user.

The special burner cools the flame and check the airflow necessary for the combustion, set up "cooled flames" avoiding the loss of thermal efficiency, generating an optimal combustion with low emissions.



210.00 mm

148.00 mm

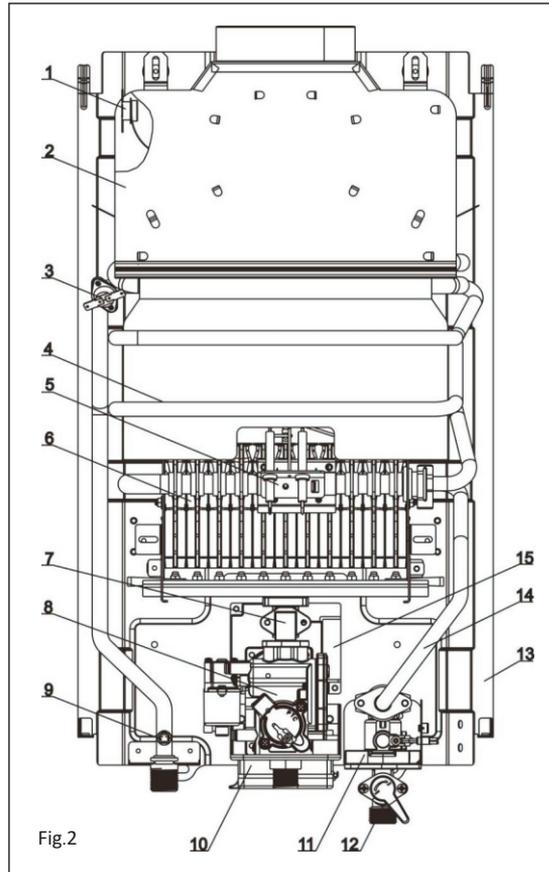


Fig.2

MAIN COMPONENTS FIG. 2

- 1 Thermostat of 85°C
- 2 Chimney
- 3 Thermostat of 77°C
- 4 Heat exchanger
- 5 Ignition pin
- 6 Burner
- 7 Connector of gas
- 8 Gas proportional valve
- 9 temperature probe
- 10 Battery box
- 11 Water flow sensor
- 12 Connector of water inlet
- 13 Back plate
- 14 Water inlet
- 15 Controller

210.00 mm

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Technical Data

Appliance name	TTulpe gas fired water heater				
Trade name	TTulpe®				
Type	B11BS				
Gas Category	I2EK	I2H	I2E	I3BP	I3P
Model	Indoor B-10 N20/N25Eco	Indoor B-10 N20 Eco	Indoor B-10 N20-E Eco	Indoor B-10 B30/37/50Eco	Indoor B-10 P30/37/50Eco
Gas Type	G20/G25.3	Natural Gas	Natural Gas	Butane/Propaneor their mixtures	Propane
Gas Pressure	20/25mbar	20 mbar	20 mbar	28-30/37/50mbar	30/37/50mbar
Countries of Destination	NL	AT,BG,CH,CY,CZ,DK, EE,ES,FI,GB,GR,HR, I E,IT,LT,LU,LV,NO, PT,RO,SE, SI,SK,TR	DE,PL,RO,LU	AT,BE,BG,CY,DE, DK,EE,FI,FR,GB,GR, HU,IT,LT,LU,LV,MT, NL,NO,RO,SE,SI, TR,PL	AT,CZ,DE,ES,FI,FR, GB,GR, NL,IE,IT,PT, RO,SI,SK
Nozzles quantity	22				
Nozzle diameter in mm	0.83&0.86			0.47&0.51	0.5&0.57
Nominal heat input Qn kW	20				
The nominal useful output Pn kW	18.3				
The Minimum heat input Qm kW	7.5			6.5	
The Minimum useful output Pm kW	6.7			5.8	
Nominal heat efficiency	>84%				
Gas Consumption m ³ /h	2.11			0.618	0.818
NOxmg/kwh	36.31			21.25	54.79
Flue gas average temperature	175				
Hot water data					
Nominal water flow rate	11L/min				
Cold inlet water is 15°C, water temperature of maximum flame can reach	60°C				
Cold inlet water is 15°C, water temperature of minimum flame can reach	35°C				
Minimum water Pressure Pw	0.1bar				
Maximum water Pressure Pw	10bar				
Connectors' data					
Water pipe connector	G1/2" Inch				
Gas pipe connector	G1/2" Inch				
Flue diameter	Φ 110mm				
Flue length min./ max.	0.5/3m				
Battery Type	LR20				
Electrical voltage	DC 1.5V				
Dimension /Weight					
Width x Heightx Depth	640x390x255mm				
Weight	8.16kg				
Country of Origin	Made in P.R.C.				
Manufacturer	TTulpe B.V.				
  					

210.00 mm

INSTALLATION

Regulations

The use of gas devices is controlled by precise regulations. It is essential to observe all the regulations in force. Installation of liquid petroleum gas (L.P.G) must comply with all the distributor's requirements and those of the regulations.

Wall mounting

Warning

Do not install this device in an area that contains dust, greasy vapor and/orcorrosive elements.

- The device must be installed on a suitable wall surface in proximity to a fume disposal flue
- It is vital to leave the minimal distances around the device as shown in fig 3 to allow for maintenance operations to take place.

Location

The water heater must not be tightly placed in an enclosure or slot, it should have an adequate flow of air around it

- The water heater must not be placed above a kitchen or other cooking devices that might deposit grease vapor on its exterior leading to corrosion
- Surfaces that sensitive to heat (e.g. wood) must be protected using appropriate insulation.
- Fig. 1 displays the dimensions necessary for wall mounting

Room ventilation

The installation of the water heater must comply with regulations in force including any updates.

Warning: This device can only be installed in venues that are permanently ventilated according to regulation in force.

Air circulation

It is vital that areas where gas devices are installed (type B) have access to the amount of air necessary for the regular combustion of gas as well as the ventilation of the venue.

- It is prohibited to use an extractor fan, fireplaces, and other similar devices at the same time as the water heater
- The area where the water heater is installed must have a regular flow of air for ventilation.

Air flow

The flow of air must occur by the following means:

- Permanent openings in the wall that lead outdoors
- Single or collective ventilation ducts.

The air used for ventilation must be taken directly from an outside location, that is far from sources of pollution.

Indirect ventilation from adjacent areas are permitted with the fol-

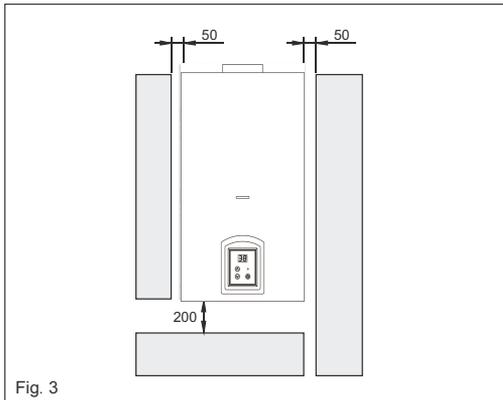


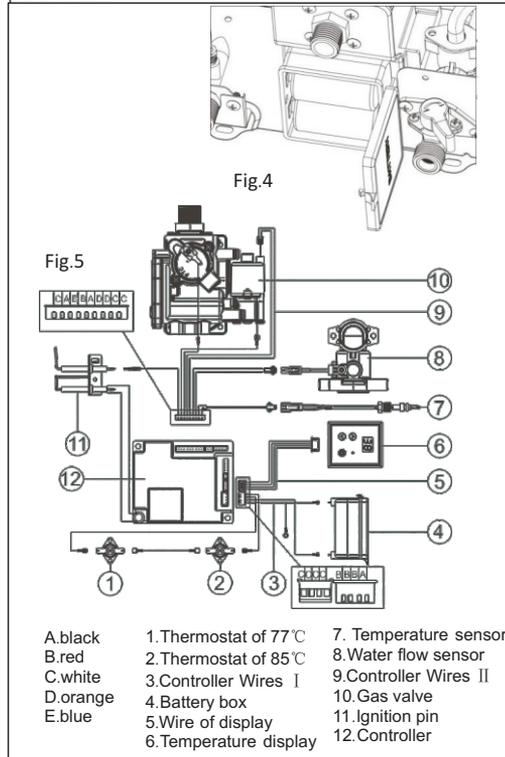
Fig. 3

lowing limitations:

- The adjacent area is equipped with direct ventilation
- The devices within the area to ventilate are connected to a waste duct
- The adjacent area does not contain a bedroom and is not a common area;
- The adjacent area is not a fire hazard such as a storage area for flammable materials, garage etc.
- The adjacent area is not lower than the area to ventilate as this might lead to an opposing draught (this can be caused by other devices that operate on the basis of combustion, a fireplace or any suction device that have not been given an adequate air supply)
- The air flow from the adjacent area occurs freely through permanent openings.

Electrical connection to battery

The device is powered by two 1.5 V batteries, alkaline long-lasting model LR20, thus it is not necessary to connect the device to a power socket.



Gas connection

Determine the pipe diameter according to current regulations. Before installing the device blow in the gas pipe to eliminate any residue from its manufacturing. Connect the water heater to the internal system's gas pipes and place a tap above the device for the halting and release of gas.

The main gas supply pipe must be connected by a flat seat fitting that allows the insertion of a gasket specifically provided for gas connections.

Do not use a conical seat fittings or union conical with threading sealed with hydraulic hacked hemp or Teflon.

The water heaters that are powered by tanks of L.P.G. gas with regulation and interception devices, must be connected correctly so to guarantee the safety of persons and the surrounding area. Follow all related regulations.

When initially installing the device, qualified persons must perform the following tests:

- Check that the internal and external parts of the gas supplying device are sealed.
- Check that the gas quantity supplied is equal to that required by the device.
- Check that the device receives the type of gas it is manufactured to process.
- Check that the gas supply pressure does not go beyond the maximum pressure values displayed on the information plate
- Check that the gas supply system supplies the necessary amount of gas to the device and that it is equipped with all the necessary safety devices prescribed by current regulations.

If the user is absent for a lengthy period, turn off the main gas supply tap.

Do not obstruct the area's ventilation openings where the device is installed to avoid dangers such as the build-up of toxic and explosive substances. Do not utilize gas tubes to earth electrical devices. **Water connection** Connect the water heater to the water supply and insert a tap to intercept the water above the device. From the front, the cold-water input is on the right and the hot water output is on the left

- ⚠ Insert the filter into the water valve input fitting.
- ⚠ Remove the plastic nut from the hot water output fit in before connecting it to the water supply.
- ⚠ Check the water hardness (°f).
In case of high water hardness, we recommend installing upstream of the appliance the water softener device or other device in compliance with the regulations including any revisions.

Ensure that the tubes of your water system are not used to earth your electrical system or telephone, they are inappropriate for performing this task.
In a short amount of time this can damage tubes and the device.

Disposal of waste product

This B11BS water heater is supplied with a device for releasing flue gas.

For output of combustion by-products refer to the regulations in force including any updates.

The gas devices with an attachment for a waste gas flue must be connected directly to properly working chimney or flue pipe; only if these devices are not present is it then permitted to release gases directly outside.

The fitting of devices to a chimney or flue pipe must occur via a

smoke channel. Smoke channels must be connected to a chimney or a smoke channel in the same or adjacent area to where the device is installed and must be made of materials resistant to mechanical strain, heat and the effects of combustion by-products and their condensation. The flue gas temperature must always be above condensation temperature in all points of the smoke channel regardless of external conditions.

FLUE GAS RELEASE SAFETY DEVICE

The product is equipped with a series of flue gas release safety devices. The device ensures the correct release of combustion by-products, the flow of combustible gas to the release conduit and the smoke channel.

The safety device contains a "thermostat", it can stop the flow of gas to the main burner and the pilot flame.

The safety device can be triggered by the partial or total obstruction of the release conduit or the smoke channel.

When the temperature of the thermostat resumes to normal, remove the fault code according to the Fault Code Solution. Then turn on the tap again.

If the device or its electrical connections breaks down, the product cannot be put ON, it ensures a safe condition

If the device or its electrical connections breaks down, the machine operation is blocked.

If the machine is constantly blocked because of the flue gas safety device, it is necessary to request the assistance of a qualified technician according

to law in force, to check the correct release of flue gas through the release conduit and/or the smoke channel, according to the installation regulation.

It is highly prohibited to attempt to modify or remove the flue gas safety device; this risks the safety of

the user and persons in the area. Only a qualified technician who is authorized by the manufacturer can meddle with the safety device to check its functionality or to substitute it if necessary

If it is necessary to replace the device, it is vital to only use "original parts" supplied by the manufacturer since it has been designed, studied, and regulated to be fitted with the water heater.

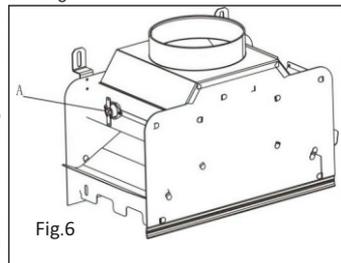


Fig.6

OPERATION

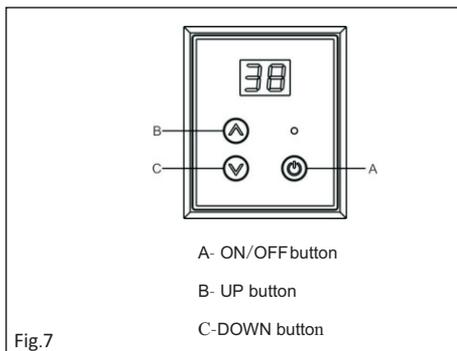


Fig.7

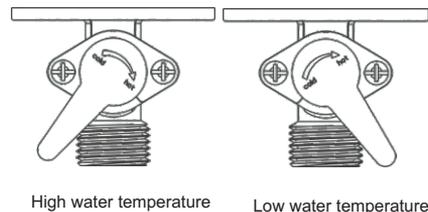


Fig.8

Function

The water heater is used to produce instant hot water. The removal of hot water can be performed by multiple taps. By turning on the relative tap, the main burner switches on heating the water that passes.

1. After adjusting the temperature, the traditional knob control gas water heater cannot keep the setting temperature constant due to the fluctuation of water pressure and air pressure.

Due to its digital control valve and more advanced control system, the controller can control the opening of the proportional valve according to the increase or decrease of the water temperature detected by the temperature sensor, in case of water pressure or air pressure fluctuation, so as to control the gas flow rate. Therefore, the hot water outlet temperature can keep the setting temperature constant.

2. The traditional knob control gas water heater will have high CO rate under high pressure due to the unstable air pressure supplied.

However, for this type of gas water heater with constant temperature function, because the gas valve has a pressure stabilizing function, when the gas pressure is too high, the valve will keep the pressure at the outlet of the valve stable, then the CO rate can be controlled in a low range.

Usage

Ensure that the gas tap and all water taps are switched off

- Turn on the Main gas supply tap or that of the gas tank if using Liquefied Petroleum Gas (L.P.G.)
- Open the gas tap, not supplied with the device, placed immediately before the water heater on the gas input pipe
- Press ON/OFF button, the gas water heater will be in standby status. Press UP or DOWN button to set the temperature of water outlet (Fig 7). Press UP or DOWN button for one time, then the setting temperature will increase or decrease 1°C accordingly. When long press UP or DOWN button for every 0.3 seconds, the setting temperature will increase or decrease 1°C. Temperature setting range can be 35-60°C
- When the gas water heater is connected with water supply, the ignition pin will start to work and ignite the main burner.
- If disconnect the water supply (turn off the water tap) or press ON/OFF button to turn off the gas water heater, the burner will automatically shut down. Then the device awaits another heating request.

If after 60 seconds it does not switch on, the controller detector interrupts the flow of gas and blocks the device.

To reuse the device after it has been blocked, close the hot water extraction tap and then reopen it to restart the sequence. If the main burner accidentally switches off, the device will attempt to turn it on again.

If within 60 seconds the device does not function it is blocked. The device is built to function with normal water pressure; in addition, a temperature selector B is also supplied.

Rotate the knob completely to the left to obtain the minimum water output or completely to the right for the maximum water output.

When the water heater is not used for long periods close the gas supply tap or the LPG gas valve on the tank.

For the best operational results, it is recommended to have a qualified technician service the machine at least once a year.

DANGER OF FREEZING

If there is a possibility that the area where the device is stalled could reach below 0°C, the device must be emptied of all water contained. In case of freezing conditions disconnect the incoming water pipe to drain the water heater completely.

MAINTENANCE

To maintain the machine at maximum efficiency, have qualified personnel perform a maintenance check at least once a year. Before cleaning or performing maintenance,

opening or disassembling the panels, switch off the device and turn off the gas supply. Check the main burner and the pilot flame, the ignition electrode, the safety valve and that there is no leakage.

Check that there is nothing obstructing the passages within the exchanger smoke channel.

To clean the outside of the panels, utilize a cloth with soap and water.

Do not use solvents, powders, or abrasive sponges.

Do not clean the device and/or its parts with flammable materials (e.g. petrol, alcohol, diesel etc.).

Troubleshooting: problems and solutions

Fault code



It will immediately shut down all gas channels and display the fault code on the screen when the controller detects a fault.

Fault Code meaning

- E1: Ignition failure (Including ignition failure caused by low voltage).
- E2: Ignition failure for the second time. (Including ignition failure caused by low voltage).
- E3: MCU self-check fault or EEPROM fault or wires fault.
- E4: Temperature sensor of water outlet has open circuit or short circuit.
- E5: Temperature sensor of water inlet has open circuit or short circuit (When the temperature sensor of water inlet is included).
- E6: False fire.
- E7: The overheating thermostat has open circuit.
- E8: Temperature of water outlet is over 85°C
- E9: Continuously working time (When this function is available).

Fault Code Solution

1. When the display appears the fault code except for E7, after solving the problems, there are two methods to remove the fault code.
 - ① Press ON/OFF button to restart for two times, then fault code can be removed
 - ② Remove and install the battery or turn off and open the water tap.
2. When the display appears the fault code E7, or the display appears other fault codes for 5 times in 15 minutes, display appears fault code and "rL", the only solution is to press DOWN button for more than 5 seconds. Then the fault code can be removed.

Malfunction Sheet

For the best functioning of the water heater, to prolong its lifetime and ensure that it is always safe, ensure that it is inspected at least once a year by a trained professional. The trained professional is to perform the following maintenance operations:

- Remove any rust from the burner
- Remove any deposit on the glow plug by the electrode
- Clean the combustion tank
- Check the ignition, switching off and general functionality of the device
- Check that the gas and water tubes and connections are sealed

Warning: the following repair instructions are only to be performed by qualified and authorized technicians.

Malfunctions Causes											Remedies	
	Flue goes out during use	No ignite after turning on	The flame bursts	Flame is yellow	Abnormal flame with peculiar smell	Difficult ignition	Outlet water temperature is too low	Outlet water temperature is too high	Fire does not ignite at low temp. position	Fire is not out after water heater is off.		
Flue is blocked up.	●											Check the flue and make sure it is not blocked up.
Gas valve is not open.		●										Fully open gas valve or replace gas tank.
Gas valve is half open.							●					Fully open gas valve
There is air inside gas valve.		●										Repeatedly turn on and off the outlet water valve until the water heater ignites successfully.
Gas pressure is too high.			●			●		●				Contact with maintenance personnel
Gas pressure is too low.	●						●					Contact with maintenance personnel
Freezing		●										Contact with maintenance personnel
Inlet water pressure is not enough.	●	●						●	●			Contact with maintenance personnel
Burner is blocked.				●	●	●						Contact with maintenance personnel
Heat exchanger is blocked.	●			●	●							Contact with maintenance personnel
Water controlling device defect	●	●					●	●		●		Contact with maintenance personnel
Pulse ignition defect	●	●										Contact with maintenance personnel
Internal wires loose	●	●										Contact with maintenance personnel
Batteries are put at wrong terminals			●									Put the batteries correctly
Electromagnetic valve defect	●	●										Contact with maintenance personnel
Feedback electrode defect	●											Contact with maintenance personnel
Discharge distance or parts abnormal.			●									Contact with maintenance personnel
Inlet water valve is not opened.		●										Fully open inlet water valve
Fresh air is not enough.				●	●	●						Contact with maintenance personnel

148.00 mm

Certificate of warranty –TTulpe®

TTulpe® guarantees appliances that it supplies in accordance with European directive 1999/44/EC guaranteeing the sale of Consumer Goods for a period of two years against a lack of conformity appearing after delivery of the product.

Unless proven otherwise, it will be assumed that any lack of conformity that appears in the six months from the delivery did not exist when the goods were delivered.

The warranty for spare parts will have a duration of two years from the date of delivery of the equipment.

This guarantee is only and exclusively valid for equipment sold and installed on EU territory.

Scope of the warranty

Unless proven otherwise, it is understood that the goods comply with and are suitable for the purpose for which they were purchased, and are always used under the following conditions:

- The guaranteed equipment must correspond to the equipment that the manufacturer expressly intends for the country of destination and must be installed in that country.
- The necessary spare parts will be those determined by our OFFICIAL Technical Department, and in all cases will be TTulpe original parts.
- The warranty is valid provided that the normal maintenance operations, described in the technical instructions supplied with the equipment, are carried out.
- The consumer must inform TTulpe of a lack of conformity within a period of less than two months after discovering it.

The warranty does not cover incidents caused by:

Freezing, although it can be that your device is equipped with an anti-freeze protection, is any damage due to frost out of warranty.

- The electrical supply of equipment by generators or any other system that is not a stable electrical network with sufficient capacity.
- Products that have undergone any repair not carried out by TTulpe's OFFICIAL Technical Department and/or personnel authorized by TTulpe.
- Corrosion, deformation, etc., caused by inadequate storage.
- Handling of the product by anyone outside of TTulpe during the warranty period.
- Assembly not in accordance with the instructions supplied with the equipment.
- Installation of the equipment that does not respect the Laws and Regulations in force (electricity, hydraulics, etc.).
- Defects in the electric or hydraulic facilities, or due to insufficient flow etc.
- Faults caused by the incorrect treatment of supply water to the equipment, by corrosion originating from water hardness, by poorly carried out descaling treatments etc.
- Faults caused by atmospheric agents (ice, lightning, floods etc.) as well as by erratic currents.
- Inadequate maintenance, neglect, or improper use.

The material replaced under warranty will remain the property of TTulpe®

NOTE: It is essential to complete all the information requested in the Certificate of Warranty. The validation of the warranty must be done immediately, by filling in the date and sending it immediately to TTulpe B.V. All our OFFICIAL Technical Departments have the corresponding accreditation from TTulpe®. Request this accreditation for any intervention.

Potential claims must be made to the competent authority in this matter

210.00 mm

148.00 mm

210.00 mm



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Nederland
www.ttulpe.com
info@ttulpe.com
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11/20