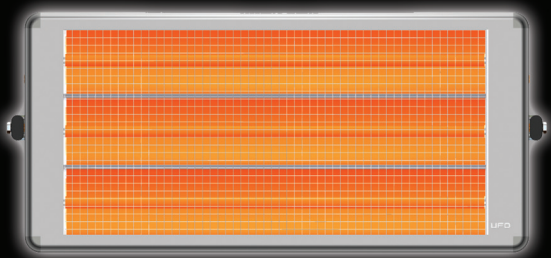


# UFO<sup>®</sup>

INFRARED TECHNOLOGY



CH MODEL – INDUSTRIAL HEATER

**USER'S GUIDE &  
GUARANTEE CERTIFICATE**

**ATTENTION!**

**NEVER USE YOUR DEVICE VERTICALLY.**

Dear Customer,

This users' guide is prepared for the UFO-CH models.

You have purchased an original, high qualitative and efficient UFO-IR Infrared Heater.

We thank you for your right decision and your fate in UFO.

Please read this users guide carefully in order to provide that your satisfaction lasts long.

Particularly, follow the rules exactly in the part "Safety Instructions".

A correct mounting, correct operation and maintenance is very important for your safety and for the safety of the persons who will benefit from your device.

"SAVE THESE INSTRUCTIONS"

We wish you to use your new UFO product in cheery days.

All products of the brand UFO are CE certified.

Products of the brand UFO are manufactured at its plant, decorated with the ISO 9001:2008 Quality Management System certificate.

**UFO**<sup>®</sup>  
INFRARED TECHNOLOGY

*Merkez: SUN Pazarlama Elk. Mak. Dan. ve Paz. Ltd. Şti.  
Akçaburgaz Mah. 72. Sok. No:17 K:2  
Esenyurt / İstanbul*

*Fabrika: UFO Işıklı Isıtma Sistemleri San. ve Tic. Ltd. Şti.  
Akçaburgaz Mah. 72. Sok. No:17  
Esenyurt / İstanbul*

[www.ufotr.com](http://www.ufotr.com)

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## INTENDED USE

UFO-CH series are commercial (industrial) wall-ceiling mounted radiant heaters. It provides you the possibility to direct and control the heat. Thus, it is appropriate for indoor applications such as workshops, temples, cafes, etc. and also for semi-open and outdoor applications such as garden, terrace, restaurant, veranda, store, etc.

Please read for more information for types installations our attached instruction manual.

## 2. SAFETY

### 2.1 Safety Instructions (I)

#### 1 - Electrical Connection Safety

- Do not operate any heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
- Do not run cord under carpeting- Do not cover cord with throw rugs, runners, or the like. Arrange cord away from traffic area and where it will not be tripped over.
- A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
- UFO-CH models provide protection against water spilling from any direction.
- It must be ensured that the main electricity is at the proper voltage which is indicated on the sticker of your heater.
- The diameter of the electricity supply cable has to be as shown in the table below and the cable has to be heat resistant for permanent temperatures up to +150°C such as silicone or flourinated polymeric cables.

FILAMENT COUNT	POWER (Watt)	CABLE-DIAMETER (mm <sup>2</sup> ) / (AWG)
1	1800 - 2000W	3 X 2.5 mm <sup>2</sup> (13AWG)
1	2300 - 2500W	3 X 2.5 mm <sup>2</sup> (13AWG)
1	2900 - 3200W	3 X 2.5 mm <sup>2</sup> (13AWG)
2	3600 - 4000W	4 X 2.5 mm <sup>2</sup> (13AWG)
2	4600 - 5000W	4 X 2.5 mm <sup>2</sup> (13AWG)
2	5800 - 6400W	4 X 2.5 mm <sup>2</sup> (13AWG)
3	5400 - 6000W	5 X 2.5 mm <sup>2</sup> (13AWG)
3	6900 - 7500W	5 X 2.5 mm <sup>2</sup> (13AWG)
3	8700 - 9600W	5 X 2.5 mm <sup>2</sup> (13AWG)

- Check the electric network safety. The fuses need to be at 20A for each phase.
- The device should not be used together with other devices at the same electricity cable or fuse.
- It has to be checked if there are any deformations like damages, cracks on the filament (heater tube) of the device. If there should be any damages, cracks etc. the device should not be used and the authorized service should be notified.
- The electric connection cables may not be placed on the hot body of your UFO device, the heating area, on hot surfaces or close to them.

## 2 - Mounting on Walls, Safe Distances regarding High Temperature and Fire Protection

- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- Risk of fire. Do not use as a residential or household heater.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- The heater device should only be used in horizontal position. It should be used at a maximum angle of 5 degrees. At angles more than 5 degrees in horizontal or in vertical usage, the heating spiral wire will become unusable in short time.
- Never mount your device on burnable surfaces (wood, carton etc.)
- There has to be minimum distance of 1.8m (6 feet) between the device and the floor.
- The safety distances for the mounting of the device are explained in the part 3.3 Mounting Instructions Position+Distance
- The safety distances between the device and easy flammable (fabric, paper, wood etc) objects, and living and burnable materials are given in the table below.

	P ≤ 5000W	P > 5000W
The safety distances between the device and easy flammable (fabric, paper, wood etc) objects.	1 m (3.5 feet)	3 m (10 feet)
The safety distances between the device and living	2 m (7 feet)	3 m (10 feet)
The safety distances between the device and easy burnable materials	8 m (26 feet)	12 m (39.5 feet)

- The heater device should not be covered due to fire danger. The product should not be used to dry things like clothing, towel, fabric etc.
- The heater device should not be used to light cigarettes and the like.
- As long as necessary operation instructions by responsible persons are not given or if the operation of the devices are not observed; the device should not be intended to be operated by mental or physical handicapped or person with less knowledge and experience (including children and old).
- Do not intervene the device prior to cutting of the connection to the power source.

## 2.1 Safety Instructions (II)

1-Cleaning and Maintenance Instruction (See Page 14) First, cut off the connection of your UFO to the electric line. The front grid has to be removed in order to clean the reflector (reflecting blend) and the filament and the methods indicated on page 13 must be applied.

2 - Repair and Service Procedure (See Page 15) Attention: Repair, maintenance and part replacements must be performed by our technical service or other specialists, authorized by UFO, only.

Dear Customer; Please read the complete safety instructions carefully.  
This is very important for the safety of you, your family and your environment.

## 2.3 IPX4

UFO-CH model heaters feature IP



IP (Ingress Protection) code in a product is a coding system defined for indicating protecting levels provided by a case against access to dangerous section, entry of foreign materials and water and for providing additional information about such protection. Protection class number, the IP is referred using a two digit number (IP XY). First digit (X) indicates protection against gross particles (and of course against people) and second digit refers to protection against fluids. In general, the higher the digit is, the higher the digit is, the more protection provided to the product.

UFO-CH heaters bear IPX4 certificate. IPX4 refers that they provide protection against water spilling from any direction.

Electrical components of UFO-CH heaters manufactured in accordance with IPX4 protection class are insulated. Due to the said features, they can safely be used in outdoor applications.

## 3.1 Mounting Instructions

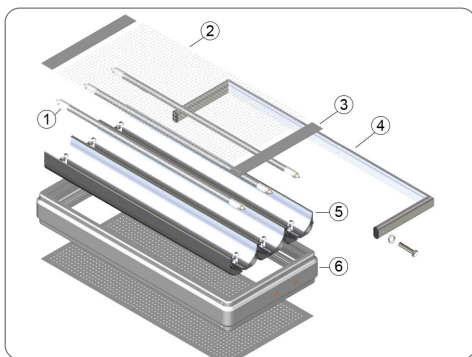
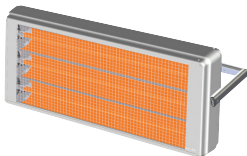


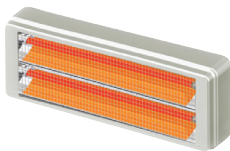
Figure 3.1

1. Filament (Heater Tube)
2. Fire guard
3. Support Piece
4. Mounting Arm
5. Reflector
6. Device Body
7. Electric Connection Box

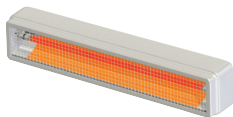
Note: The electric connection box is on the backside of the device.



Models with 3 filaments



Models with 2 filaments



Single Filament Models

## 3.2 Mounting on Ceiling or Wall

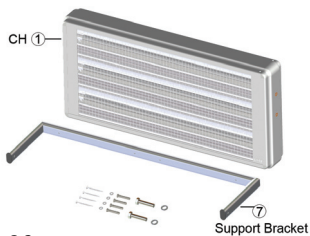


Figure 3.2

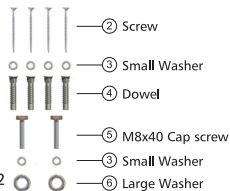


Figure 3.2-2

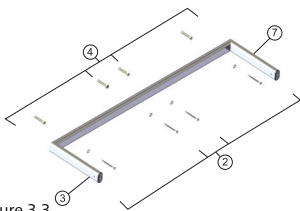


Figure 3.3

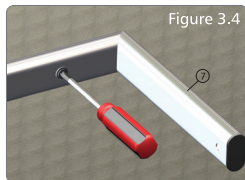


Figure 3.4

1- Make Marks on the ceiling or the wall by the holes on the carrier arm. Drill the wall or ceiling with a 10mm drill bit and place the dowels. The carrier arm is fixed on the ceiling or the wall as shown in the figure by the delivered connection elements.

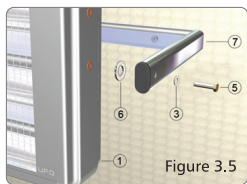


Figure 3.5

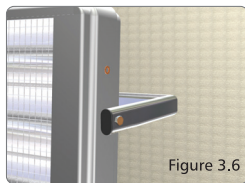


Figure 3.6

2- The device is fixed on the carrier arm with the small washer and the M8x40 screw as shown in the figure. The large washer has to be placed between the carrier arm and the device.

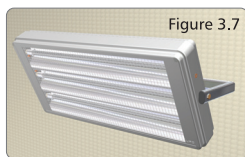
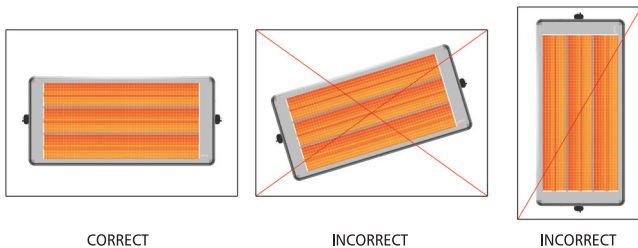


Figure 3.7



### 3.3 Mounting Instructions - Position + Distance

Mounting Positions: Attention! Only a horizontal mounting at  $\pm 5^\circ$  will ensure a long lifetime.



Attention! The device must be mounted such that the filaments (heater tube) are parallel to the floor.

Safe Distance: Necessary minimum distances for safety;

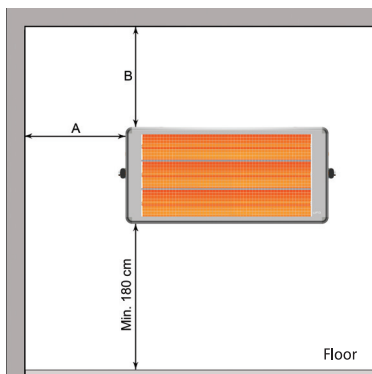


Figure 3.8

	$P \leq 5000W$	$P > 5000W$
A	Min 70 cm	Min 70 cm
B	Min 40 cm	Min 50 cm

At least 1 meter (3,5 feet) separation to be provided between adjacent heaters.

### 3.3 Mounting Instructions - Position + Distance

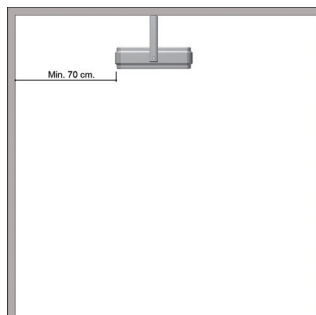


Figure 3.9

If the heater is mounted to the ceiling, it has to be positioned horizontally as showed in Figure 3.9.

The distance between the heater and the adjacent surfaces has to be at least 70 cm.

Mounting differently than described above would cause fire due to overheating at adjacent surface.

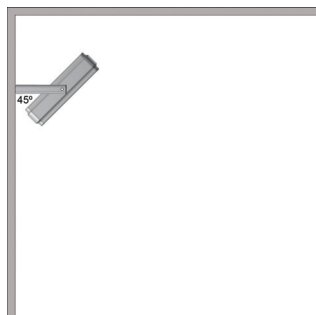


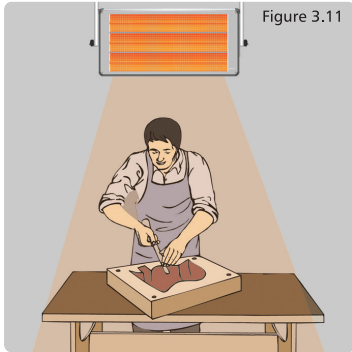
Figure 3.10

If the device would be mounted to the wall, it should be positioned with 45° degrees as showed in Figure 3.10, with accordance to safety distances and warnings in Figure 3.8.

Mounting at angles more or less than 45° degrees, would cause fire due to the overheating at adjacent surfaces.

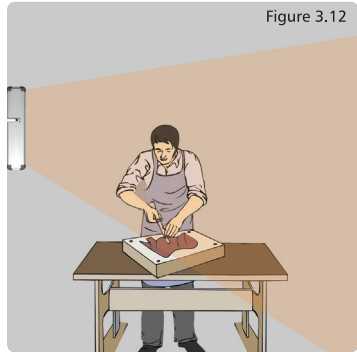
### 3.4 Correct and Incorrect Mounting Positions

The device is commonly used at places with a high ceiling.



**FALSE**

(Mounting close to user, extreme hot temperatures)



**FALSE**

(Low mounting, false direction)



**RIGHT**

(Adequate distance to user and adequate direction)

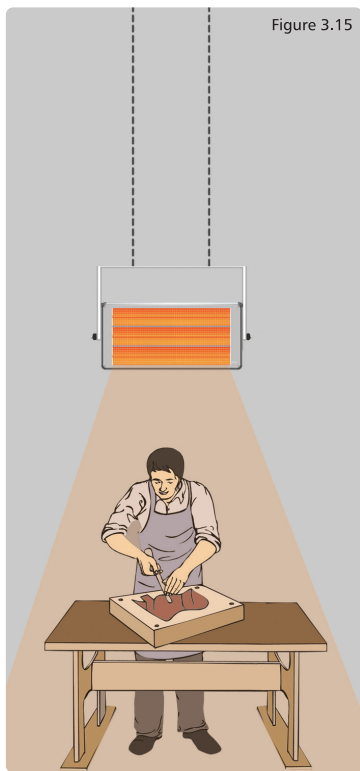
### 3.4 Correct and Incorrect Mounting Positions

Note: The device has to be at an adequate height.



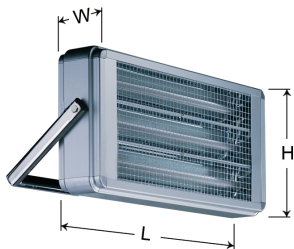
FALSE

(Mounting except effective distance)



FALSE

(Heater can not be used by the assistance of a chain)



UFO COMMERCIAL HEATER

MODEL	Volt	Hertz	Power	Filament Number	Dimension			Weight
	V(~) (±10)	(Hz)	Watt		H (cm)	W (cm)	L (cm)	(kg)
UFO- CH UL18	208-220-240	50-60	2000-1800-2000W	1	19.8	13	78.8	5.3
UFO- CH UL23	208-220-240	50-60	2500-2300-2500W	1	19.8	13	78.8	5.3
UFO- CH UL30	208-220-240	50-60	3200-2900-3200W	1	19.8	13	99.8	6.5
UFO- CH UL36	208-220-240	50-60	4000-3600-4000W	2	33.6	13	78.8	8.2
UFO- CH UL46	208-220-240	50-60	5000-4600-5000W	2	33.6	13	78.8	8.2
UFO- CH UL60	208-220-240	50-60	6400-5800-6400W	2	33.6	13	99.8	9.7
UFO- CH UL54	208-220-240	50-60	6000-5400-6000W	3	47.3	13	78.8	11.2
UFO- CH UL69	208-220-240	50-60	7500-6900-7500W	3	47.3	13	78.8	11.2
UFO- CH UL90	208-220-240	50-60	9600-8700-9600W	3	47.3	13	99.8	13.4
UFO- CH18EN	230-240	50-60	1800 - 2000W	1	19.8	13	78.8	5.3
UFO- CH23EN	230-240	50-60	2300 - 2500W	1	19.8	13	78.8	5.3
UFO- CH30EN	230-240	50-60	2900 - 3200W	1	19.8	13	99.8	6.5
UFO- CH36EN	230-240	50-60	3600 - 4000W	2	33.6	13	78.8	8.2
UFO- CH46EN	230-240	50-60	4600 - 5000W	2	33.6	13	78.8	8.2
UFO- CH60EN	230-240	50-60	5800 - 6400W	2	33.6	13	99.8	9.7
UFO- CH54EN	230-240	50-60	5400 - 6000W	3	47.3	13	78.8	11.2
UFO- CH69EN	230-240	50-60	6900 - 7500W	3	47.3	13	78.8	11.2
UFO- CH90EN	230-240	50-60	8700 - 9600W	3	47.3	13	99.8	13.4

## 5. Operation Instructions

### Electrical Installation

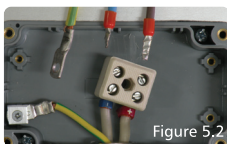
In this part you will see the general connection types of UFO-CH models, when you are mounting your device, choose a proper method for your heater as described at the electric scheme. Before you start with cable connection, cut off the power supply from the main electric line by a switch/button.

Note: Ceramic connector is only connected to a filament. So, for phase connections (220 V/208 V single phase connections), you should connect a phase and a neutral on a ceramic connector. For, phase to phase (208 V three phase) connection you should connect two different phases on a ceramic connector. For, phase to phase (240 V 3-wire single phase) connection, you should connect two live lines of the main line on a ceramic connector.

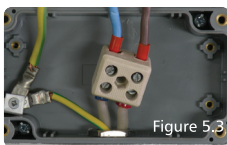
- Mounting of devices with single filament (UFO-CH18, UFO-CH23, UFO-CH30); the current connection of the device is performed via the connection box on the back side. Open the cover of the connection box.



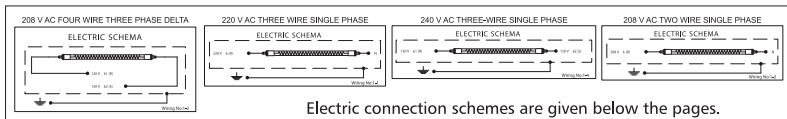
Figure 5.1 is the situation you will see when you open the connection box for the first time. There is a grounding line and a two line connected ceramic connector.



For the protective earth connection; remove the screw with the protective earth line of the device is connected. Place a cable shoe conforming the diameter of your cable to the edge of the protective earth line from the main line and for the lines which will be connected to the ceramic connector, place a cable ring to the edges as indicated in figure 5.2.



Connect the protective earth cables of the main line and the devices as in Figure 5.3 connect the line edges of the main line to the ceramic connector and complete the mounting by fixing the connector screw as in figure 5.3.



Electric connection schemes are given below the pages.

Figure 5.4

- Mounting of devices with double filament (UFO-CH36, UFO-CH46, UFO-CH60);

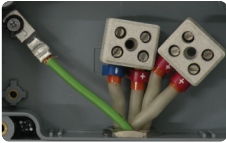


Figure 5.5

Figure 5.5 is the situation you will see when you open the connection box for the first time. There is grounding line and for each filament there is a ceramic connector.



Figure 5.6

For the protective earth connection; remove the screw with the protective earth line of the device is connected. Place a cable shoe conforming the diameter of your cable to the edge of the protective earth line from the main line and place a cable ring to the edges of lines as indicated in figure 5.6.



Figure 5.7

Connect the protective earth cables of the main line and the devices as in Figure 5.7 connect the lines to the ceramic connectors, do not forget that each ceramic connector connected to a filament, and complete the mounting by fixing the connector screw as in Figure 5.7.

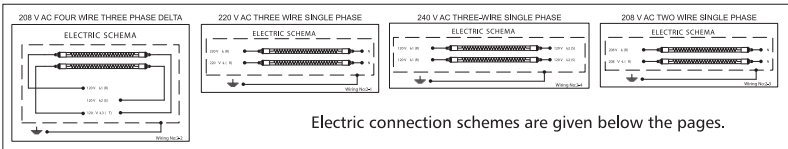


Figure 5.8

## 5. Operation Instructions

- Mounting of devices with triple filament (UFO-CH54, UFO-CH69, UFO-CH90);

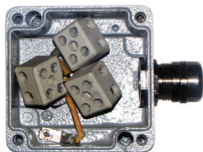


Figure 5.9

Figure 5.9 is the situation you will see when you open the connection box for the first time. There is grounding line and 3 ceramic connectors, one for each filament.

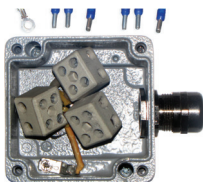


Figure 5.10

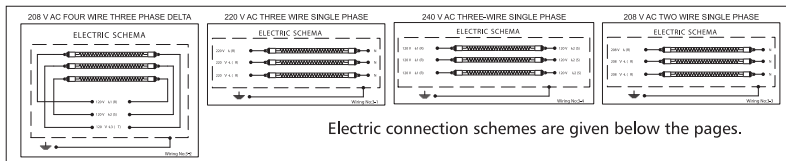
For the protective earth connection; remove the screw with the protective earth line of the device is connected. Place a cable shoe conforming the diameter of your cable to the edge of the protective earth line from the main line place a cable ring for every line that you will connect to a ceramic connector.



Figure 5.11

Connect the protective earth cables of the main line and the devices as in Figure 5.11 Connect the edges of lines to the ceramic connector and complete the mounting by fixing the connector screw as in figure 5.11

Note: If you supply 208 V ac four wire three phase you have to connect each phase to each connector once, second phase connection to connector have to be made by different phase for example R-S, S-T, R-T.



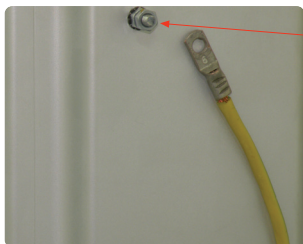
Electric connection schemes are given below the pages.

Figure 5.12



- Equipotential Line Connection;

The protection grounding of the device is performed via the place with the grounding sign on its side.



EQUIPOTENTIAL



Remove the nut at the place with the equipotential sign at the side of the device. (Figure 5.13)

Figure 5.13



Figure 5.14

Connect the equipotential line of your electrical installation of your building.

After establishing the electric and equipotential connection, turn on the switch/button on the main line electric connection. Your device will start to operate.

## 6. Cleaning and Maintenance Instructions

### Maintenance

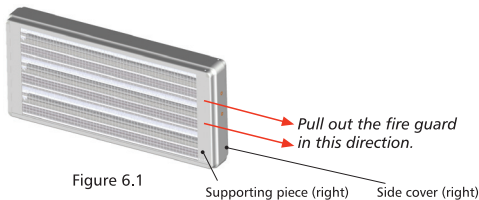
Attention! In order to operate UFO Heater efficiently and powerfully for a long term, the careful and regular maintenance according to our suggestions is very important.

- 1- The dirt of the reflector (reflector blend) and the IR filament should be controlled at least once a month. If it should be dirty, the cleaning and maintenance instruction should be applied.
- 2- Depending on the dust ratio in the usage environment, such controls should be performed more frequently.
- 3- Whilst cleaning the device, the reflector, filament and body should be checked visually for deformations.
- 4- In order to use the device efficiently, it is suggested to replace the reflector every two years. The reflector should be replaced by the authorized service and the original reflector of the device should be used. That the reflector is clean provides that the heating output of the device is at max. level.

### Cleaning

Attention! Your device will operate more efficiently and have a longer life-time by regular and careful cleaning, performed by the user.

- 1- Cut off the electricity connection prior to start cleaning the device.
- 2- Remove the connection screws of the cover on the right side by using a cross screw-driver, remove the side cover (right) and the support piece (right).
- 3- Remove the steel clips, connecting the fire guard to the device, carefully with a pliers or a round nose pliers. The clips may jump out due to being steel, be careful.
- 4- Remove the fire guard by pulling it out from the right side of the device as indicated in Figure 6.1.



- 5- The reflector and the filament should only be cleaned with a soft, cotton fabric, a soft brush or dry air. The cotton fabric may also be wet. It should be cleaned with cream detergents and dried such that no spots are left.
- 6- Detergents, possible to harm the reflector (powder detergents) should not be used, it should be taken care not to scratch while cleaning.
- 7- The fire guard should be placed back by using a plain screw-driver.

Dear Customers,

We believe in the importance of providing you a good service along with innovative, good and qualitative products. This users guide is prepared in order to be closer to you, the aware consumers, to find faster solutions for your problems.

Our Internet address, where you can find information regarding our products, the authorized technical services and service addresses at your location: [www.ufotr.com](http://www.ufotr.com)

Please obey the following suggestions.

In case of a need of a service, please contact your closest UFO Authorized Service as indicated in the attached list.

Repairs and spare part replacements should only be performed by UFO UFO Authorized Services and other UFO Authorized Technical Staff.

As your work is done, do not forget to request from the Technical Service the „Technical Service Defect Form“. The „Technical Service Defect Form“ you will get will be useful for you in case of future defects.

Let your Warranty Certificate confirm by the Authorized UFO Dealer you purchased your product. Life-term: 10 years. (Duration for the availability of spare parts for a functioning of the product)

Issues to be checked prior to sending the product to the service for repair purposes:

1. Check the installation and fuse which is supplying electricity to the heater.
2. It should be checked if the mounting was performed in accordance to this User's Guide. If the mounting is faulty, you should contact the Technical Service.

## 8. Warranty Conditions

Whilst this warranty, provided by SUN, does not cover any damages which arise due to usage of the device except normal, it is also except warranty in following situations.

- 1- Damages and defects due to faulty usage.
- 2- Damages and defects during loading, unloading and carrying after the delivery of the product to the customer.
- 3- Damages and defects due to low or high voltage; faulty electrical installation; usage of the product at a voltage different to that indicated on the label.
- 4- Damages and defects due to fire and lightning.
- 5- Damages and defects due to repairs and maintenances by persons except our authorized services.
- 6- Defects due to usage of the product contrary to the issues mentioned in the users' guide.
- 7- Damages and defects during the transport of the device to the place of repair.

Attention! Your device will be excluded from warranty in case of a false maintenance and cleaning.

1. Not paying attention to dust and dirt due to the environment.
2. Scratches of the reflector or filament due to false cleaning.
3. Faulty mounting or detachment.
4. Operation with faulty filament, body or power cable.

The amendment of above mentioned defects and services are not in frame of the warranty.

The warranty is valid for the duration indicated on the other side of the certificate and only for defects of the product, and no claims indemnification requests can be made under any other definition.

Documents without the stamp and signature of the seller company and the date of sale are invalid.

This warranty certificate will get invalid In case of an alteration on the warranty certificate, removal of the serial number on the product or when altered.

All products of the brand UFO are  certified.



### MANUFACTURER

UFO IŞIKLA ISITMA SİSTEMLERİ  
SAN. VE TİC. LTD. ŞTİ.

Akşadın Mah. 72. Sok. No:17  
Etiler/Beşiktaş/İstanbul

Marmara Kurumlar V.D. 885 030 35 33  
Tel: (0212) 886 30 00



This symbol on the product or the packaging indicates that the product may not be disposed with normal home waste, and that it has to be forwarded to collecting points regarding the recycling of electrical and electronic devices. If you dispose this product properly, you will contribute to the protection of the nature and human health. You can obtain more information regarding the recycling of this product from the municipality, waste collecting service or the store your purchased the product.



### CAUTION!

Source of  
Possible Ignition!  
High Temperature!

Keep combustible  
material away  
from front heater.

Do not cover.



UFO-CH90UL



### CAUTION!

Do not install less than  
6 feet (or 1.8 meters)  
from the floor

Risk of fire.  
Do not use as a residential  
or household heater.

Do not use vertically

For each filament use  
20 ampere branch circuit.

At least 1 meter  
separation is provided  
between adjacent heaters.

While wall-mounted!  
Do not install closer than  
50 cm to horizontal surface,  
70 cm to vertical surfaces.

While ceiling-mounted!  
Do not install closer than  
50 cm to horizontal surfaces.



## INFRARED HEATER WARRANTY CERTIFICATE

As long as its mounted and used as indicated in the User's Guide, no repairs or interventions are made by persons except those authorized by SUN Pazarlama, the UFO-CH Models are under warranty for a term of 2 (two) years after product delivery against labour and production failures.

In case of a defect due to both material and labour and mounting failures within the term of warranty, the repair will be performed with requesting any fee for labour, spare parts or under any other definition. In case of a defect within the term of warranty, the time passed for repair will be added to the warranty term. The maximum repair duration is 30 working days. This term begins with the delivery of the product to our service station, if not applicable, to our authorized dealer or our company. If the defect of the product should not be amended within 15 working days, SUN Pazarlama will provide another product with similar specifications to the usage of the customer until the product is repaired. The determination of the defect in frame of warranty and the parts to be replaced and the method belongs to our company.

Upon delivery of the product, provided to be within the warranty term, if the same defect should incur more than twice within a year or if the total number of different defects within the determined warranty term should be more than six and the inability to use the product should get continuous, the termination of the maximum duration of repair,

and if there should be no authorized technical service, by a report to be issued in order by our authorized dealer, distributor, regional representative or our company, determining that the defect is not amendable, a charge-free replacement will take place.

Defects due to usage of the product contrary to the points in the User's Guide of the product, are excluded from the warranty. It can be applied to the General Directorate for the Protection of Consumers and Competition of the Ministry for Industry and Trade in cases of eventual disputes regarding the Warranty Certificate. The utilization of this Warranty Certificate is allowed by the Republic of Turkey, Ministry for Industry and Trade, in accordance to the Directive Regarding the Application Principles of Warranty Certificates, established according to the Consumers Protection Act Nr. 4077.

Model :  
Serial Nr. :  
Manufacture Date :

Delivery Date :  
Invoice Date, Nr. :  
Title of Dealer Company :  
Address :  
Phone-Fax :  
Dealer Company (Stamp and Signature)

This certificate is issued according to the permission certificate Nr. 57832 of July 29th 2008 of the Ministry for Industry and Trade.

(This part will be undersigned and stamped by the Authorized Dealer you purchased the product.)



SUN Pazarlama Elk. Makina San. Tic. Ltd. Şti.