

The logo for Teba therm, with 'Teba' in a bold, sans-serif font and 'therm' in a smaller, italicized script font below it.

# Installation & Manual

The letters 'TR' in a bold, sans-serif font, enclosed within a thin black circular border.

Central Heating Stove With Solid Fuel

## Model T-21

The CE mark, consisting of the letters 'C' and 'E' in a bold, sans-serif font.

Tested according to DIN EN 13240

For product efficiency and emission values, see the declaration of conformity!

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## 1. INTRODUCTION

Central heating stoves provide a comfortable and easy-to-use interior aqueous system. These heating units combine pleasure with a fireplace view. It is an independent heating unit that provides heat dissipation of radiators, heat distribution to the whole house and hot water through heat exchanger or boiler.

The stove body is made of steel and the food heating chamber is made of Teflon or enamel coating.

The ashtray is placed at the bottom of the product and a fire chamber is available.

Water chamber is located on three sides (right, left and rear) of the combustion and heating area.

Chimney output is placed on the upper plate of the product.

The product is highly efficient due to its physical structure.

It has an automatic ash discharge system.

There is an easy replaceable grid system.

The thermostat in the product ensures that the circulation pump prevents automatically, thus avoids the continuous consumption of the electricity.

Circulation pump works quietly and the electricity consumption is up to a light bulb.

Once the air flow is set, the system automatically starts getting fresh air through the mechanical thermostat. Thus, fuel savings can be ensured by using the product in the desired degree.

You have a solid fuel central heating stove with European Standards Quality Certificate.

Please read the user manual, carefully. It includes information on product functions and easy-to-use information.

Use of these information increases the product quality and extend its life. You can properly protect the fuel and the environment.

Warranty of the product depends on the right use of installation and instructions as described in the guide.

We recommend you to keep this guide in order to reach the information about the correct use of the stove at the beginning of every winter.

## 2. GENERAL INFORMATION

National Standards, European Standards, local regulations, construction regulations, fire protection and safety regulations must be observed.

During the installation, one must contact a person who is authorized for the chimney. The authorized person shall check the shape of the chimney connection of the product in the prescribed directions. In addition, the product installation and installation connection must be made by an authorized person. Before installing the stove, the lifting capacity of the installation ground should be checked whether it is resistant for the stove. In case of insufficient load resistance or low lifting capacity, suitable precautions must be taken (eg put a stove lifting plate).

## 3. SAFETY

THE VENTILATION CONDITIONS WHERE THE PRODUCT WILL BE INSTALLED AND THE PROTECTION AGAINST FREEZING MUST BE TAKEN INTO CONSIDERATION.

All the required standard examinations are tested for the product. The predicted parameters associated with combustion efficiency and exhaust gas emissions are observed. The stove type described in this manual has been tested according to the BA 1, DIN 1881 EN13240 standards, by an approved agency.

Combustion chamber cover should be opened only to load the fuel. To avoid hazards, the combustion chamber must be closed. For the efficient operation of the stove, there must be minimum of fresh air flow in the room where it is installed.

**CAUTION! The stove can operate in conjunction with the existing multiple flue systems. This should not be an aspirator, ventilator etc.**

The combustion of combustible materials causes heat energy to heat the stove surfaces (doors, door handles, flame monitor cover, side walls, front wall). These parts should not be touched without heat-protective gloves.

**CAUTION! Since the stove top surface might be hot, please do not put combustible materials on it.**

Hazardous materials (plastic, flammable substances, etc.) may cause chimney fires. In this case, immediately close all the parts of the stove and call the fire fighting.

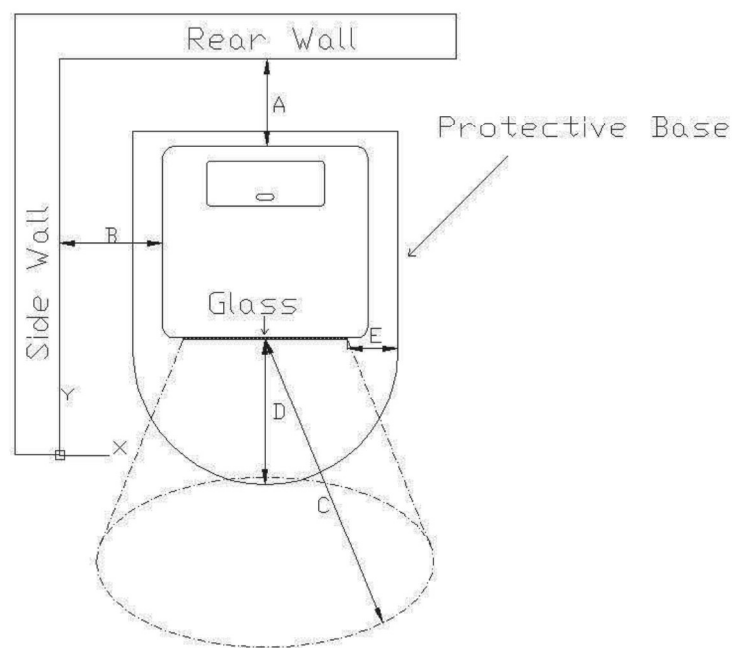
**CAUTION! Check the water level in the stoves and radiators before use.**

**\*\*\* The stove should not be used without water.\*\*\***

#### 4. INSTALLATION AND CONNECTION

The packaging of the stove protects the product from damage in the best possible way. However, the stove or its accessories may still be damaged during transport. Therefore, after removing the stove from the package, check whether it is complete and undamaged. In case of any damage, notify your dealer.

##### 4.1 SAFETY DISTANCES (MINIMUM DISTANCE)



While installing the stove, the fire regulations and chimney's instructions must be complied. For any related questions please ask the chimney installer. Minimum distances to be observed in flammable or heat-sensitive materials (eg furniture, wallpaper, wood panels) (see diagram below) are:

**A** 25cm from rear wall

- B** 15cm from lateral wall and
- C** 80cm from the radiation area (front side of the product)

Flammable materials and furniture should not be placed at a distance of 80 cm in the radiation area (C) of the flame monitoring cover.

This distance can be reduced to 40 cm when the protection panel is placed between the stove and the materials that are likely to burn.

Minimum distances for flammable materials and furniture are indicated on the product label and must not be exceeded. If the floor where the stove needs to be installed is flammable or heat-sensitive, you should place the product on the ground protection plate (eg marble or glass base).

In this case the minimum dimensions of stove bottom plate (look at drawing) should be:

- D** 50cm (front length)
- E** 30cm (lateral length from the inner edge of the fire chamber cover)

**You can order the floor protection plate from seller when you require.**

## 4.2 STOVE INSTALLATION AND CONNECTION

Product installation and assembly should be done according to the user manual and by an authorized person. Since our central heating stove with solid fuel for a flat is designed for interior and provide heat to the ambient, it should not be installed in bathroom, balcony, cellar, woodshed, etc... The distance between stove and chimney must be close.

**Select an appropriate place for the product. The expansion tank, circulation pump, mechanical thermostat, indicator panel and chimney connection must be installed as shown in the installation diagram.**

### 4.2.1 Expansion Tank

After the connection of the expansion tank to the suitable place (wall), it must be securely connected to the 1" pipe (PVC-metal) and must be connected to 1" records on the stove, to hot - cold return output and to  $\frac{3}{4}$  connection records on the expansion tank (see assembly diagram)

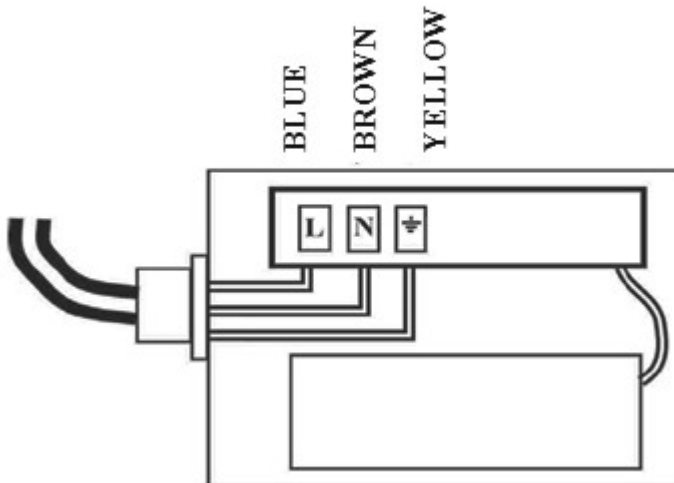
The expansion tank vapor output (water discharge) is used to expel the water vapor caused by pressure from the stove. The water vapor expels by taking a line from vapor output (water discharge) to the wet floor.

**CAUTION!** When filling, the installation has to be carried out from any point of the installation other than the expansion tank and the other outlet on the side should be closed with a blind plug, but the vapor output (water discharge) on the expansion tank must not be closed.

While adding water to the expansion tank, please check the water level, fill the water up to half of the expansion tank.

#### 4.2.2 Circulation Pump

Circulation pump and bypass line should be installed to the input of the radiators of the product as shown in (figure). The unshielded cable, located at the (rear) part of the product, should be connected to the circulation pump as shown below.



#### 4.2.3 Mechanical Thermostat

Your stove is equipped with a mechanical thermostat. Appropriate settings of the mechanical thermostat is specified in the enclosed information page. In the stand-by, you can save fuel and take advantage of optimal fuel energy if the recommended settings are adhered to.

While Burning Stove: **(Mechanical Thermostat Settings)**

Fuel	Max. Fuel Quantity	Mechanical thermostat (Air passing through the grate )	Glass Cleaning Air - Condition
Wood	3 - 4 Parts (Around. 3,5 - 4 kg)	First of all, burn 10 -15 min at least at max. Temperature (90C°) After set to the temperature you need.	Open
Coal Briquettes	(Around 3,5 - 4 kg)	First of all, burn 15-20 min at least at max. Temperature (90C°) After set the temperature you need.	Open

The mechanical thermostat should be set to the highest degree (90°C) when the stove is burning. The chain connected to the mechanical thermostat and the vent cover ensures wide opening of the vent cover. After about 15-20 min – the stove becomes hot enough - you can set the Mechanical Thermostat to the required temperature, it should not be under 40°C; otherwise it will not cause rapid combustion.

#### 4.2.4 Indicator Panel

**Electric Lamp:** The electric lamp starts to last the moment we plug the stove into the wall socket. If this lamp illuminates, it indicates that there is electricity. If the lamp does not illuminate, check the power line.

**Pump:** the pump lamp indicates whether the circulation pump is activated.

**Thermometer:** the thermometer allows us to see the temperature of the water inside the stove.

**Boiler Thermostat:** the boiler thermostat enables the circulation pump to operate at a certain temperature. This temperature is between 35°C and 45°C.

**CAUTION: Our electrical system operates at 220V / 50Hz. Our company is not responsible for any voltage drop and/or rise of the electrical current.**



#### 4.2.5 Hot water for USE

There is a serpentine (flex pipe) system for hot water. In the serpentine system, pressure reducers, valves or spiral hose must be used for hot-cold inlet-outlet. In addition, if there is any problem in the product by connecting the serpentine system heat safety valve (power failure, etc.), and the boiler water temperature rises to 95 °C, it opens the way of the heat exchanger to allow the cold water to circulate in the boiler and helps to reduce the heat of the boiler water and prevent it from going out again.

#### 4.2.6 Chimney Connection

For stove connection steel sheet flue pipes of 2mm thickness must be used. Stove pipe must be connected to stove chimney output and chimney firmly. This strong and close connection is also compulsory for flue pipes. After connecting flue pipe to the chimney, remaining gaps around chimney must be closed with sealing and fireproof materials. When the distance between stove and chimney is long, horizontal connection must be avoided. Chimney pipe must be installed according to the direction of the chimney. When the distance is short at least 1 meter length flue pipe must be used and must be installed vertically.

The chimney to be used at the exhaust gas outlet can be multiple chimney connection (See Chimney Assembly Diagram)

**CAUTION: Do not burn the stove when the flue pipe is connected. First of all, the radiator installation must be done ( Otherwise stove burned without water can lead to stove deformations). Our company is not responsible for damages caused by burning without water.**

**The chimney connection should be done according to DIN4705.**

#### 4.2.7 Radiator Installation Connection

Stove radiator plumbing connections should be installed by an expert or qualified person to guarantee a technically correct operation. Our company is not responsible for any mistakes that will occur while installing and assembling.

The radiator wiring connection of the stove should only be made with quality and tried-and-tested safety equipment.

Plumbing main line pipes, for metal and plastic PVC Pipes should be at least 1". In a heating system installed like this, the circulation ( hot water circulation ) will be easy, comfortable and the temperature of radiators is felt earlier. The main line pipes of the last few radiators can be ¾" metal and a plastic PVC pipe.

The main pipes in the heating system should be connected to the radiator installation by using the connection parts as seen in the installation diagram (records, valves, nipples).

**CAUTION: Depending on the climatic conditions of the regions, certain amounts of antifreeze must be added. Our company is not responsible for any damages caused by not using antifreeze.**

**CAUTION: The plumbing pipes should not be routed as far as possible through concrete floors and should be isolated if required. Otherwise, it cannot get enough efficiency, heat loss may occur.**

## 5. STOVE WORK PRINCIPLES

The stove should only be used by adults. Children should not be alone with the stove. The stove should only be used in accordance with this manual.

### 5.1 SUITABLE FUEL

Stove is suitable for highly efficient fuels. Approved fuel for combustion is listed in the attached information sheet.

**CAUTION : Since wood is not a permanently combustible fuel, it is impossible to heat overnight**

**CAUTION: Never use wallpaper, chipboard waste, plastic or treated wood (paint, coating, etc.) for heating! Otherwise, the chimney and flue pipes may be blocked.**

**Caution: Do not use flammable materials (thinner, paint, gasoline etc.)**

### 5.2 FIRST USE OF STOVE

After the installation process of the product is completed, heating water (installation water) will be added to the stove and radiators. The added water could be observed from the water level indicator of the expansion tank. Check if there are any leakages in the installation and radiators, in case of no leakage connect the product plug to the electrical power.

Check the electrical power and observe the light and whether the inner shaft rotates, by removing the yellow screw located in the middle part of the circulating pump. If the shaft does not rotate, rotate it with the screwdriver, and put the yellow screw in place.

In the meantime, by opening the air-intake screw located on the radiators, the air gaps in the radiators and installation needs to be removed.

**CAUTION: Fill the expansion tank halfway through water supply.**

Before the activation of the stove, the labels (except the plate) on the stove and the accessories in the ashtray or fire chamber needs to be removed, as it is only valid for shipping protection.

## 5.3 COMBUSTION AND HEATING

First of all put 3-4 bricket wood in the fire chamber and put small pieces of wood or paper to burn. All existing glass cleaning vents must be open. Then, after burning the stove, close the fireplace chamber cover. For the air-flow control, thermostatic regulation setting in the attached information page needs to be observed.

The stove should be burned carefully during the first use and the flame should be kept as low as possible. If you burn it carefully, you will prevent the formation of cracks in the insulating stones, damage the paint and deterioration of the material. The smell caused by the protective paint on the stove is short-lived, so keep the doors and windows open.

**CAUTION: Our products should not be used to burn environmentally hazardous waste.**

### 5.3.1 Adding fuel

In addition to suitable fuel, enough chimney extraction and properly use of the stove has an impact on glass cleaning. In this context, we recommend you to use wood in a single layer and use wood to fill the width of the large fire chamber. When opening the flame chamber cover, make sure that the air vent cover of the mechanical thermostat is closed. After adding the fuel, the flame chamber cover should be closed and the mechanical thermostat needs to be set.

### 5.3.2 Use during transition period

In the transitional season or by hot weather, problems may occur in the chimney output (smoke) draft. To avoid damages in the transitional period, the product should be operated with less fuel or should not be burned.

### 5.3.3 Ashtray Discharge

After a long period of combustion, at least once a day, the ash should be transferred from the grid to the ash tray by using the ash-handle. We advise you to do this when the stove is cold. When half of the ashtray is filled, draining should be considered.

If the ashtray is full, cast-iron parts will stay between the fuel chamber and ash, and the air-take will be impossible. This can cause damage and deformations to the product parts. While emptying the ash, make sure the cover of the chamber is closed.

**Attention! Before discharging the ash, embers should be checked. Even if the ash is cold, there may still be embers in the trash that can cause a fire.**

### 5.3.4 Emission Limit

The stove is suitable for high efficient fuel. Unsuitable fuels according to the Ministry of Environment Applications are for example:

- Wood that is moist and treated with protection
- Thin sawdust
- Paper and paperboard (except ignition)
- Bark and hardboard waste
- Plastic and other wastes

Burning these materials will damage the environment as well as shorten the life of the stove and cause damages. Regular cleaning and maintenance will also reduce harmful emissions.

## 6. CLEANING AND MAINTENANCE

At least once a year (when necessary more often) the stove should be cleaned and maintained in cold condition (once every 2 months when using coal). The efficiency increases as much as you clean. Wastes adhering to the stove and the stove pipe should be cleaned with a brush. Fireplace glass can be cleaned with a wet sponge and ordinary glass cleaning material can be used or the flame itself can clean the glass in efficient chimneys. Besides, the chimney should be cleaned once a year. We advise you to get the cleaning done by an authorized person.

The surface of the stove should not be cleaned with scratching and harmful cleaning material because otherwise the paint surface may be damaged.

## 6.1 PROBLEM AND CAUSES

Reasons why the stove does not heat or smoke coming out	Solution
The stove or the stove-pipe let smokes continuously	Check the chimney efficiency. Clean your stove and stove pipes on time ( see the chimney assembly scheme )
The chimney connection of the stove is leaking	Check the connection. In case of necessity close the leaking areas with sealing materials (see chimney assembly scheme )
The boiler does not reach the desired temperature	<ul style="list-style-type: none"> <li>- Check Fuel Type</li> <li>- Chimney emission may be low</li> <li>- Check the combustion chamber for sufficient air supply</li> </ul>
The desired temperature is not reached while the boiler is burning	<ul style="list-style-type: none"> <li>- Check the height of the expansion tank</li> <li>- Check plumbing</li> <li>- Heat losses are prevented</li> <li>- In case of necessity isolation should be done</li> </ul>
There is no fresh air flow from outside	Ventilate the room more
The water pressure and level in the system is too low	Check the water pressure ( add water if necessary )
The stove is overheating continuously	Check the power and whether the pump is switched on, use the power supply
The mechanical thermostat is not set correctly	Set the mechanical thermostat at the desired temperature

## 7. GENERAL WARRANTY AND POLICIES

ARAL MAKİNA MADENİ EŞYA SAN. VE TİC.LTD. ŞTİ provides warranty to the buyer within the framework of legal provisions. 2 (two) year warranty period against production defects starts from the actual delivery date. An invoice must be presented for inclusion in the warranty.

**Pump + glass + electric current high/low voltage resulted to a digital card failure + user errors are not covered by the warranty.**

In case of any damage related to production in our product, our company will try to repair this damage as soon as possible within the warranty period or it will replace the problematic part. Only spare parts approved or supplied by the manufacturer must be used.

After the warranty period, our company will continue to serve you in the necessary conditions.

You are kindly requested to inform the relevant dealer where you have purchased the product from with the model number printed on the label on the back of the product.

The company reserves the right to make changes to the product after publication of this manual.

DATE:

MANUFACTURER

ARAL MAKİNA MADENİ  
EŞYA SAN. VE TİC.LTD. ŞTİ  
Org. San. Böl. 8.cad. no: 16  
KAYSERİ

AUTHORIZED DEALER

CONSUMER