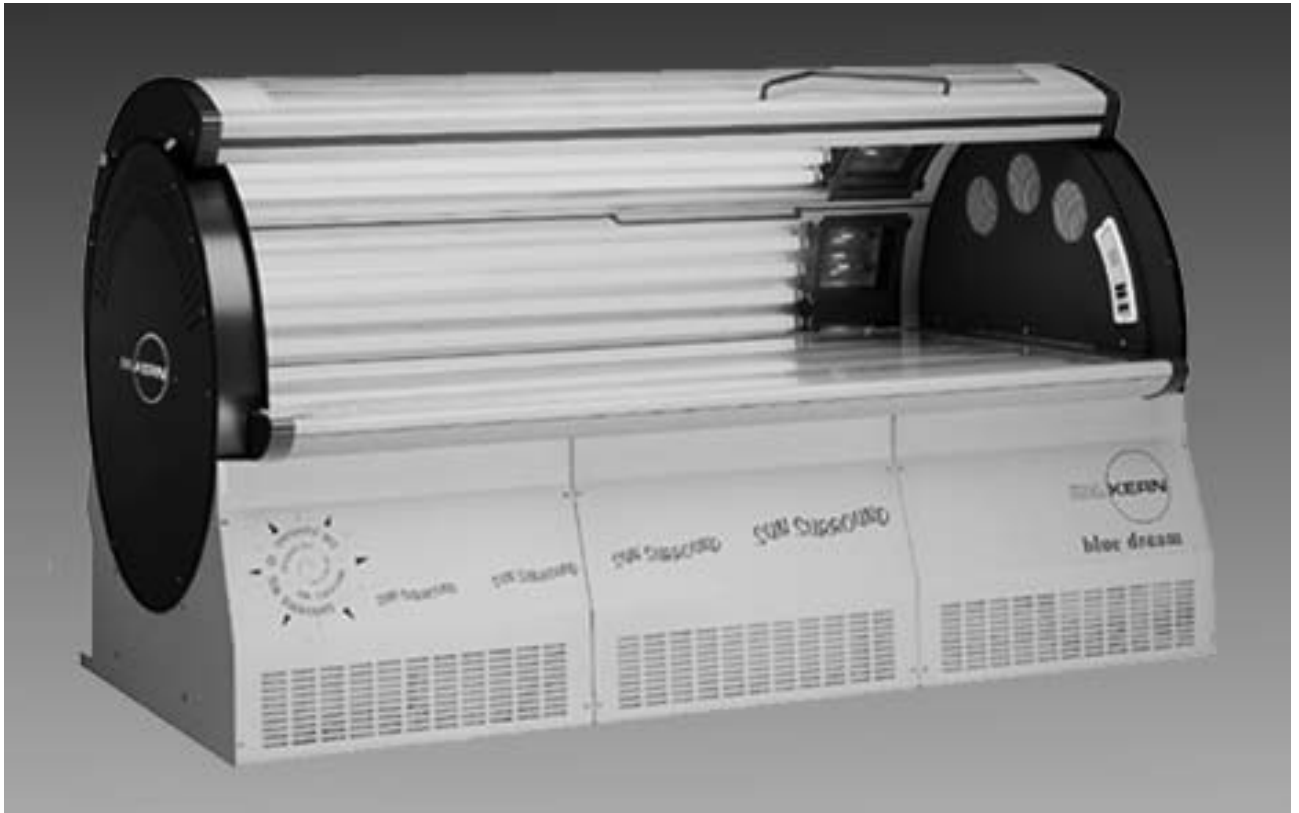


# USER'S MANUAL



# SUN SURROUND 428

## **WARNING:**

- Read the instructions booklet before using this product.
- When using a folding combination machine with bench and canopy, lie down on the bench and pull the canopy down until it will move no further. When using a canopy only, lie down and pull the canopy down as far as the stand will allow.
- Operation of this device closer to the body than the recommended minimum distance for use may result in overexposure.
- Recommended eyewear: Provided eyeshields (Intexco Nr. 5635/1s) or equivalent eyewear as defined under 21 CFR 1040.20 2(b) (6).

One pair of protective eyewear is furnished with this equipment and should be worn by all persons in the room when lamps are on. Disconnect power cord before attempting to clean, replace lamps or engage in the maintenance of this product. **THE FOLLOWING LAMPS HAVE BEEN CERTIFIED FOR USE IN THIS EQUIPMENT: DR. KERN SER 100 W, DR. KERN SER 160 W, DR. KERN 400 W HP-lamp** or compatible types.

**THIS PRODUCT CONFORMS WITH PERFORMANCE STANDARDS FOR SUN LAMP PRODUCTS UNDER 21 CFR PART 1040.20**

## **DANGER**

Ultraviolet radiation. Follow instructions. Avoid overexposure. As with natural sunlight, overexposure can cause eye and skin injury and allergic reactions. Repeated exposure may cause premature aging of the skin and skin cancer. **WEAR PROTECTIVE EYEWEAR; FAILURE TO DO SO MAY RESULT IN SEVERE BURNS OR LONG-TERM INJURY TO THE EYES.**

Medication or cosmetics may increase your sensitivity to the ultraviolet radiation. Consult physician before using sunlamp if you are using medications or have a history of skin problems or believe yourself especially sensitive to sunlight. If you do not tan in the sun, you are unlikely to tan from the use of this product. Minimum use distance is 1 inch or 2.54 centimeter. Tanning may appear after one application provided that your skin is capable of developing a suntan. Allow 48 hours between sessions to obtain a base tan, once or twice per week to maintain appearance.

## **IMPORTANT NOTICES**

- This solarium is designed to be permanently connected to a single phase 220 V 60 Hz power source.
- This solarium may only be used in a dry area, free of liquid spray or high humidity (below 70 %). The ambient temperature should not exceed 28 degrees Celsius (85 Degrees Fahrenheit), otherwise the surface temperature of the bench may become warm.
- To prevent overheating of the solarium, air intake vents and fan output areas must not be blocked.
- In the event of a ventilation fan failure, the solarium will operate warmer than normal, and should be shut down immediately to repair or replace the fan.
- Insure that the solarium is disconnected from the main power source when replacing lamps, starters, or acrylics, as well as during maintenance or cleaning.
- Electrical repairation may only be conducted by an authorized technician.
- The floor surface upon which the solarium is to be placed must have a support rating of at least 150 Lb. per square foot. If the surface rating cannot be officially confirmed, Dr. Kern USA must be contacted for further instructions prior to installation.
- If the solarium is operated with 220 V single phase, only a power cord 3 x AWG 4 may be used. In case of connection to a 3phase 220 V power source the connection lead should be type SJT or equivalent 4 x AWG 6 cable. In both cases the maximum length should not exceed 25 ft.

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## **IMPORTANT THINGS TO KNOW BEFORE TANNING**

The irradiance output of this solarium has been calibrated for optimum effectiveness. Only the highest quality reflector lamps and acrylic sheets are employed to provide the best possible tanning performance at maximum UV-transmission levels. The "Te / Tm" (Time to Erythema relative to Time to Melanogenesis) has been precisely formulated and expressed in the recommended maximum exposure schedule (MED), which should never be exceeded.

In both commercial and residential application, the user should consult his or her physician about indoor sun tanning and its effects on their condition before using this solarium. Persons taking prescription medications must always take care that such substances do not increase the level of sensitivity to UV light, and may not tan if any warnings are issued by their respective manufacturers or the prescribing physician.

If you do not normally tan in natural sunlight, it is unlikely that a tan will occur through use of this solarium. Persons of skin type 1 (see MED schedule) should not tan indoors, unless instructed to do so by a dermatologist. In that event, the commercial operator of the solarium must obtain written permission from the user's dermatologist before tanning.

### **EXPOSURE DISTANCE**

The exposure distance is a built-in feature of the construction of the unit, and should not be reduced under any circumstances.

### **ELECTRICAL REQUIREMENTS**

The electrical requirements for all 220 Volt combinations are:  
220 Volt dedicated circuit  
4 AWG SJT Power Cord  
60 Amp rated breaker

Operating any 220 volt combination at voltage levels below 220 or above 240 constitutes an automatic nullification of the warranty, as it could cause damage to the unit's system.

Please insure that your electrician and / or installer reads this information prior to delivery and setup. Using a digital volt meter, he or she must first determine the exact line voltage being delivered to the receptacle. If the line voltage is not within the specified range, employment of a buck-boost transformer will be requested to regulate it. Please contact your authorized DR. KERN dealer for pricing and availability on buck-boost transformers.

## **FOR COMMERCIAL OPERATORS:**

1. No one under the age of 16 should be allowed to tan without the express, written consent of a parent or guardian.
2. The distance between the lamps and an individual tanning in this solarium has been preset, and may under no conditions be altered or lessened.
3. UV radiation can cause damage to the skin and eyes. Insure that you and your staff have been properly trained by a state or provincially - authorized educational organization to give adequate usage instructions to tanning customers.
4. Obey the contents of the danger and warning labels affixed to the solarium, and do not attempt to override the MED (maximum exposure dosage) session times.
5. Insure that all users of this solarium are given eye protection, of the type approved by your respective state's or province's health and / or radiological control agency, and insist that they be at all times when the unit's lamps are lighted.
6. Instruct all users to remove any make-up or facial cosmetics before using the solarium.
7. Be sure to not allow any individual to tan more than once during the course of a 24 hour period.
8. Do not allow any individual to tan should they appear physically sick, disoriented, under the influence of alcohol, or display signs of swollen or infected skin. Insist that any such person goes immediately to their physician if they complain of injuries or burned skin before or after tanning.
9. Recommend to your customers that they apply a moisturizing lotion after tanning.
10. Make sure that there is enough room to move the parts of the machine into the cabin, and that there is sufficient space in the cabin itself for proper installation

RECOMMENDED EXPOSURE SCHEDULE		MAXIMUM EXPOSURE TIMES (IN MINUTES)			
CLASS:	SKIN TYPES:	week 1	week 2	week 3	MAX
I	<b>SENSITIVE SKIN</b> (Burns easily and severely, and does not tan.)	<b>TANNING NOT ADVISED</b>			
II	<b>LIGHT SKIN</b> (Burns easily and severely, and tans minimally.)	3	7	11	15
III	<b>NORMAL SKIN</b> (Burns moderately, and tans moderately.)	4	8	12	15
IV	<b>DARK SKIN</b> (Burns minimally, and tans well or above average.)	6	9	12	15

## OPERATION INSTRUCTIONS

The control panel with timer is located on the inside of the side cover panel at the head end of the machine. Its functions are as follows.

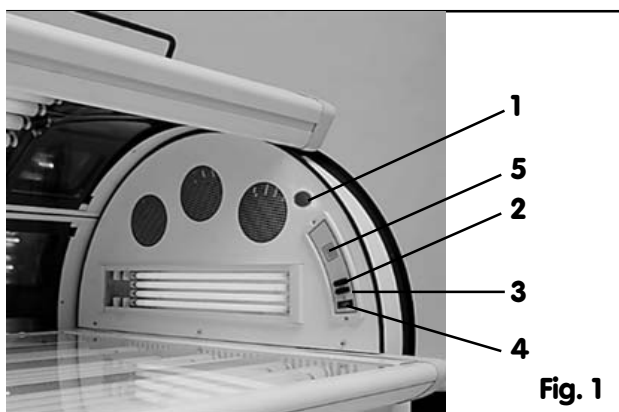


Fig. 1

### PRIMARY TIMER (1)

The primary timer is located on the right of the operating panel. Select the desired sunbathe time by means of the rotary knob. On expiration of this time, the tubes and the facial tanning lamps are switched off automatically. The primary timer only works if the ON/OFF switch is in ON-position. In any case, when the timer is replaced, be sure that the running time does not exceed the maximum exposure time of 15 minutes.

### ON / OFF SWITCH (2)

This machine was designed to be used in commercial applications with a remote timer system. The ON / OFF Switch will only work with a remote timer connected, and can be used as a "Panic" or "Emergency Off" button.

### FACIAL TANNER SWITCH (3)

The desired tanning time is preselected by means of the time switch and the facial tan lamps are optionally switched on or off "0" by means of the rocker switch. Full tanning power is attained by the facial tan lamps after a warm-up time of approx. 3 minutes.

If switched off and immediately switched on again, the lamps do not light up again until after a time of approx. 3 minutes.

When the preset tanning time has run out, switch the rocker switch to "0".

If the machine is outfitted with the option shoulder tanners, they will turn on and off as the facial tanner switch is activated as well.

### BODY FAN SWITCH (4)

The rheostat switch controls the output of the three laterally-mounted body fans, all of which can be completely turned off as well.

### DIGITAL TIMER (5)

This machine is outfitted with a digital timer which displays a progressive count of minutes (starting with 1 and running up the numbers scale to the allowable Maximum Exposure Time). The timer itself is synchronized to the lamps; the time begins with the lamps having been activated, and ends as they are turned off. No time will be reflected with the after-cooling fans running.

### AIR CONDITIONING SYSTEM

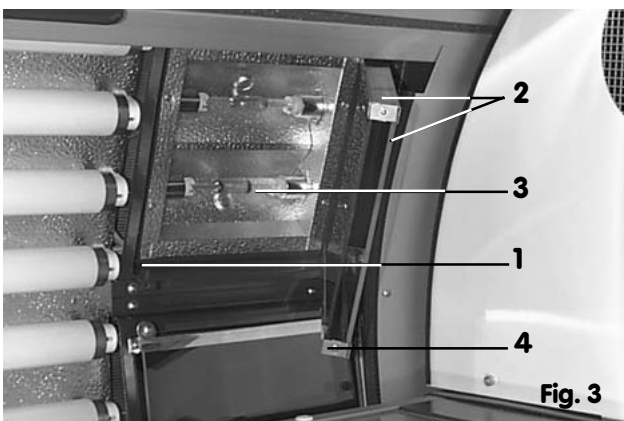
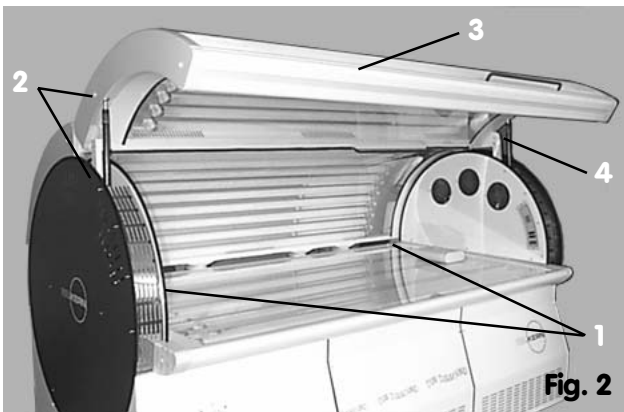
This machine is designed to accept an optional air conditioning system, which, if installed, will run automatically as the unit is turned on and off. The air conditioner is set to maintain a comfortable temperature on the bench acrylic of around 79 degrees Fahrenheit.

# INSTRUCTIONS FOR SERVICING AND MAINTENANCE

## CLEANING THE MACHINE AND ITS ACRYLIC SHEETS

Always remember to first disconnect the power to this machine before cleaning it. Use a moist towel to clean surfaces other than the acrylic sheets. The acrylic sheets should be removed and cleaned on a regular basis with a non-alcoholic, non-ammonium-content cleaner which is specially produced for use on acrylic glass in tanning machines. To remove the acrylic sheets of the bench, remove the two screws(1) in the back side, and then push up on the sheet slightly into its railing. When the trailing edge frees itself, it can be then lifted completely out of the machine. To remove the acrylic sheets in the canopy, release the securing bars on the ends by unscrewing them (see illustration) and swinging the front section of the canopy (3) upwards as supported by the gas springs (4). The securing bars can then be reset into the canopy ends so as to hold the section in the upright position, thereby allowing easy access to both sections. The acrylic sheets then can be removed out of the rails of the extrusion by pushing the middle of it slightly inwards. Fig. 2

Replace the acrylic sheets in the opposite manner as described above.



## REPLACEMENT OF LOW PRESSURE LAMPS, STARTERS, HIGH AND LOW PRESSURE FACIAL LAMPS, AND FILTER GLASS SHEETS IN HP FACIAL CASSETTES

The longevity of the fluorescent lamps vary from manufacturer to manufacturer, but is usually between 500 and 800 hours of use.

Only authorized, original parts and factory components can be used in this machine; please make sure to have your model type and serial number available when ordering these from your DR. KERN distributor.

THE FOLLOWING LAMPS HAVE BEEN CERTIFIED FOR USE IN THIS EQUIPMENT:

- Canopy: High Pressure Lamp Dr. Kern 400 W
- Canopy: Dr. Kern SER 160 W
- Bench: Dr. Kern SER 100 W
- Sidecover: Dr. Kern SER 25 W (Spaghetti)

The low pressure lamps (1) used in this machine should be replaced at intervals dependent upon their respective manufacturer's recommendations. Make sure to only use those lamps either that are listed on the warning labels of this machine or those which have been listed as Compatible by their manufacturers. They are removed by rotating the tube until the bipins (2) come free. Replacement is done in the opposite manner, whereby the tube should be rotated back until an audible snap is heard. Fig. 4



The starters (3) can easily removed by applying gentle pressure and turning it to the left.

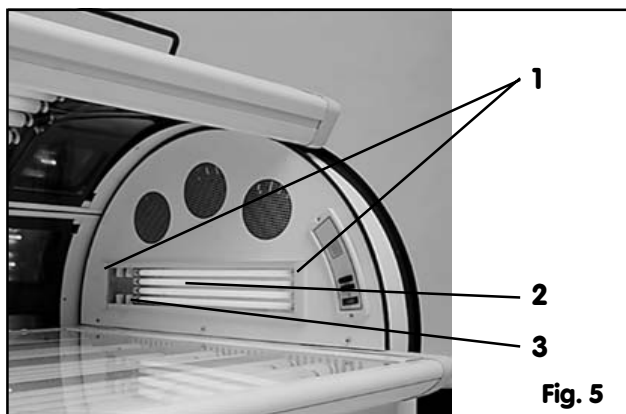
The high pressure facial lamps can be replaced by removing the acrylic cover sheets and loosening the securing screws on the cassettes, which can then be folded downward. Fig. 3

The filter glass sheets can then be removed by taking out their respective holding panels, and then sliding them out along the rails. This machine accepts 400W high pressure lamps with R7s endings which fit into spring-loaded lampholders. Without touching skin to the glass on the lamp, press in one end of the old lamp until the other end comes free. Replace the new lamp in the opposite man-

ner. Make sure that the dimple on the lamp bulb are pointed toward the reflector of the cassette. Replace the filter glass sheets in the opposite manner as described above. DO NOT USE THE HIGH PRESSURE FACIAL TANNERS WITHOUT THEIR FILTER GLASS SHEETS PROPERLY INSTALLED. FAILURE TO DO THIS WILL CAUSE HARMFUL BURNS ON THE SKIN AND EYES. MAKE SURE TO USE REPLACE THE ORIGINAL FILTER GLASSES: MUG-6 AND FILTER 324, MADE BY DESAG, GERMANY.

## REPLACEMENT OF THE SHOULDER TANNING SYSTEM'S "SPAGHETTI" LAMPS

The thin, low-pressure, so-called "Spaghetti" lamps in the shoulder tanning system at the head of the machine can be accessed by sliding the acrylic cover sheet up and out of its rails (1) after folding its securing panel upwards. These lamps (2) and starters (3) can be removed from and replaced into the machine in the exact same manner as normal fluorescent lamps in the bench and canopy. Fig.5



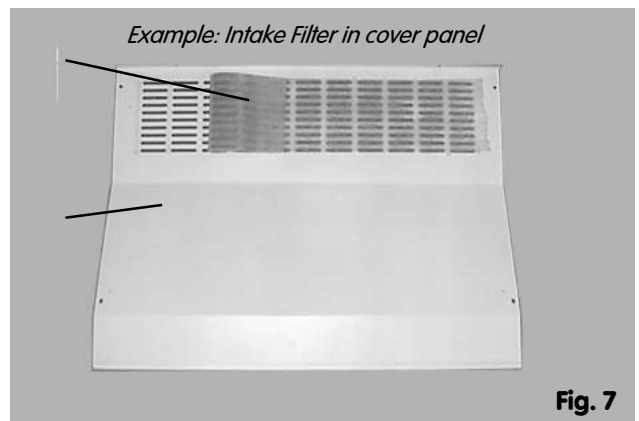
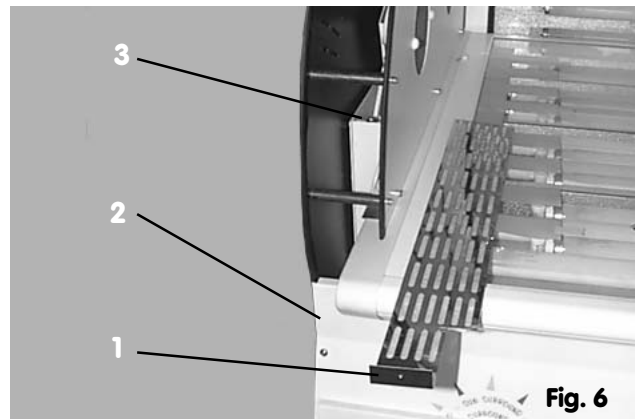
## ADJUSTMENT OF THE CANOPY LIFT SYSTEM

The weighting of the canopy sections is neutral, thereby allowing it to remain unmoving in any position from fully-closed to fully-open. If after installation, the canopy does not remain in a static position, the adjustment screw on the tension spring in the frame of the machine can be rotated for more or less tension. The screw itself can be accessed by removing the side cover panels at each end of the machine. THE MAXIMUM TENSION RATING FOR THIS MACHINE IS A 455 MM REDUCTION IN LENGTH FROM THE FACTORY SETTING. Once the frames (1) of the side cover panels (2) have been removed, the enclosed Hexagonal wrench can be used to make adjustments on the tension spring screw (3). Turning to the right increases tension, whereby a left turn decreases it. Fig. 6

The canopy lift system should be monitored and adjusted on a regular basis. The critical parts constituent to the system should be replaced as soon as necessary to avoid future problems.

## REPLACING THE INTAKE FILTERS

The fresh air intakes in the top deck and pedestal sections are covered with special filters (1), which should be inspected once each month and replaced as needed. To access these filters, loosen the quick release bolts in the front of the pedestal (2) as well as the securing screws in the sides of the top dock and remove both. Once the side endcaps have been removed, the forward cover on the top deck can be easily taken out, as can the front pedestal cover once the quick release bolts have been loosened. Pull the old filters out carefully from their carriages and replace with new ones on the same manner for both pedestal and top deck.



## CONNECTION OF A REMOTE TIMER

The DR. KERN 428 models were designed primarily for commercial application and remote operation. Please note that the after-cooling fan lead must be connected at all times. The connection of the remote timer is shown in Fig. 11.

The two wires between poles 2 and 4 which enables the machine to be activated by the primary timer in the side cover panel must first be removed before the remote timer can be connected according to the diagram Fig 11.

When the remote timer has run out of time and has shut down its circuit, no other function on the machine can

turned on or off via its internal control panel.

For remote switching of the tanning unit only a relay with a normally open contact is necessary. Use a cord type SJT or equivalent, with a 25 foot maximum length.

Note: In accordance with the maximum exposure limit of 15 minutes, the maximum running time of the remote timer should not exceed 15 minutes.

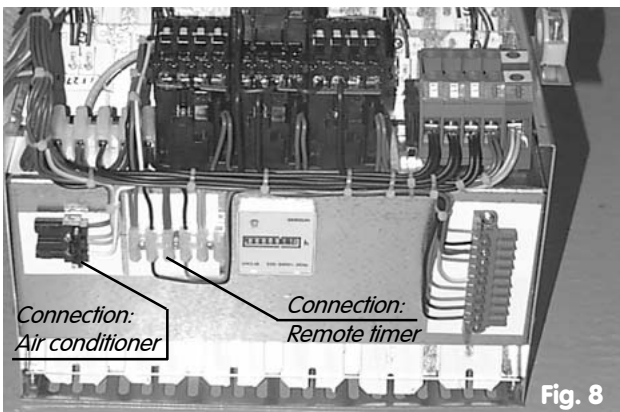
### CONNECTION OF AUXILIARY FANS

In some cases with very long exhaust hoses and if the hot air has a large height to overcome you will need a auxiliary fan to transport the hot air outward. This fan can be connected to pole 1 (fan) and pole 3 (L2) of the 6 pole terminal shown in fig. 11.

### INSTALLING THE AIR CONDITIONING SYSTEM IN THE SUN SURROUND AS OPTIONAL ACCESSORY

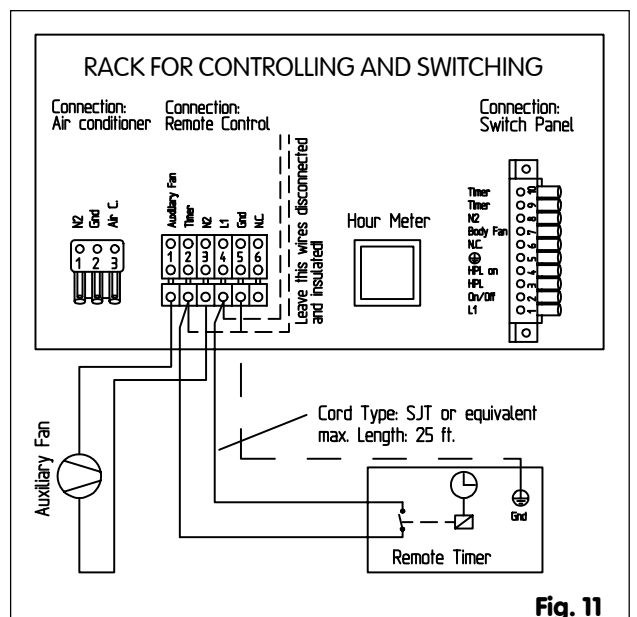
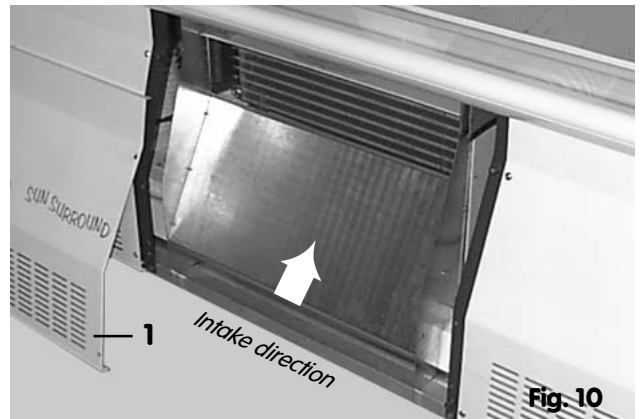
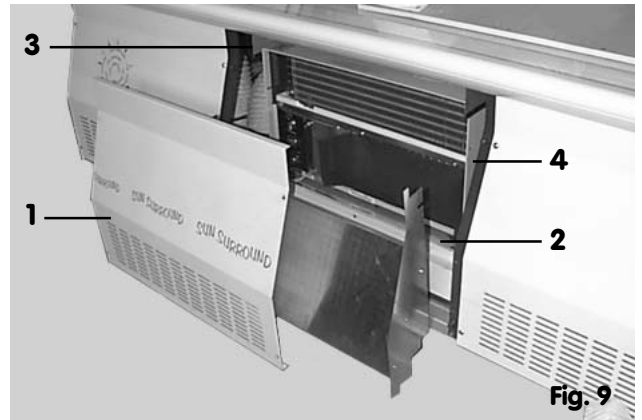
The air conditioner will cool the air being inducted into the machine so as to cool the electrical parts during operation, and is turned on automatically at the beginning of the tanning session. It is placed into the machine as an after-installation accessory as follows:

- Remove the front pedestal cover panel (1). Locate the air intake hose to the bench just behind the panel. Disassemble and remove this hose and its air intake hose attachments from the panel and from the middle of the bench.
- The exhaust hose in the middle of the main hot air ventilation unit connected to the rear of the bench must now be removed and fixed to the provided outlets left and right.

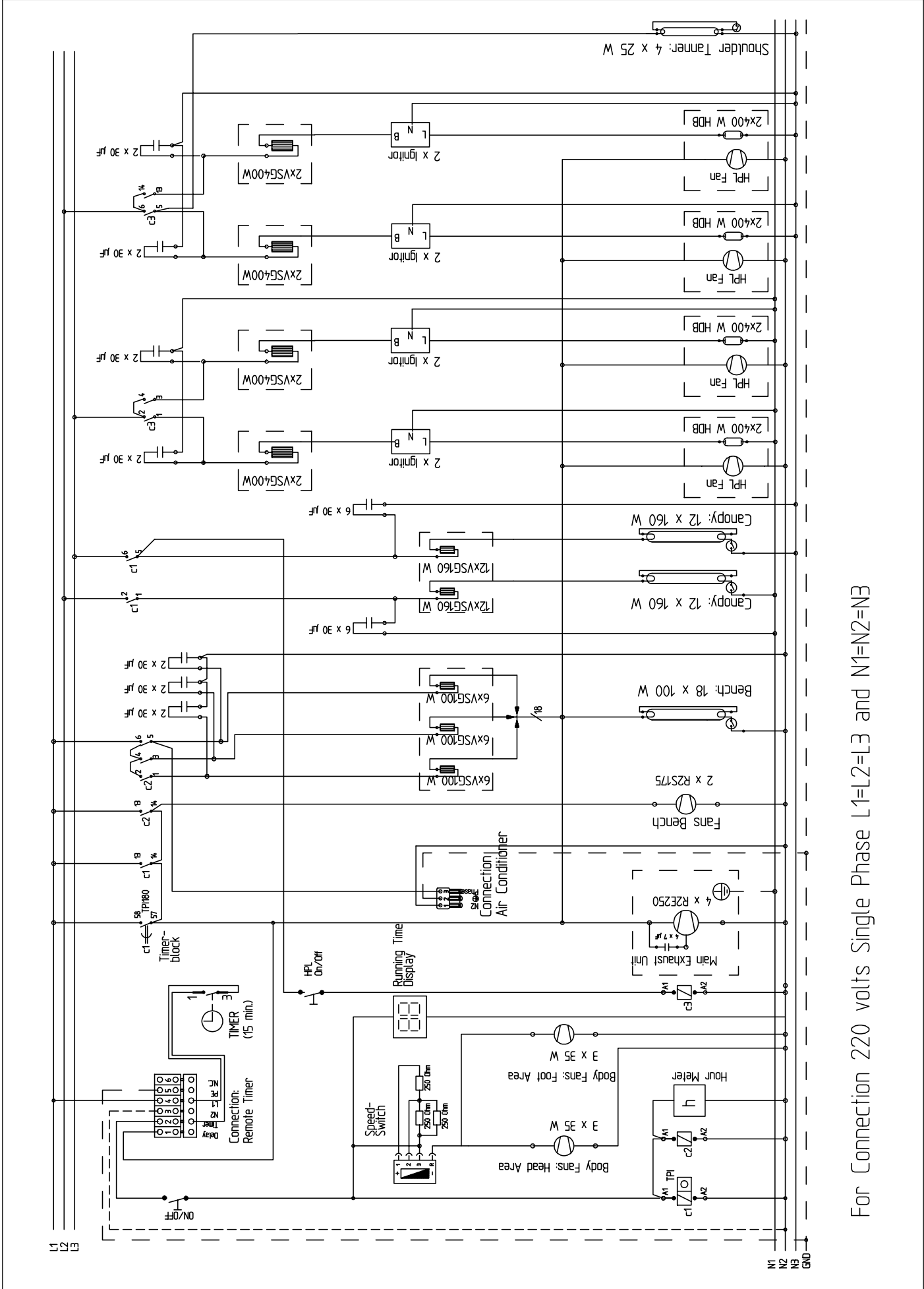


- Now the frame (delivered with the air conditioner) for positioning the air conditioner must be fixed below the bench.

- Slide the air conditioner under the bench in its position.
- The new cool air intake attachment should now be placed on the air conditioner. Finally all cover panels must be fixed to the pedestals.







For Connection 220 volts Single Phase L1=L2=L3 and N1=N2=N3

## TECHNICAL DATA

	DR. KERN 428
Length	2300 mm / 96"
Breadth	1350 mm / 53"
Height	1340 mm / 52"
Bench size	1000x2000 mm / 39"x78"
Division of Lamps	
Canopy	24 x 160 W RUVA-Lamps 8 x 400 W Facial Tanners
Bench	18 x 100 W RUVA-Lamps
Shoulder Tanner (Optional)	4 x 25 W RUVA-Lamps
Air-Conditioner	optional
Shoulder Tanner	optional
Total output	10 kW
Power source Standard	220 V 60 Hz single phase
Optional	220 V 60 Hz 3 phase
Fuse protection single phase	60 A
Power cord single phase	SJT 4 AWG
Exhaust air conduit	300 mm / 12"

## GUARANTEE / REGISTRATION CARD

Irrespective of the dealer's obligations under his sale agreement, the guarantee period for sunbeds (radiation sources excepted) is one year from date of purchase. In the case of commercial use e.g. in hotels or guest-houses, the guarantee period is six months from purchase.

Within these time limits, we shall rectify, free of charge, damage demonstrably attributable to defects of material or workmanship.

Damage caused by misoperation or improper use does not come under the guarantee. Any transport costs incurred in the dispatch or return of equipment cannot be accepted by us.

In the event of a complaint, please send this guarantee slip - together with the sale invoice in all cases - to the dealer, after-sales service centre, or direct to the manufacturer.

Date of purchase:

Dealer:

## WARRANTY

With the exception of acrylic sheets and lamps, this solarium is warranted for (1) one year on all factory components or parts, and 30 days on labor after initial installation. Repairs that are required as a result of damage during transportation to the end-user's location, as well as any due to neglect, improper installation, or handling, are not covered.

Important note: This warranty must be activated prior to installation of the unit. To activate the warranty, please fill out the accompanying product registration card and mail it to us. or, call **1-800-908-9885** and register your solarium. Make sure to have your model and serial number before calling.

