

## UTD 1000 SERIES LABORATORY OVEN RANGE



UTD 1315



UTD 1300

## USER MANUAL

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## 1. INTRODUCTION

The following symbols are used in this manual



This symbol recalls attention warning or procedure which assures operator safety or good functioning of apparatus.



This symbol recalls attention useful information about test procedure and about easy use of the machine and suggestions.

It is important to install device correctly, to maintain it regularly and to use as described manner.

The guarantee period of the machine you have bought is 1 year and the product end-of-life is 10 years. Product end-of-life is the time in which all parts of the machine has to be kept in the stock of the company.

PS: Do not use the machine without reading this instruction manual. This manual will help you to use the machine easily and safely. Specific test procedures are not mentioned in this instruction manual. It is recommended to read related standards for further information.



This machine is manufactured without damaging the environment and animals.

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## 2. WARNINGS and SAFETY DEVICES

Please read and follow the procedure below. There may be injuries, performance decrease of the machine or physical damage. In such a case, every guarantee and reliability undertakings will be invalid.

### WARNINGS

- The machine is designed such that it must be used in the laboratory conditions. Do not set it in a dusty, humid or hot medium.
- Set the machine correctly, use it as described manner and do maintenance regularly.
- Contact with the technical service department in case the power cable or electrical cable is broken down.
- Some problems may cause due to electrical equipment of the building. So the machine must be set into an electrically suitable medium. It is very important to ground the machine and that the earth of the electrical supply is in good condition. In the case of inefficient and non-existent earth, there is a potential danger to operator, machine and the working performance of the Control Unit.
- Do not change electric circuit of the machine.
- While the power cable is plugged into the mains or while the machine is running, do not remove any parts of the machine.
- Only qualified person should perform the related repairs.
- Do not change the calibration settings of the machine.
- If the instructions given in troubleshooting cannot help to solve your problem, plug out the power cable and call UTEST technical service.
  
- The machine must only be used with samples and apparatus given in the instruction manual. Do not use samples which has inappropriate hardness for the platens of the machine.
- Keep this manual for future reference
- Do not forget other general warning rules which are not given in this manual.

PS: The warnings are dedicated for all related UTEST Machine Park. Therefore, some of them may not be applicable to this particular device.

### SAFETY DEVICES:

*All UTEST UTD 1300 Series Lab. Ovens are fitted with:*

- Over temperature protection via an analogue over-temperature protection thermostat.

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### 3. GENERAL DESCRIPTION

UTEST UTD 1000 Series Laboratory Ovens correspond 5 different capacities. They have been designed for drying asphalt, soil, rock, concrete, aggregate or similar materials. 50, 120, 250, 500 and 750 LT capacity versions are available. From ambient to 250 °C temperature range with  $\pm 2$  °C precision.

The interior is manufactured from stainless steel and the exterior is robustly constructed from sheet steel finished in powder coated paint. The oven is also insulated with thick fiber-glass material.

All models are fan circulated (forced convection), fitted with the same direct reading digital control unit and equipped with an analogue over-temperature protection thermostat. Laboratory Ovens are supplied with 2, 3, 4 or 5 shelves according to the capacity.

The following standards such as;

**ASTM C127-C136-D558-D559-D560-D698-D1557-D1559**

**EN 932-5 / 1097-5**

**BS 1377:1 / 1924:11**

**UNE 103300**

in terms of technical properties.

Data for identification such as model number, serial no, capacity, dimension etc. are written on a label at the side panel of the machine.

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### 4. TECHNICAL CHARACTERISTICS

**Maximum Temperature:** 250 °C for all models

**Accuracy:** Better than  $\pm 5$ °C (Class IB to ASTM E145)

**Temperature Sensor:** PT100 positioned inside the drying chamber, half way up on the left hand side.

**Ambient Working Temperature:** Between 5 and 40 °C

**Heating Elements:**

**UTD 1295** ... 1 Heating Elements

**UTD 1300** ... 2 Heating Elements

**UTD 1305** ... 4 Heating Elements

**UTD 1310** ... 6 Heating Elements

**UTD 1315** ... 8 Heating Elements

**Digital Thermo-regulator:** Closed loop PID control

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## 5. IDENTIFICATION

The serial number and electrical characteristics of the oven are shown on the label attached to the unit. It is recommend that this label is not removed or damaged. Always quote the model number and serial number when ordering spare parts.

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## 6. SET UP

The working environment must be sufficiently aired and must not contain dust. The temperature of the indoor location has to be kept within the limit. The oven cannot work with an ambient temperature below 0°C. The oven must not be used in explosive or corrosive environments. The oven is not designed to be used out doors and must be protected against atmospheric elements. Place the oven on a stable base before connecting the mains. Ensure that the mains supply values correspond to which of the oven.

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	Mod. UTD 1295, 1300, 1305, 1310, 1315	

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## 7. SAFETY RULES

Use a suitable thermo-magnetic switch breaker on the mains supply line. The oven has to be earthed as per local regulations.

The external surfaces of the oven may reach high temperatures during functioning. Use proper protective means (e.g. gloves) while operating with the equipment.

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## 8. USAGE INSTRUCTIONS

### START-UP PROCESS:

- When the oven is ready for usage, turn on the oven using the main ON/OFF switch.
- As soon as the main switch is on, below mentioned functions are activated.
  - ◆ The thermo-regulator
  - ◆ The heating elements
  - ◆ The fan/fans mounted on the panel of the oven
  - ◆ The control unit
- Front fascia (picture 1) consists of DT104 control unit, on/off switch and alarm led. Power cable and short circuit breakers are located (picture 2) at rear.
- Control panel values are preset at UTEST so that there is nothing to get altered by the customer, but OFFSET value for user calibration. When the oven temperature is calibrated by the customer via a reference thermometer, the difference between the temperature values (if any) of control panel and reference thermometer can be compensated via this submenu, please check Picture 4 for the related illustration. All the submenus of the control panel can be observed from Picture 3.

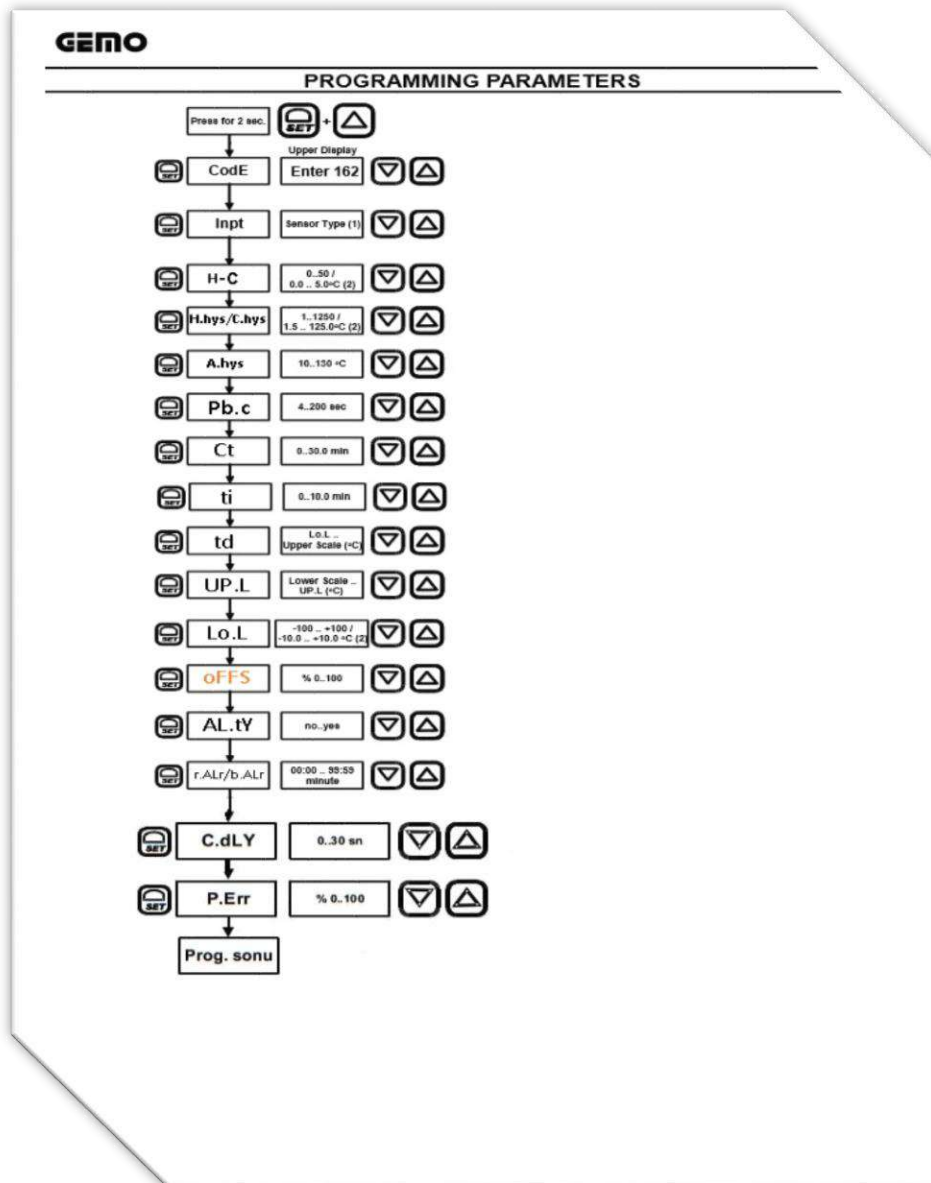


Picture 1: The Front Fascia of the Control Box



Picture 2: The Rear Section of the Control Box





**TEMPERATURE CONTROLLER SETTING :**

Press SET and ▲ buttons together.  
Code menu appears, using ▲ button type 162.  
By pressing the SET button, all menu can be accessed.

Select the menu ( ofss ).

Using the keys ▲ ▼

Change the value of thermocouple.  
To exit the menu, press SET.

Picture 3: Menu system of the Control Unit



Hold UP / SET buttons together approx. 3 seconds to reach the code screen. Then by using UP/DOWN buttons, enter 162. Use set button in order to roll down the submenus. When you enter OFFSET submenu, which it is coded as oFFS, place the desired temperature difference by using UP/DOWN buttons.



Picture 4: Adjusting requested offset temperature

- The oven is fitted with a forced ventilation system which causes an air flow in the oven from the bottom to the top and ensures temperature uniformity at various points in the oven chamber (maximum variation less than  $\pm 5^{\circ}\text{C}$ ).
- The vent duct allows:
  - Faster cooling when the heating elements are switched off.
  - Insertion of an additional temperature probe for checking/calibration of oven temperature.



Before opening the oven door, ensure that the chamber temperature has dropped to a safe level.

## TEMPERTURE ADJUSTMENT:

### Set Temperature Adjustment:



Picture 5: Actual and Set Temperature Values

- ✓ In order to change the set temperature (set point, in YELLOW colour), hold SET button for 2-3 seconds and adjust the requested set temperature via arrow buttons.
- ✓ The direction keys increase/decrease the value by one digit at a time, but if the buttons kept pressed, the related set temperature value continuously and rapidly changes to allow quick setting of the desired value.

Exit from the input mode is made automatically if no key is pressed for 2 seconds and the new set point is saved and used.

## 9. DOCUMENTS



**UTEST**  
MATERIAL TESTING EQUIPMENT

*"your solution partner in quality control"*



**EC DECLARATION OF CONFORMITY**  
**AT UYGUNLUK BEYANI**

Directive 2006/42/EC, Annex II (A)  
Makine Emniyeti Yönetmeliği (2006/42/AT), Ek II (A)

**MANUFACTURER** : UTEST Malzeme Test Cihazları ve Makineleri İmalatı ve Dış Ticaret A.Ş.  
Üretici

**ADRESS** : ASO 1. Organize Sanayi Bölgesi Ural Cad. No: 18 Sincan / Ankara / TURKEY  
Adres

**Herewith declares that the machine**  
İş bu belge ile beyan ederiz ki aşağıdaki makine

**MODEL** : UTD-1295  
Model

**SERIAL NUMBER** : See Details on Product Identification Label  
Seri No

**DESCRIPTION** : Laboratory Oven – 50 LT  
Ürün Adı : Laboratuvar Fırını – 50 LT

is in conformity with the provision of the following EC directives;  
belirtilen AT Yönetmelikleri hükümleri ile uyumludur;

- Machinery Directive (2006/42/EC)  
Makine Emniyeti Yönetmeliği (2006/42/AT)
- Low Voltage Directive (2006/95/EC)  
Düşük Voltaj Yönetmeliği (2006/95/AT)
- Electromagnetic Compatability Directive (2004/108/EC)  
Elektromanyetik Uyumluluk Yönetmeliği (2004/108/AT)

is in conformity with the following standards;  
belirtilen standartlar ile uyumludur;

EN 932-5 / 1097-5

Issue Date  
Yayın Tarihi  
03.03.2013



Product Safety Manager  
Ürün Güvenlik Yöneticisi  
Fuat İŞİM

Mod. UTD 1295, 1300, 1305, 1310, 1315



**EC DECLARATION OF CONFORMITY  
AT UYGUNLUK BEYANI**

Directive 2006/42/EC, Annex II (A)  
Makine Emniyeti Yönetmeliği (2006/42/AT), Ek II (A)

**MANUFACTURER** : UTEST Malzeme Test Cihazları ve Makineleri İmalatı ve Dış Ticaret A.Ş.  
Üretici  
**ADRESS** : ASO 1. Organize Sanayi Bölgesi Ural Cad. No: 18 Sincan / Ankara / TURKEY  
Adres

**MODEL** : UTD-1300  
Model

**SERIAL NUMBER** : See Details on Product Identification Label  
Seri No : Ürün Tanımlama Etiketine Bakınız

**DESCRIPTION** : Laboratory Oven – 120 LT  
Ürün Adı : Laboratuvar Fırını – 120 LT

Herewith declares that the machine  
İş bu belge ile beyan ederiz ki aşağıdaki makine

is in conformity with the provision of the following EC directives;  
belirtilen AT Yönetmelikleri hükümleri ile uyumludur;

- Machinery Directive (2006/42/EC)  
Makine Emniyeti Yönetmeliği (2006/42/AT)
- Low Voltage Directive (2006/95/EC)  
Düşük Voltaj Yönetmeliği (2006/95/AT)
- Electromagnetic Compatibility Directive (2004/108/EC)  
Elektromanyetik Uyumluluk Yönetmeliği (2004/108/AT)

is in conformity with the following standards;  
belirtilen standartlar ile uyumludur;

EN 932-5 / 1097-5

Issue Date  
Yayın Tarihi  
03.03.2013

Product Safety Manager  
Ürün Güvenlik Yöneticisi  
Fuat İŞİM

Mod. UTD 1295, 1300, 1305, 1310, 1315



**EC DECLARATION OF CONFORMITY**  
**AT UYGUNLUK BEYANI**

Directive 2006/42/EC, Annex II (A)  
Makine Emniyeti Yönetmeliği (2006/42/AT), Ek II (A)

**MANUFACTURER** : UTEST Malzeme Test Cihazları ve Makineleri İmalatı ve Dis Ticaret A.Ş.  
Üretilen  
**ADRESS** : ASO 1. Organize Sanayi Bölgesi Ural Cad. No: 18 Sincan / Ankara / TURKEY  
Adres  
**MODEL** : UTD-1305  
Model  
**SERIAL NUMBER** : See Details on Product Identification Label  
Seri No  
**DESCRIPTION** : Laboratory Oven – 250 LT  
Ürün Adı

**Herewith declares that the machine**  
İş bu belge ile beyan ederiz ki aşağıdaki makine

is in conformity with the provision of the following EC directives;  
belirtilen AT Yönetmelikleri hükümleri ile uyumludur;

- Machinery Directive (2006/42/EC)  
Makine Emniyeti Yönetmeliği (2006/42/AT)
- Low Voltage Directive (2006/95/EC)  
Düşük Voltaj Yönetmeliği (2006/95/AT)
- Electromagnetic Compatibility Directive (2004/108/EC)  
Elektromanyetik Uyumluluk Yönetmeliği (2004/108/AT)

is in conformity with the following standards;  
belirtilen standartlar ile uyumludur;

EN 932-5 / 1097-5

Issue Date  
Yayın Tarihi  
05.03.2013

Product Safety Manager  
Ürün Güvenlik Yöneticisi  
Fuat İŞİM

Mod. UTD 1295, 1300, 1305, 1310, 1315



**EC DECLARATION OF CONFORMITY  
AT UYGUNLUK BEYANI**

Directive 2006/42/EC, Annex II (A)  
Makine Emniyeti Yönetmeliği (2006/42/AT), Ek II (A)

**MANUFACTURER** : UTEST Malzeme Test Cihazları ve Makineleri İmalatı ve Dis Ticaret A.Ş.  
**Üretilen**  
**ADRESS** : ASO 1. Organize Sanayi Bölgesi Ural Cad. No: 18 Sincan / Ankara / TURKEY  
**Adres**

**Herewith declares that the machine**  
İş bu belge ile beyan ederiz ki aşağıdaki makine

**MODEL** : UTD-1310  
**Model**  
**SERIAL NUMBER** : See Details on Product Identification Label  
**Seri No**  
**DESCRIPTION** : Laboratory Oven – 500 LT  
**Ürün Adı** : Laboratuvar Fırını – 500 LT

is in conformity with the provision of the following EC directives;  
belirtilen AT Yönetmelikleri hükümleri ile uyumludur;

- Machinery Directive (2006/42/EC)  
Makine Emniyeti Yönetmeliği (2006/42/AT)
- Low Voltage Directive (2006/95/EC)  
Düşük Voltaj Yönetmeliği (2006/95/AT)
- Electromagnetic Compatability Directive (2004/108/EC)  
Elektromanyetik Uyumluluk Yönetmeliği (2004/108/AT)

is in conformity with the following standards;  
belirtilen standartlar ile uyumludur;

EN 932-5 / 1097-5

**Issue Date**  
**Yayın Tarihi**  
03.03.2013

**Product Safety Manager**  
**Ürün Güvenlik Yöneticisi**  
Fuat İŞİM

Mod. UTD 1295, 1300, 1305, 1310, 1315



**EC DECLARATION OF CONFORMITY  
AT UYGUNLUK BEYANI**

Directive 2006/42/EC, Annex II (A)  
Makine Emniyeti Yönetmeliği (2006/42/AT), Ek II (A)

**MANUFACTURER** : UTEST Malzeme Test Cihazları ve Makineleri İmalatı ve Dış Ticaret A.Ş.  
Üretici  
**ADDRESS** : ASO 1. Organize Sanayi Bölgesi Ural Cad. No: 18 Sincan / Ankara / TURKEY  
Adres  
**MODEL** : UTD-1315  
Model  
**SERIAL NUMBER** : See Details on Product Identification Label  
Seri No  
**DESCRIPTION** : Laboratory Oven – 700 LT  
Ürün Adı : Laboratuvar Fırını – 700 LT

**Herewith declares that the machine**  
İş bu belge ile beyan ederiz ki aşağıdaki makine

is in conformity with the provision of the following EC directives;  
belirtilen AT Yönetmelikleri hükümleri ile uyumludur;

- Machinery Directive (2006/42/EC)  
Makine Emniyeti Yönetmeliği (2006/42/AT)
- Low Voltage Directive (2006/95/EC)  
Düşük Voltaj Yönetmeliği (2006/95/AT)
- Electromagnetic Compatibility Directive (2004/108/EC)  
Elektromanyetik Uyumluluk Yönetmeliği (2004/108/AT)

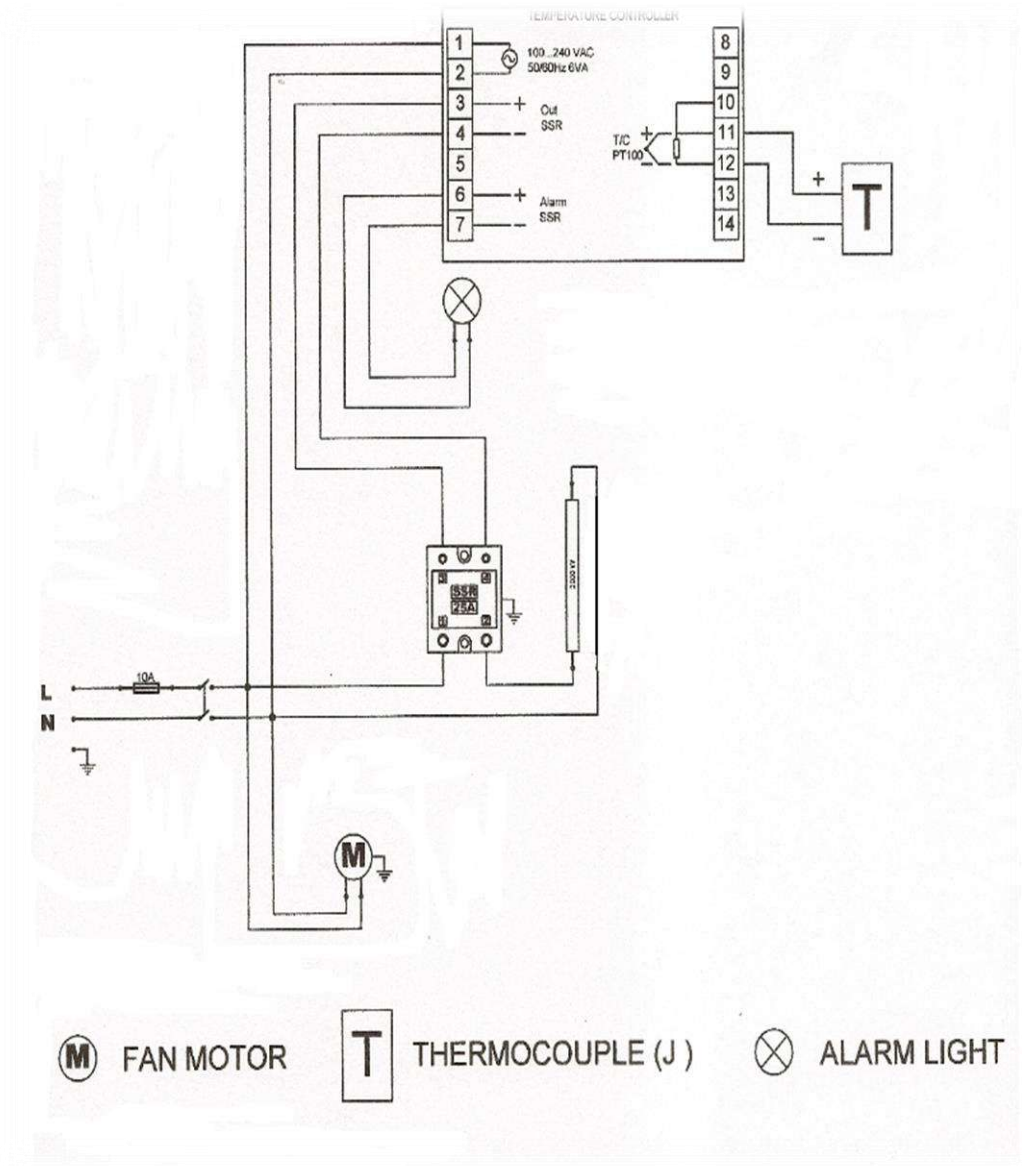
is in conformity with the following standards;  
belirtilen standartlar ile uyumludur;

EN 932-5 / 1097-5

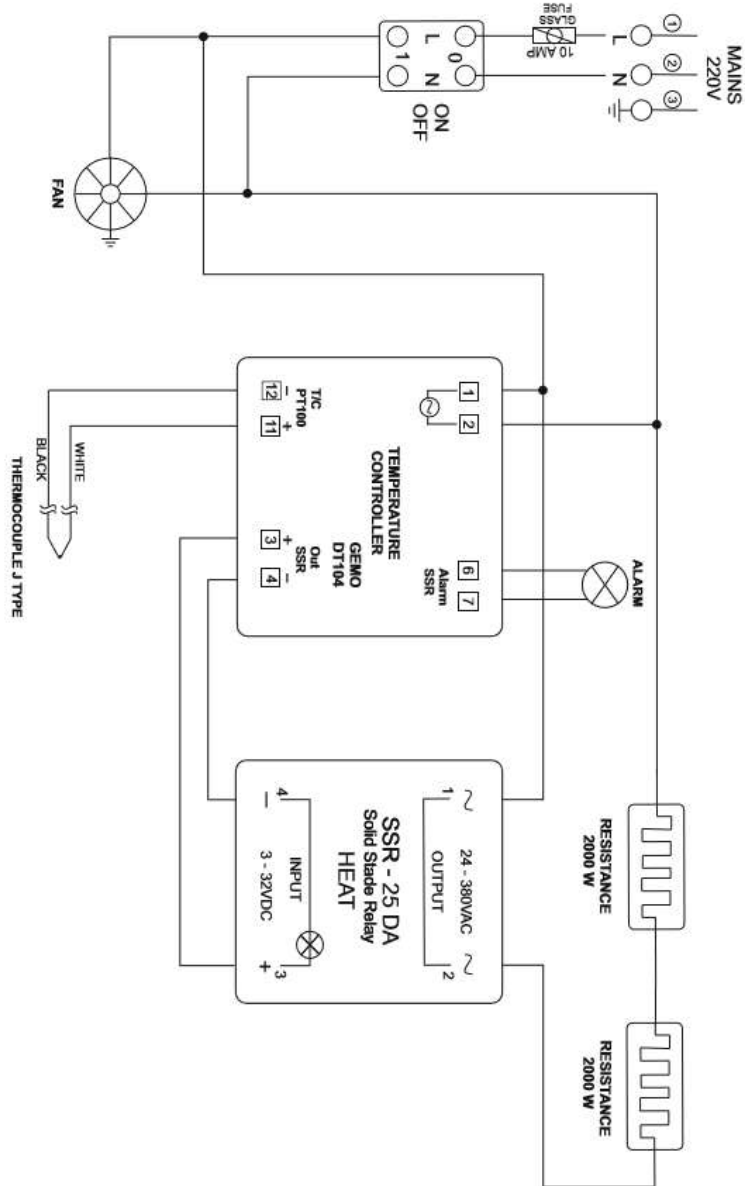
Product Safety Manager  
Ürün Güvenlik Yöneticisi  
Fuat İŞİM

Issue Date  
Yayın Tarihi  
03.03.2013



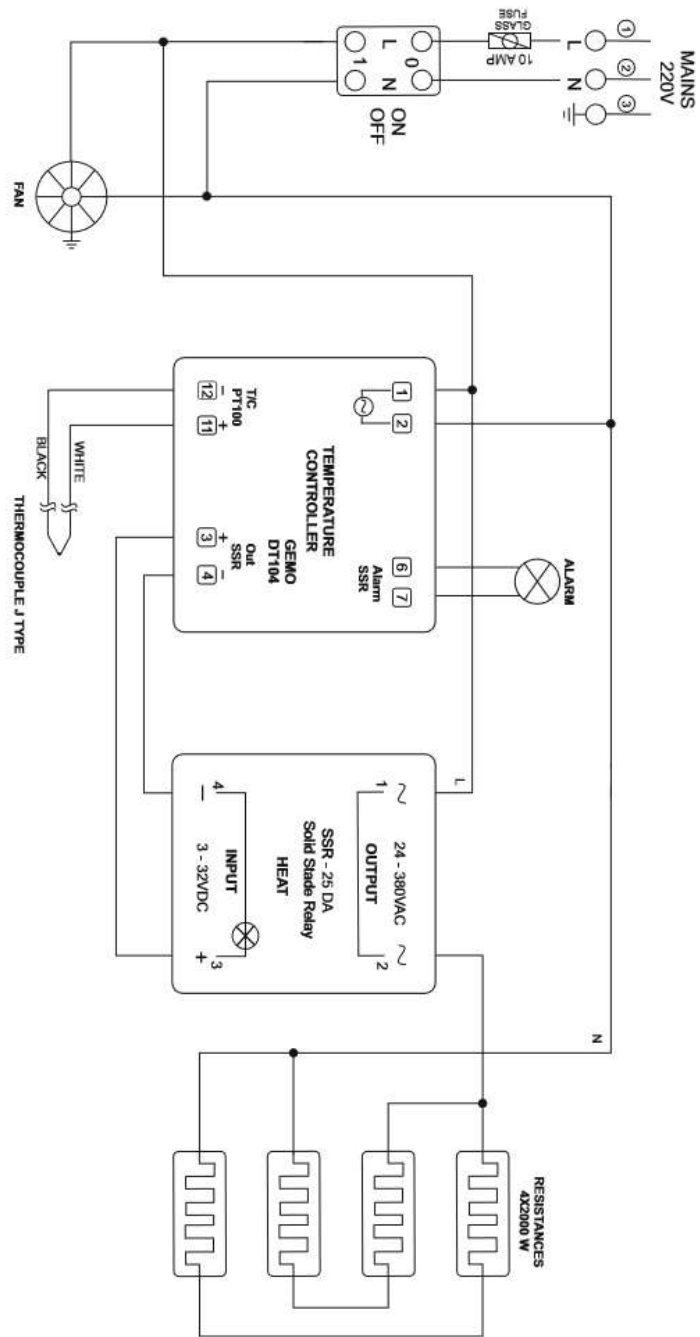


Picture 6: Electric Diagram of UTD-1295



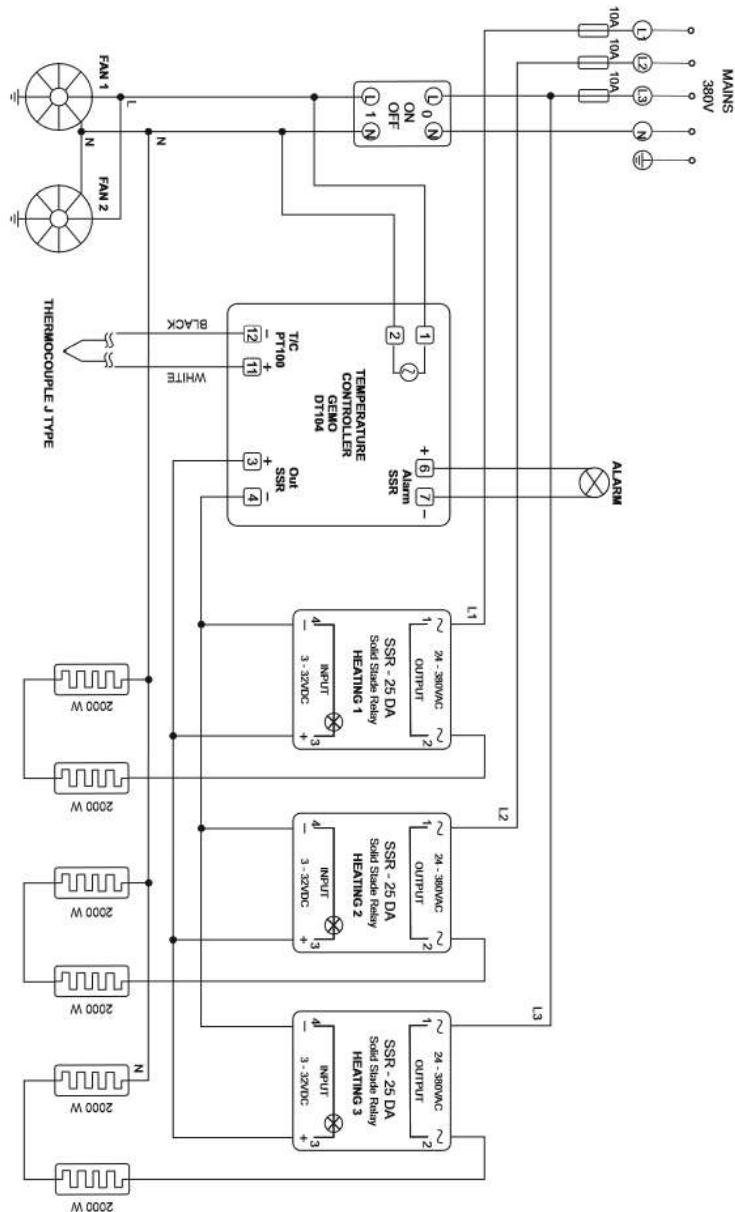
PRODUCT NUMBER:	UTD-1300		DRYING OVEN 120 LT / MAS	
PROJECT DATE:				
NAME:	MODEL:	MANUFACTURER:	SIZE:	ELECTRICAL SPECIFICATIONS:
UTDM	NOCCA	NOCCA	1200 X 750 X 1500 MM	Power: 15000 W
DESIGN:	SWITZERLAND	SWITZERLAND	TEMPERATURE:	350-650 °C
DESIGNED BY:	VALERIO	VALERIO	Voltage:	220V
CONTROLLED BY:	NOCCA	NOCCA	Phase:	1/1
COMMISSIONED BY:	NOCCA	NOCCA	1st:	
Rev No.:	Rev No.:		Rev Date:	

Picture 7: Electric Diagram of UTD-1300



PRODUCT NUMBER		UTD-1305		DRYING OVEN 250 LT/MAS		UTEST	
PROJECT DATE		12/01/2015		PAGE NUMBER: 1/1		MATERIAL TESTING EQUIPMENT	
MODEL	UTDM	FUNCTION	NO OVEN	TEMPERATURE	2500 W	TEL: (011) 344 38 77	www.utech.com.br
MANUFACTURER	UTDM	FUNCTION	NO OVEN	TEMPERATURE	2500 W	Fax: (011) 344 38 77	
CONTROLLED BY	UTDM	FUNCTION	NO OVEN	Voltage	220 V		
CONTROLLED BY	UTDM	FUNCTION	NO OVEN	Amperage	12 A		
CONTROLLED BY	UTDM	FUNCTION	NO OVEN	Phase	1Ph	Rev. No.:	Rev. Date:

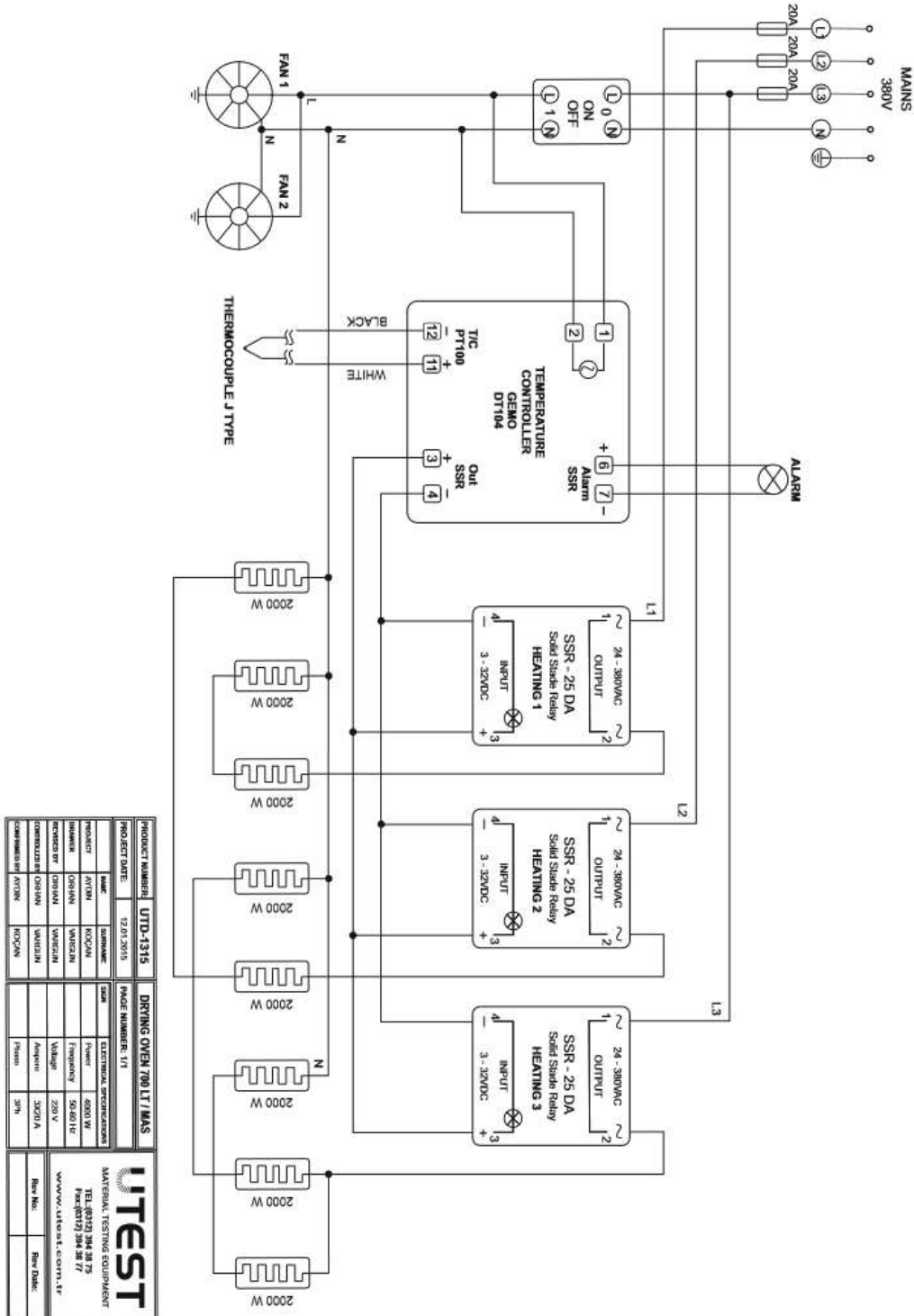
Picture 8: Electric Diagram of UTD-1305



PRODUCT NUMBER: UTD-1310		DRYING OVEN 500 LT/MS	
PRODUCT DATE: 12.01.2015		PAGE NUMBER: 1/1	
MODEL	TEMPERATURE	SIZE	ELECTRICAL SPECIFICATIONS
UTDM	ISOCLASS		Power: 3000 W
MAXIMUM	WORKING		Temperature: 2500 °C
DRYING	WORKING		Voltage: 230 V
CONTROLLED BY	WORKING		Amperage: 13 A
CONTROLLED BY	WORKING		Phase: 3PH
CONTROLLED BY	WORKING		
UTEST		www.utest.com.tr	
MATERIAL TESTING EQUIPMENT		New Model: Revizyon:	
Fahriye Sok. No: 17			
Etiler Kat: 7			
Beşiktaş / İstanbul / Turkey			

Picture 9: Electric Diagram of UTD-1310

Mod. UTD 1295, 1300, 1305, 1310, 1315



Picture 10: Electric Diagram of UTD-1315

## 10. TECHNICAL SPECIFICATION

### MODEL ... UTD-1295

Drying Chamber Capacity, LT	50
Internal Dia., mm	380x380x380
External Dia., mm	580x550x510
Working Ambient Temp. Range, °C	5-40
Max. Temp. ,	250
Accuracy, °C	Better than $\pm 5$ (Class IB to ASTM E145)
Weight ( Approx.), kg	50
Power Parameters	220 V $\pm$ 10 %, 10 A, 50 Hz, 1 Phase

### MODEL ... UTD-1300

Drying Chamber Capacity, LT	120
Internal Dia., mm	470x450x600
External Dia., mm	800x500x720
Working Ambient Temp. Range, °C	5-40
Max. Temp. ,	250
Accuracy, °C	Better than $\pm 5$ (Class IB to ASTM E145)
Weight ( Approx.), kg	60
Power Parameters	220 V $\pm$ 10 %, 10 A, 50 Hz, 1 Phase

## MODEL ... UTD-1305

Drying Chamber Capacity, LT	250
Internal Dia., mm	600x570x800
External Dia., mm	850x790x980
Working Ambient Temp. Range, °C	5-40
Max. Temp. ,	250
Accuracy, °C	Better than $\pm 5$ (Class IB to ASTM E145)
Weight ( Approx.), kg	95
Power Parameters	220 V $\pm$ 10 %, 10 A, 50 Hz, 1 Phase

## MODEL ... UTD-1310

Drying Chamber Capacity, LT	500
Internal Dia., mm	800x570x1100
External Dia., mm	920x650x1440
Working Ambient Temp. Range, °C	5-40
Max. Temp. ,	250
Accuracy, °C	Better than $\pm 5$ (Class IB to ASTM E145)
Weight ( Approx.), kg	127
Power Parameters	380 V $\pm$ 10 %, 50-60 Hz, 3 Ph

**MODEL ... UTD-1315**

Drying Chamber Capacity, LT	700
Internal Dia., mm	900x570x1400
External Dia., mm	1100x800x1600
Working Ambient Temp. Range, °C	5-40
Max. Temp. ,	250
Accuracy, °C	Better than $\pm 5$ (Class IB to ASTM E145)
Weight ( Approx.), kg	185
Power Parameters	380 V $\pm$ 10 %, 50-60 Hz, 3 Ph

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## 11. CUSTOMER SUPPORT-Warranty

UTEST technical services group is available for your technical questions. The technical service engineers are well-trained and experienced on UTEST material testing equipment and should be able to answer your questions. It is recommended to reread the related test standard such as EN, ASTM etc. if your questions are related with test procedures.

The guarantee period of the machine is 1 year and the product end-of-life is 10 years. Product end-of-life is the time in which all spare parts of the machine has to be kept in the stock of the company. Also the pictures used in this user manual are just for showing purpose. So that they may not be completely the identical to your apparatus.

Failing to perform the recommended maintenance actions or maintenance performed by unauthorized people can void the warranty. UTEST will not be responsible for maintenance and service actions performed by unauthorized people.



Mod. UTD 1295, 1300, 1305, 1310, 1315

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## 12. NOTES