



KBL

The Beauty & Health Company

08/2017

Service information

How to avoid equipment failures with preventive maintenance measures

Product line

Tower pureEnergy



1. General information

Preventive maintenance measures are defined as the regular performance of equipment maintenance practices in order to avoid future equipment problems.

An important first step is to learn how to identify possible causes of equipment failure. KBL provides managers and service technicians with the knowledge to identify causes that have been known to cause malfunctions.

KBL encourages managers to establish an effective preventive maintenance program and to use the checklist on the last page to verify the maintenance status of their tanning device.

In case of questions, contact our service representative.

1.1 Definitions

- **Qualified, trained and authorized service technician**
Qualified staff who have been trained and authorized by the manufacturer for assembly and maintenance work with specific devices.
- **Staff**
People who are responsible for the operation, cleaning and disinfection as well as for the general maintenance work and instruction of the user on how to operate the tanning devices.
- **Studio operator**
People who provide tanning devices to users on a commercial basis. The studio operator is trained to operate and maintain the tanning device. He is responsible for the proper operation of the tanning device as well as for compliance with the maintenance intervals.
- **User**
A person who uses the tanning device.

2. Elements of effective maintenance

WARNING

Injuries and damage caused by improper or insufficient maintenance

Maintenance and care play a major role for the tanning devices performance and appearance over its useful life. Diligent compliance at the specified intervals is absolutely necessary to ensure the proper operation of your tanning device. Improper maintenance can cause the tanning device to be damaged or to become unusable. Always comply with the specified maintenance intervals. Refer to the following informations given in this chapter.

- Please note that the tanning device must be inspected regularly by an authorized KBL representative every 12 months from the date of the last inspection to maintain its proper condition.
- If the tanning device is in use for longer than 10 years, it must be completely overhauled by qualified, trained and authorized service technician.
- If the tanning device has not been used for a longer period of time, then it must first be inspected by qualified, trained and authorized service technician before being put back into operation.



- The studio operator is responsible to ensure that the tanning device is handled properly.
- Safety equipment (e.g. thermal switch) shall not be removed, deactivated, or otherwise bypassed as it may impair the safe operation of the tanning device!
- The electrical installation shall have a freely accessible, all-pole disconnecting device (Master switch with clearly labeled On/Off settings, e.g. '0' and '1' or additional indicator light) fitted externally on the site side.

2.2 Training of staff



The studio operator is obligated to train his staff and to instruct them in the established legal and accident prevention regulations. He must ensure that his staff has understood and observes these instructions. This includes:

- Operating instructions
 - Safety instructions
 - Information regarding intended use and foreseeable misuse
 - Cleaning/disinfection and maintenance instructions
- The instructions and additional information from the manufacturer must be available to the staff at their workplace. Regularly test your staff's safety consciousness and awareness of the risks, taking into account the operating instructions of the tanning device.
 - Make sure that the cleaning/disinfection intervals are complied with, especially the cleaning and disinfection of the tanning device after every use.
 - Make sure that your staff provides the customers with appropriate advice, especially regarding tanning times, possible risks and the operation of the tanning device.

2.1 Obligations of the studio operator

- The studio operator is responsible for informing users on possible risks of tanning.
- All danger and safety labels attached to the tanning device must be observed and shall not be removed!
- The tanning device shall only be used when in proper operational condition!

2.3 Maintenance intervals

	 WARNING
	<p>Injuries and damage caused by improper or insufficient maintenance.</p>

Component	500 h / 6 months	2000 h / 1 Year	5000 h / 5 Years	10000 h / 10 Years	Activity
Electronic starters		X			Inspect and replace as necessary
			X		Replace
Acrylic panes	X				Inspect and replace as necessary
		X			Replace
Sleeve of the door cable entry		X			Inspect and replace as necessary
Chassis and associated fasteners		X			Inspect and replace as necessary
				X	Replace
Wiring and associated plugs / terminal connections		X			Inspect and replace as necessary
				X	Replace
Starter decorative lighting		X			Replace
Electrolytic capacitors		X			Inspect and replace as necessary
				X	Replace
Conductors		X			Inspect and replace as necessary
				X	Replace

Component	After approx. 250 operating hours	After approx. 500 operating hours	After approx. 1000 operating hours	Activity
Tubes		X		Replace
aquaCool nozzles	X			Inspect and replace as necessary
			X	Replace

Additional maintenance intervals	
Yearly maintenance	Inspect the tanning device by a KBL authorized representative every 12 months from date of the last inspection.
10 Years service	If the tanning device is in use for longer than 10 years, it must be completely overhauled by qualified, trained and authorized service technician.
Start up if, the tanning device has not been used for a longer period of time.	Inspect the tanning device by qualified, trained and authorized service technician, before being put back into operation again.



2.4 Verify that the manual detailing operating and maintenance instructions is still available and up to date

CURRENT VERSIONS (e.g., AUGUST 2013)

Operating Instructions:

BA_TpureEnergy_US

Date: x x

Item no.:

Assembly Instructions:

MA_TpureEnergy_US

Date: x x

Item no.:

If not, please contact:

KBL AG

Ringstraße 24-26 · 56307 Dernbach · Germany

fon +49 (0) 26 89.94 26-0 · fax 94 26-66

e-mail: customerservice@kbl.de

2.5 Establish an accurate record-keeping system for the maintenance reports

Ensure that all maintenance periods have been fully complied with and documented as described in chapter „Maintenance intervals“ in the operating instructions.

Only use OEM spare parts of the same type!

The use of other parts will void the manufacturer's warranty! In case of damage or injury proven to be the result of the use of non-genuine spare parts any liability is excluded.

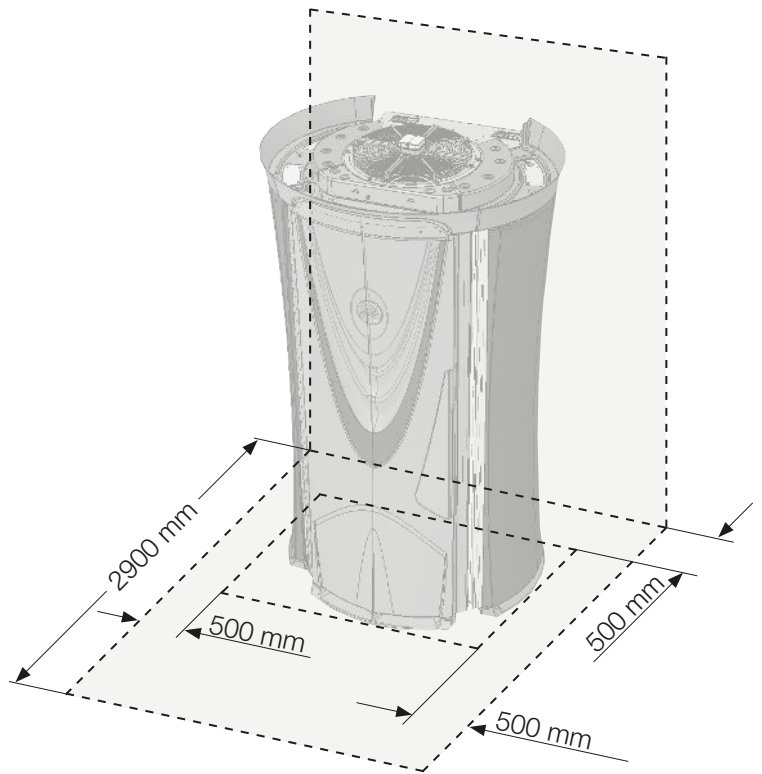
Unauthorized changes or modifications to the tanning device are prohibited.



The service of the tanning device may only be carried out by **qualified, trained and authorized service technician.**

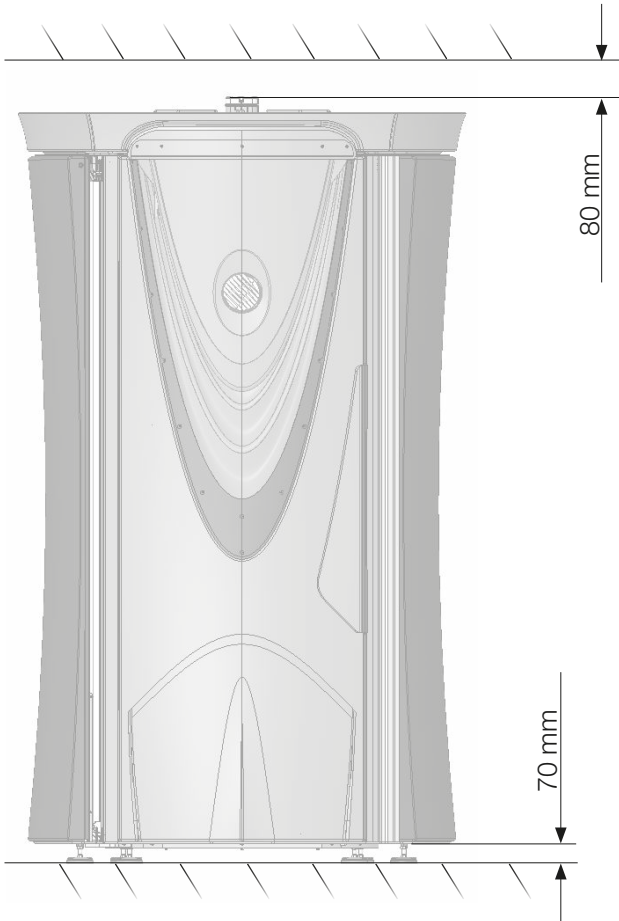
2.6 Danger of overheating by obstruction of the airflow

- Avoid in any case a change, obstruction or blockage of the air inflow and outflow area to the tanning device or make any unauthorized changes to the tanning device. The manufacturer shall bear no liability for damage or injuries resulting from such actions.
- Comply with the ventilation information to avoid serious system malfunctions.
- Only use OEM spare parts of the same type! The use of other parts will void the manufacturer's warranty!
- Maintain the minimum distances from **rear wall** and **side walls**:





- Maintain the minimum distances from **ceiling** and **bottom**:



- Insufficient air supply leads to overheating. This can lead to damage the tanning device!

2.7 Cleaning of the tanning device

	! WARNING
	These cleaning works must be carried out by qualified, trained and authorized service technician.

After each tanning session

Always comply with the specified cleaning intervals, see chapter 9.1 "Instructions on cleaning, disinfection and care" in the current operating instructions.

Every 6 months

Make sure that the inside and outside of the tanning device is cleaned and free from dust, fluff or objects.

- Check the correct position of the plugs on the top of the rear of the appliance after each cleaning!
- Insufficient cleaning results in overheating. This can lead to damage the tanning device!

2.8 Approved UV tubes installed

Make sure that the correct UV tubes are installed. Only replace UV low-pressure lamps with the original type or compatible lamps:

megaLine 2086 R 230W -> TE-time **7** minutes
KBL item no.: 3230074855



megaLine 2082 R 230W -> TE-time **10** minutes
KBL item no.: 3230075060

- The use of any other UV lamps voids the operating license!

2.9 Installation record form filled out

Check whether the installation record is completed correctly.


3. General electrical faults


 DANGER	
	<p>Live parts</p> <p>Danger of life or fatal injury due to electric shock when touching live parts.</p> <ul style="list-style-type: none"> • Switch neutral • Secure against reconnection • Check for neutrality • Ground and short-circuit • Cover or shield any adjacent live parts or components
	<p>Attention</p> <p>The tanning device may only be assembled, installed, upgraded or repaired by qualified, trained and authorized service technician.</p>

3.1 Cables and connections fault-free

Make sure, that

- all cables in the tanning device have a fault-free contact to their connectors.
- all loose wires in the tanning device are properly insulated.
- no conductors or connections have discolorations, deformations or melting tracks due to thermal effects.

	<p>Attention</p> <p>Any fault must be fixed before putting back the tanning device into operation.</p>
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	<p>The service of the tanning device may only be carried out by qualified, trained and authorized service technician.</p>
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- Faulty wiring can lead to electrical overstress and, as a result, damage the tanning device!

3.2 Approved starters installed

Make sure that the correct starters are installed and make sure that they are properly seated in their sockets.

Use only OEM spare parts:

Solar ÖKO82 (4 - 230W Single)

200-250 Vac 50/60 Hz (-5°C to +80°C)

KBL item no.: 3200304120

- The use of unsuitable starters can lead to electrical overstress and, as a result, damage the tanning device!

3.3 Approved ballasts installed

Ensure that the correct ballasts are installed and make sure that they are correctly installed and that the connection cables are properly screwed into the clamps.

Use only OEM spare parts:

Cosmedico cosmopower (74222)

225W / 220V~60Hz

KBL item no.: 4200254211

KBL approved alternative:

May & Christe D225-24.2-6

225W-230W / 220V~60Hz

- The use of unsuitable ballasts can lead to electrical overstress and, as a result, damage the tanning device!

3.4 Approved capacitors installed

Make sure the correct and approved capacitors are installed. Make sure that the capacitors are properly installed and that the conductors are properly installed into the terminals.

Test the conductors with a pincer for their tight fit.

Use only OEM spare parts:

Electronicon E12.E43-404500

MKP 45 μ F \pm 5% - 280V 50/60Hz

KBL item no.: 3200285000

KBL approved alternative:

Ducati - Series 4.16.31.96.93

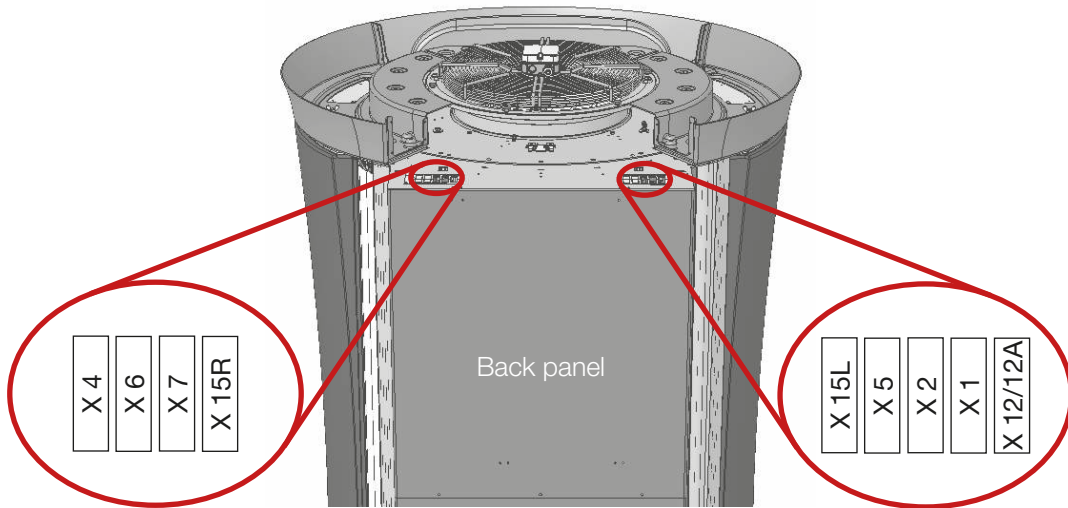
MKP 45 μ F \pm 5% - 280V 50/60Hz

- The use of unsuitable capacitors can lead to electrical overstress and, as a result, damage the tanning device!



4. Important positions: Connections at the top of the rear wall - left and right

Positions from outside

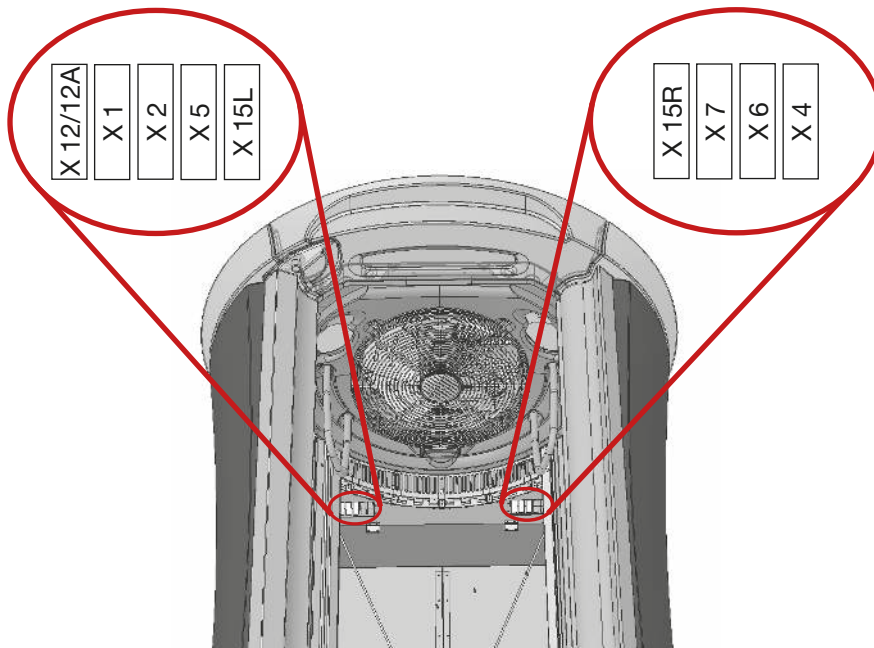


Attention



Professional replacement of plug/socket is conducted from inside the tanning device. Under no circumstances pull the wire harness out of the socket from outside! This may cause a reduction of the contact quality and could lead to electrical overstress.

Positions from inside



Signs of electrical overstress - EOS

Check the plugs on signs of electrical overstress!

- **Discoloration**
- **Deformations**
- **Melting**
- **Blisters on the housing**




The affected components shall be replaced immediately! Use only OEM spare parts.

Only the following connectors shall be used:

WAGO female connector - Item no.: 3200443013

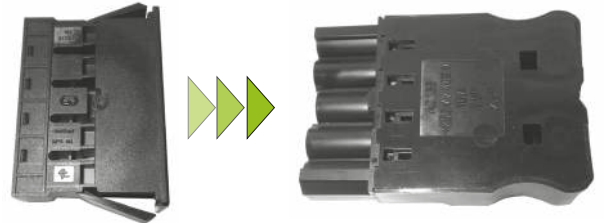
WAGO male connector - Item no.: 3200443011

Check positions from outside

4.1 Check all connections externally for signs indicating electrical overstress. 

4.2 Check the connector and socket interior for signs of electrical overstress.

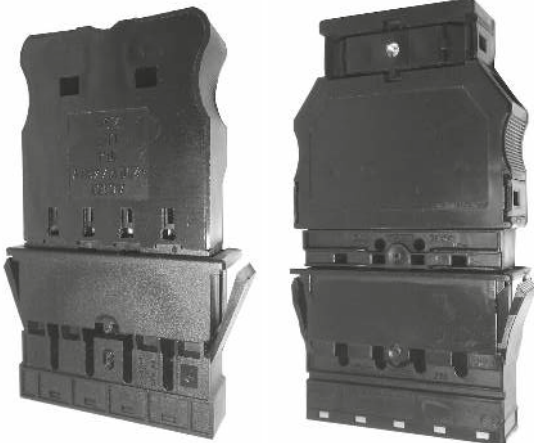
- Disconnect all connectors.



Depending on the year of manufacture, connectors from two different suppliers were installed at the factory.

Adels

WAGO



- In the case of a defect all connectors must be replaced by WAGO connectors.
- Always replace the complete connector (plug and socket).

- If there are signs of electrical overstress, replace the affected connectors immediately!
- If the connecting cables show signs of electrical overstress, they should be shortened to the damaged part. If necessary, the cable harness must be replaced completely.



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4.3 Very important assembly information

Adels connector

Adels female connector



Adels male connector



WAGO connector

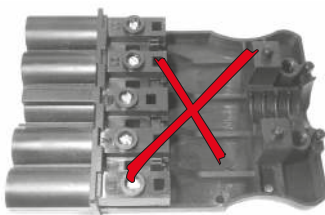
WAGO female connector



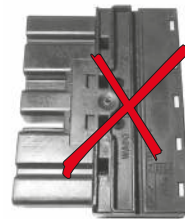
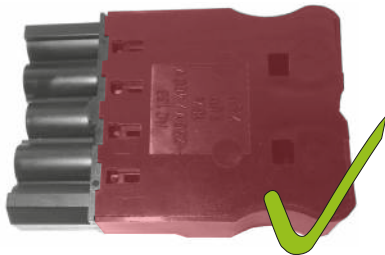
WAGO male connector



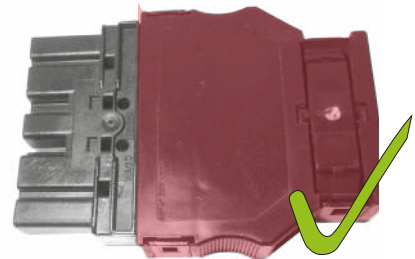
Never use the connectors without tension relief housing.



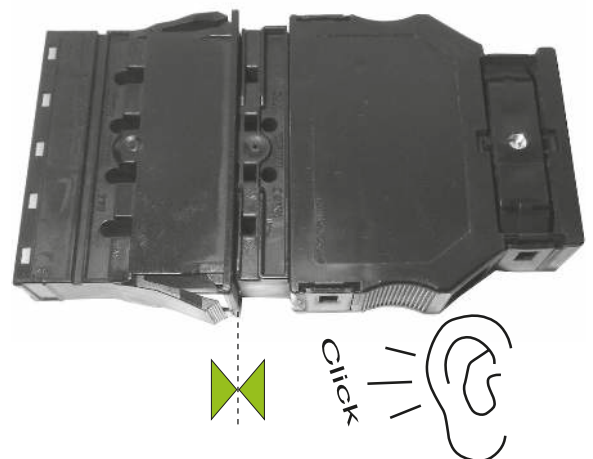
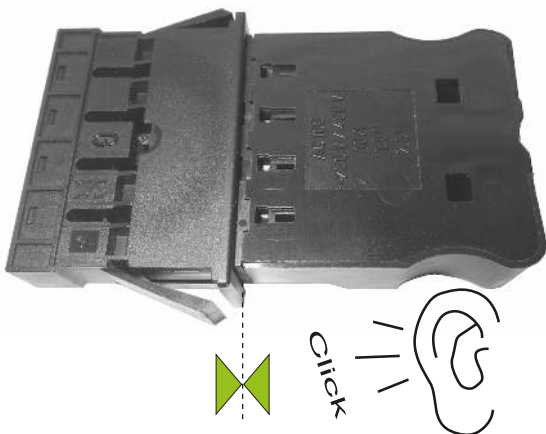
Attention
Improper
installation with
risk of electrical
shock!



Attention
Improper installation
with risk of electrical
shock!



Please check that all connectors are plugged into the socket housing to the end stop.
There shall be no distance between the housing of the plug and the socket.



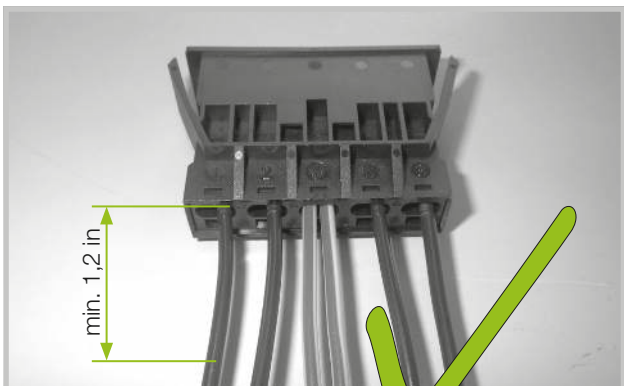


Check positions from inside

Perfect condition



- Lay the individual wires and the cable harness as shown in the figure.
- Use sufficient cable ties and position them as shown in the figure.
- Ensure good contact.



- Route the wires min. 1.2 inches vertically out of the connector plug.

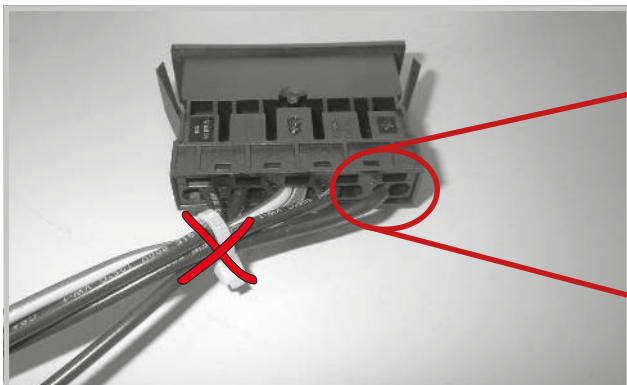


Attention

Never attach cable ties directly next to the connector plug.

Incorrect conditions

4.4 Cable tie applied too close -> bad contact



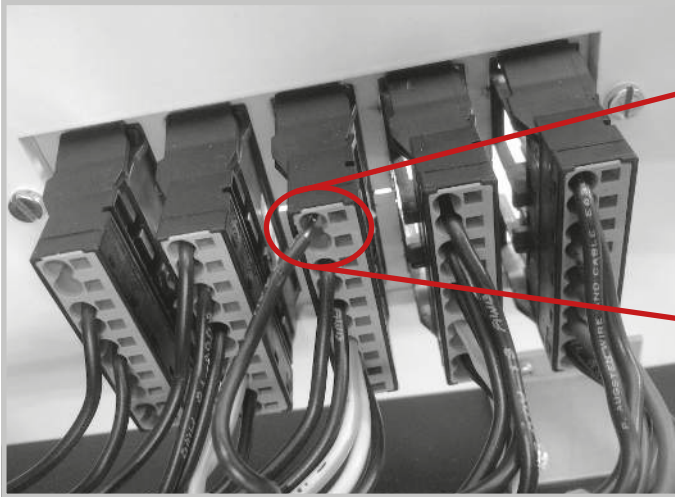
Attention

In order to operate this tanning device according to its intended use, each of the following defects must be remedied / corrected.

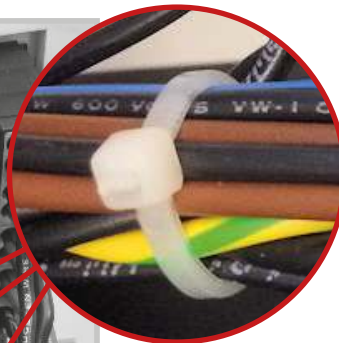
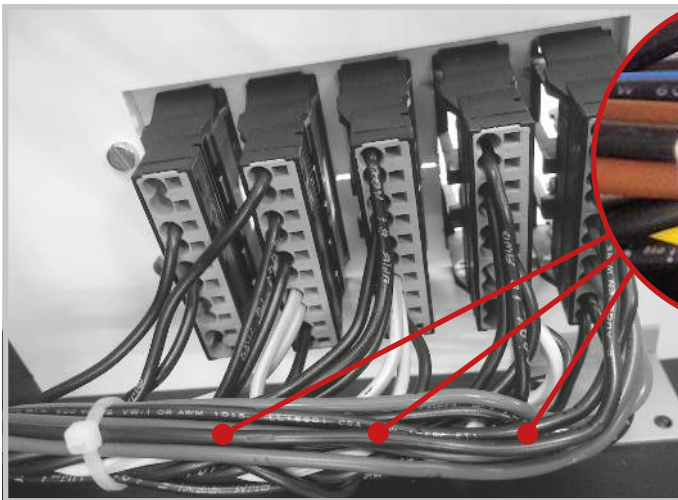




4.5 Bad or no contact



4.6 Missing cable ties



4.7 Missing cable ties and messy cable routing





CHECKLIST - MAINTENANCE STATUS

Model: _____ Serial number: _____ Construction year: _____

Elements of effective maintenance

Checked / Fixed

2.4	Verify that the manual detailing operating and maintenance instructions is still available and up to date	<input type="radio"/> yes	<input type="radio"/> no
2.5	Establish an accurate record-keeping system for the maintenance reports	<input type="radio"/> yes	<input type="radio"/> no
2.6	Danger of overheating by obstruction of the airflow	<input type="radio"/> yes	<input type="radio"/> no
2.7	Cleaning of the tanning device	<input type="radio"/> yes	<input type="radio"/> no
2.8	Approved UV Tubes installed	<input type="radio"/> yes	<input type="radio"/> no
2.9	Installation record form filled out	<input type="radio"/> yes	<input type="radio"/> no

General electrical faults

3.1	Cables and connections fault-free	<input type="radio"/> yes	<input type="radio"/> no
3.2	Approved starters installed	<input type="radio"/> yes	<input type="radio"/> no
3.3	Approved ballasts installed	<input type="radio"/> yes	<input type="radio"/> no
3.4	Approved capacitors installed. Capacitors installed correctly and the connecting cables properly fixed in the clamps	<input type="radio"/> yes	<input type="radio"/> no

Important positions

4.1	Check all connections externally for signs indicating electrical overstress	<input type="radio"/> yes	<input type="radio"/> no
4.2	Check the connector and socket interior for signs of electrical overstress	<input type="radio"/> yes	<input type="radio"/> no
4.3	Very important assembly information - WAGO / Adels connectors	<input type="radio"/> yes	<input type="radio"/> no
4.4	Cable tie applied too close -> bad contact	<input type="radio"/> yes	<input type="radio"/> no
4.5	Bad or no contact	<input type="radio"/> yes	<input type="radio"/> no
4.6	Missing cable ties	<input type="radio"/> yes	<input type="radio"/> no
4.7	Missing cable ties and messy cable routing	<input type="radio"/> yes	<input type="radio"/> no
4.8	After completion of the work check the position of the plugs on the back of the tanning device	<input type="radio"/> yes	<input type="radio"/> no
4.9	Installation record form filled out	<input type="radio"/> yes	<input type="radio"/> no

Date checked: _____

Checked by: _____

To finish the process, please send the completed checklist to

e-mail: customerservice@kbl.de