

# Sania 1550

## including Automatic Spa Water Treatment System



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Congratulations for purchasing a PICHLER-Whirlpool. You made a decision for a high quality product that will enjoying and relaxing you for many times.

If you have questions which could not be clarified by these instructions, so please direct your enquiry to your special dealer or to us.

## Placement

Your new PICHLER whirlpool needs for placement a planar horizontally ground which have to guarantee a static load of about 450 kg/m<sup>2</sup> (static load value of full filled Pool, including bathers!). The basement of the whirlpool have to lie completely flush with the surface!

All flooring, wall and ceiling coating have to be resistant for bathrooms. Steam and splash water might cause damaging your building.

In the worst case all water of the pool can leak by a technical defect or pipe burst or something like that. Therefore it would be necessary to have a sufficient water outlet at the placement.

We point out that you are responsible for having direct access to the whirlpool and his components by repair or maintenance.

Maintenance work could only be done if the access is available to concerning places at the pool.

For this work also keep the stairs free for getting access. At Sania 1550 it concerns also all rear area of external skirt.

## Electricity Supply

To connect the electricity supply of the PICHLER Whirlpool is only to be allowed by a qualified electrician. You will find the exactly dates at "Electricity Supply" by this instructions.

## Safety and Health

- Enter whirlpool cautious (slip hazard) and not alone.
- Do not use the whirlpool under influence of alcohol, drugs or medicine.
- Do not set the bath temperature more than 38°C (danger of body overheating).
- Do not stay too long at the pool. This can endanger your health. (If you are not sure because of your physical constitution you should consulting your doctor!)
- We would recommend that you are showering before going into the pool. So the pollution of the pool water is reduced.
- Never let children alone nearby the whirlpool! The insulation cover is no protection!
- Do not place electrical equipment nearby the pool (radio, hairdryer, a.s.o.)
- Keep away from children the chemicals for water care.

## Initial Operation

Before initial operation the whirlpool should be spring-cleaned. There should be no foreign particles in the whirlpool. Especially look at the area around the filter unit.

### Preparing the Filter Unit

#### Filter material of Pichler-QC-Filtersystem



Turn the skimmer basket left until the flattened surfaces are on top of each other. Then remove from filter cage.



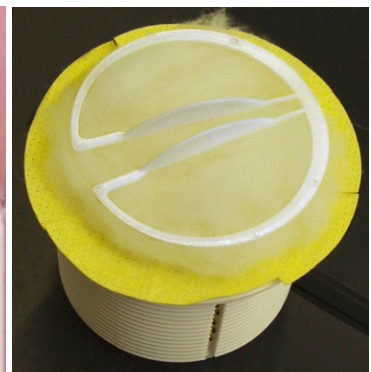
Unlock the dowel bolt of skimmer tubes by pushing together the outer skimmer basket and take the skimmer cartridge.



Take a filter leaf and put it on the empty skimmer basket.



Then arrange about  $\frac{1}{20}$  from a full package of filter cotton on the filter leaf. Put the clip on it.



Push it down with the clip to the bottom of the skimmer basket. The clip remains there!



Lock the dowel bolt by plugging the skimmer tubes into the skimmer basket tightly.



Plug the skimmer basket into the filter cage and fix it by turning right.

**The filter material should be exchanged regularly.** As a basic principle: After bathing in the pool change the filter leaf and filter cotton!

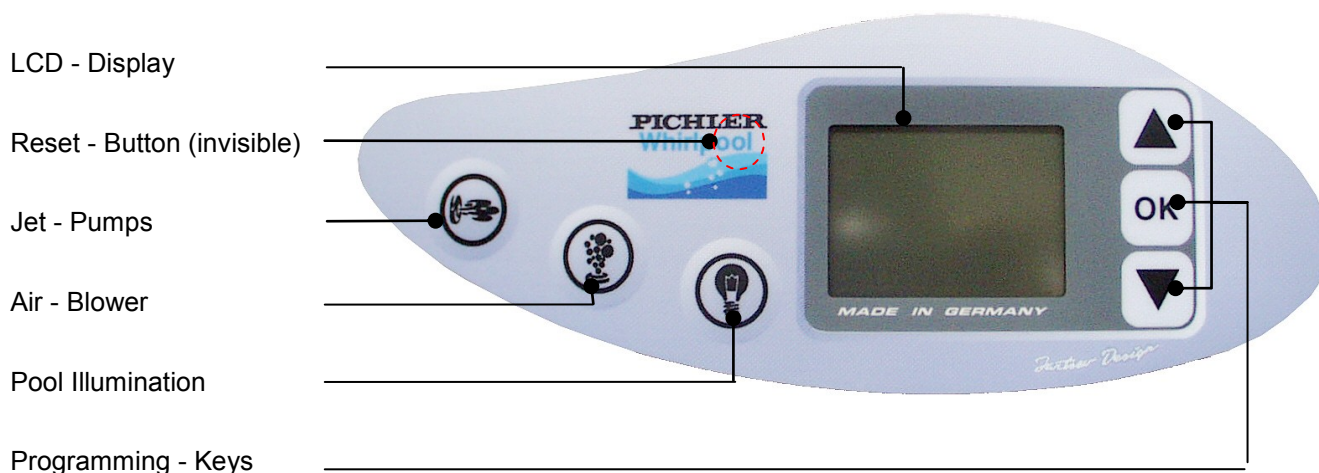


## Initial Operation

### Filling the Whirlpool

#### Control Element

The following map shows the control element of the whirlpool and gives you an overview about the buttons you partly need for initial operation. Circumstantial explanations for operating and programming the control are following later in accordant parts of these instructions.



The whirlpool starts running by switching-on the fuses.

**Caution: Never fill the pool with hot water! Risk of damage!!**

Fill the whirlpool with cold water until target value of water level (see on picture). If the minimum water level is attained the filter circulation, ozone generator and heating automatically would be activated. The pool will be heating up until the adjusted target value of temperature.

Target value of water level at the filter unit



## Water Treatment

Now starts water treatment, i.e. from this time on you have to do something for the water quality of your whirlpool.

## Pool Care

### Changing of Filter materials

The filter material should be exchanged regularly. As a basic principle: about 24 hours after bathing in the pool change the filter leaf and filter cotton! **Approach:** (see page 3, chapter „Initial Operation“)

### Cleaning of Plastic surfaces

The acrylic tub of your whirlpools has an approved surface. For routine cleaning it is sufficient to fill the tub with warm clear water and clean with some filter cotton (it has got characteristics like micro fibre cloth). Then dry the surface with tissue.

## Pool Care

### Fragrances

We strongly advise against using of water additives which are oil-based like fragrances o.s.. This affects adversely the water quality and contained fat sediments at water tubes which could cause malfunction. For whirlpools with scent dispenser are suitable fragrance bags available. The air is pressed through the scent dispenser into jets. The bags with scent pearls should be exchanged all 1 to 2 month.



### CAUTION:

Please do not use other additives in the scent dispenser. They could contain solvents which are damaging the plastic of scent dispenser.

### Indoor Insulation Cover

If you want to clean the cover use some filter cotton. It has got characteristics like micro fibre cloth. For cleaning up older and tenacious stains we advise using a chlorine solution all 3 month. You need 10 ml chlorine granulates into 2 litres of water. After cleaning the insulation cover rinse with clear water.

***Please always wear rubber gloves by making and using a chlorine solution!***

***Never fill leavings in bottles or containers which children could suspect drinkable content!***

## To let of Water

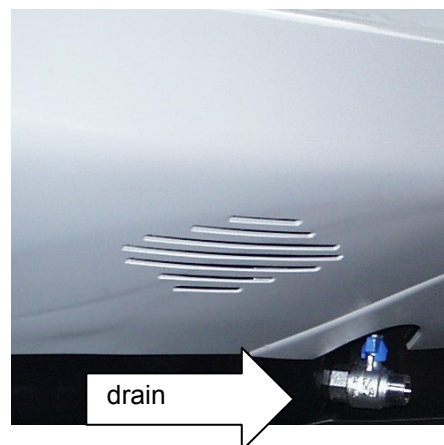
To let of water you have to plug a tube at the drain (attachment  $\frac{3}{4}$  inch). You find the drain at the black base tub underneath the steps. Open the outlet valve.

By let of water equipment will be automatically switched of. At the display appears „Wasserstand korrigieren“ (correct water level). Then remove filter cotton and filter leaf.

If the pool is empty switch on the air blower for about 1 minute to blow out water in the air lines.

***Now you can switch off the whirlpool. Turn off the fuse of the whirlpool.***

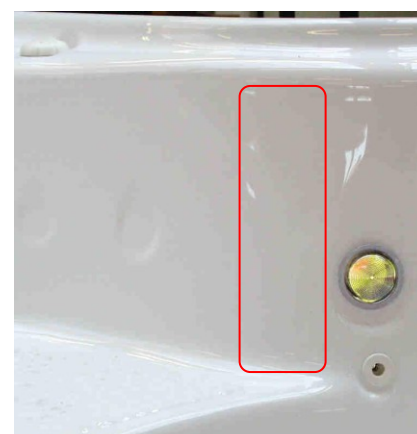
Then you could clean your whirlpool in-depth.



## Refill the Pool

You have to close the outlet valve and turn on the fuse. Then follow the instructions on page 5 for filling the pool.

Pay attention during the refill that no splash water get on the area which is signed with red line. (On the backside are water level sensors which send a signal to the digital controller. The Pool will be switched on and water in the lines would be spout.)



## Placing out of Operation

Sometimes the pool will be getting out of operation over a longer period, f.e. over the winter. For a closedown follow the instructions on page 6 „To let of water“.

### **Remaining water in the whirlpool could cause severe damages on freezing!**

*There is no guarantee from the producer on frost damages.*

Repairing a frozen whirlpool needs an extensive work which could avoid on following instructions.

- Let the outlet valve open after letting out
- You should all jets, the filter unit and the drain sucking empty with an water exhauster.

### **Sucking the Whirlpool empty**

The water will be suck with a commercial wet and dry exhauster from the pool, all jets and the filter unit. Press the suction hose directly on the respective jet. Then you have to suck remaining water from the ground of the pool.

#### **Wet and Dry Exhauster**



#### **Rotary jets**





## Placing out of Operation

Acupressure jets



Turbo jets



Ozone jet



Ground of the pool





## Placing out of Operation

### Sparkling air jets

If you don't have the possibility to switch on the air blower again to blow out remaining water in the air lines, you must additionally sucking the sparkling air jets. There for you have to unscrew the cover of these jets.

*To unscrew cover*



*Sucking the jet*



### Outlet valve

At last you have the suck the outlet valve.

***Let the outlet valve necessarily open!***



## Placing out of Operation

Now you can clean your whirlpool in-depth.

**Follow the instructions on page 5, cleaning of plastic surfaces.**

### Protection on outskirt area

During the standing idle of the whirlpool which is not filled you have to assure with an adequate cover that no water, dirt or objects could get in the pool. Dirt can infiltrate the pipes. If there are lay down any objects in or on the pool they could damage the surface of the pool. Later infiltration of water can cause damage of freezing in the line system! You could order these outskirt cover. Always you should cover your pool with it.



## Whirlpool Controller

### Automatic Functions

#### Trouble detection

Whirlpool controller detects errors and advises on display. A message is indicated until she will be entered with „OK“. Not until then the next message will be shown. The active message will be advised at least.

In the following chart all kinds of errors and their cause are listed.

Advice on display	Cause
Phase 2 absent Phase 3 absent	Detect phase: L2 and/or L3 on power supply fails Jumper on power board is not plugged
Defective rotatin field	Detect rotating field: Rotating field is interchanged (Clockwise rotation field is needed)
Water temperature over the maximum value	Measured water temperature has increased over the maximum value of 42°C.
Ozon generator error	Ozone lamp or restrictor are defective. Check the fuse on board when changing ozone generator (see on page 26).
Air blower error	Air blower motor is defective. Check the fuse on board by changing air blower (see on page 26).
Water - or Temperatur error	Heating control is activated and has detected an error. No water flow at heating Cause: Foreign particles are in the pump or before it. Air in filter cycle
Motor 2 overheats Motor 3 overheats	Motor overheat control is activated and has detected an error.
Low stage of water	Water level lies under the upper sensor.
Ozon generator error Air blower error	If their are detected error of ozone generator and error of air blower simultaneous, it is to assume that a fuse on board is defective (see on page 26). Cause: Ozone generator is defective, air blower is defective or short circuit in device, however it could be lightning or overvoltage.

If you even could not switch on the whirlpool you should be checking the transformer fuse on board (see on page 26).

#### Trouble Shooting

In the following the most questions and problems are answered. Also you come to know how to resolve that.

#### Sparkling air jets does not work


Try out different positions on servo valves and air control.

#### Water temperature constantly increase

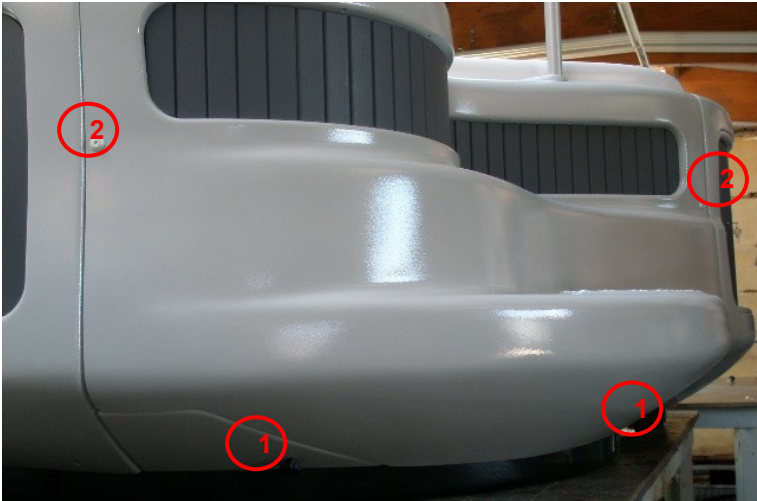


If the water temperature constantly is increasing by switched of heating (that means „HEIZUNG“ is not displayed) you have to discover the insulation cover from time to time. Cause: Filter pump and ozone generator get very warm by being in use. This causes a constantly increasing temperature of the water. The problem especially appears in warm month or in well tempered rooms (f.e. bath rooms, winter garden, a.s.o.).

**To Remove Outside skirt**

For maintenance and repair work you could remove the outside skirt as per description on following pages:

	<p><u>Needed tool:</u> Allen key</p> <p>Size: 4</p>
---	---

**Step skirt**

	<p><b>1</b> Remove star grip screws under step skirt on the left and right side.</p> <p><b>2</b> Unscrew Allen keys size 4 in front of step skirt.</p>
	<p>Remove stair skirt careful.</p> <p>Put it down on the right side → Pay attention to wiring for step light!</p>
	<p>LED lighting at hand rail – pull off the cap, than LED could be pull off. LED can not slip and disappear in the hand rail.</p>



# Trouble Shooting

## To Remove Outside skirt

Corner part (on the back side left and right) and back side skirt

		<p>Remove star grip screws under corner skirt.</p>
		<p>Careful push down the corner skirt and lift it from adjustment. Then put it down.</p>
		<p>Remove star grip screws under back side skirt on.</p>
		<p>Remove star grip screws on back side skirt on the left and right side. Then put it down.</p>

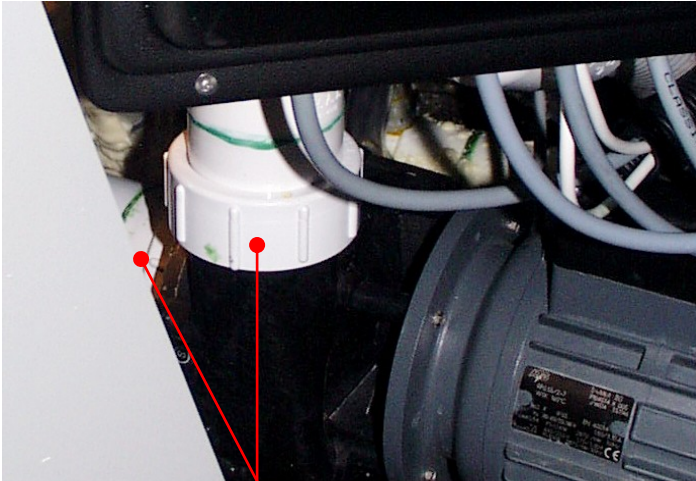
## Trouble Shooting

### Water leakage

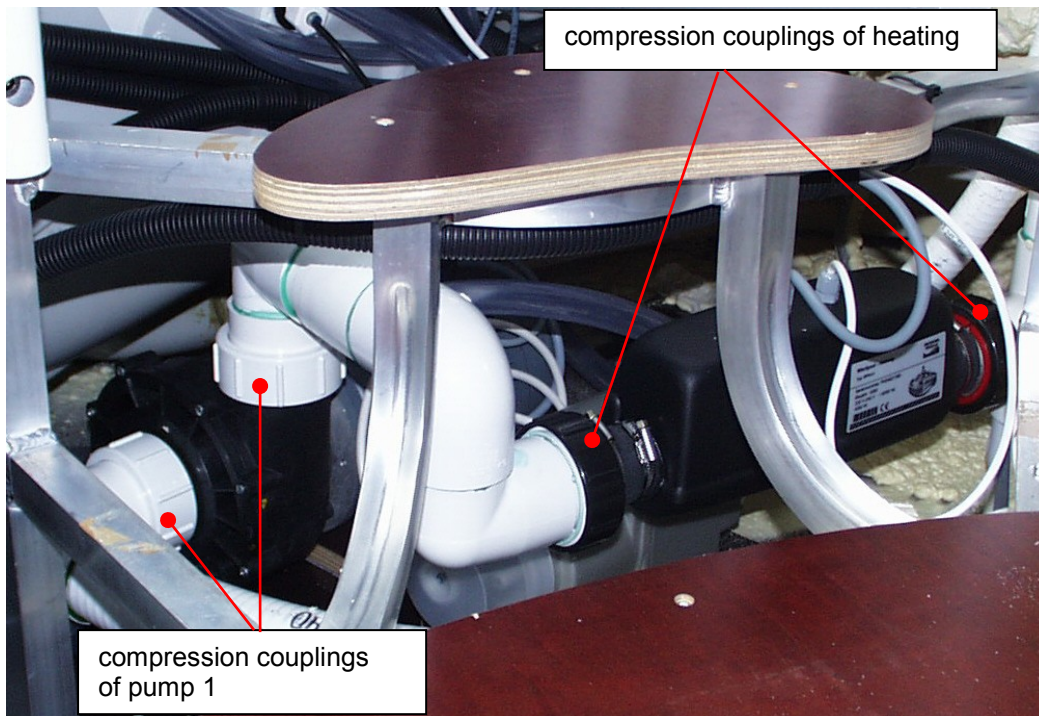
If your whirlpool loses water you first should check all compression couplings of heating and pumps. Maybe a gasket has yielded.

To check this components step skirt must have been removed (see on page 18).

1. Tighten the compression couplings of heating and pumps with both hands as strong as possible.



compression couplings of pump 3



compression couplings of heating

compression couplings  
of pump 1

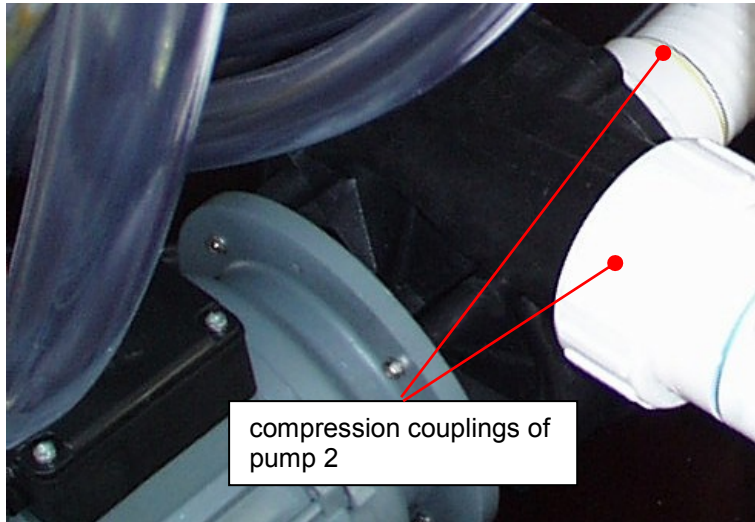
## Trouble Shooting

### Water leakage

**Check the compression couplings of pump 2 at right corner behind.**

To check this components corner cladding (on the left and right side behind) and back skirt must be removed (see on page 16).

Tighten the compression couplings of pump 2 with both hands as strong as possible.



If all compression couplings are tightened strong start hand order rinse (see on page 16) and make a visual inspection of all compression couplings of heating and pumps and servo valves (see on next page).



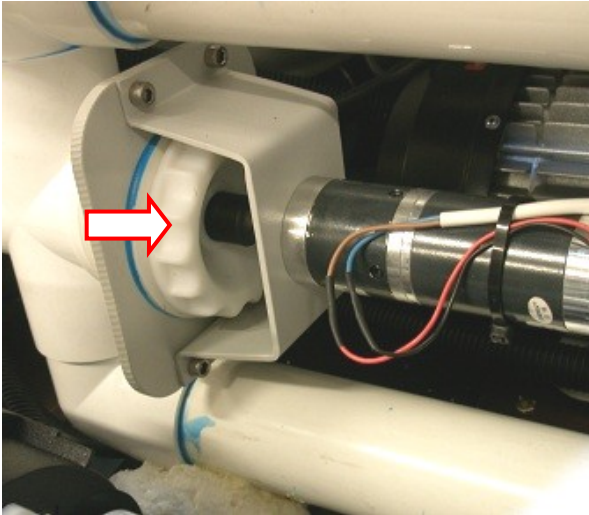
## Trouble Shooting

### Water leakage

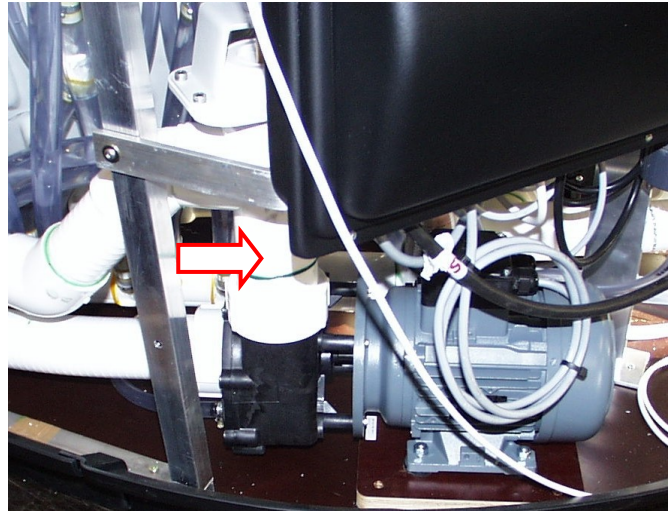
#### Servo valves

Check mixing valve cap. If there water is leaking you have to change rotary shaft seal or O-seal!

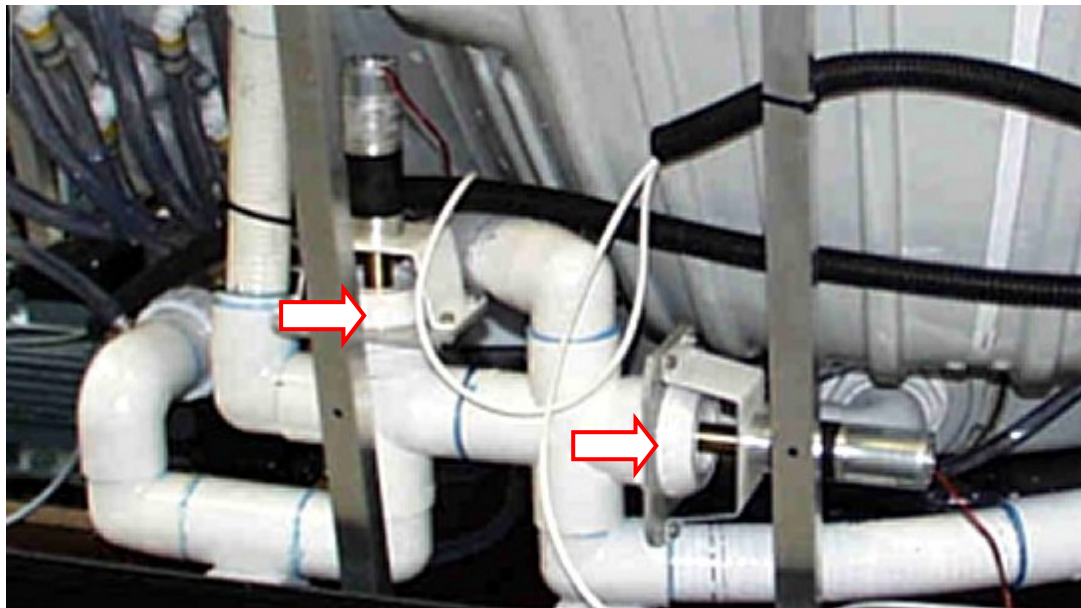
Pump 1 (beside heating)



Pump 3 (behind control box)



Pump 2



If the pool already loses water try to find out where it is leaky. Possibly you have to remove more parts of skirt. In this case you should inform your dealer respectively our customer service.


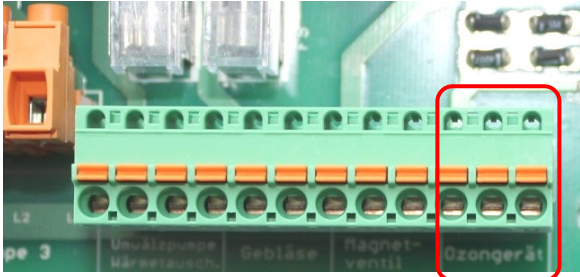
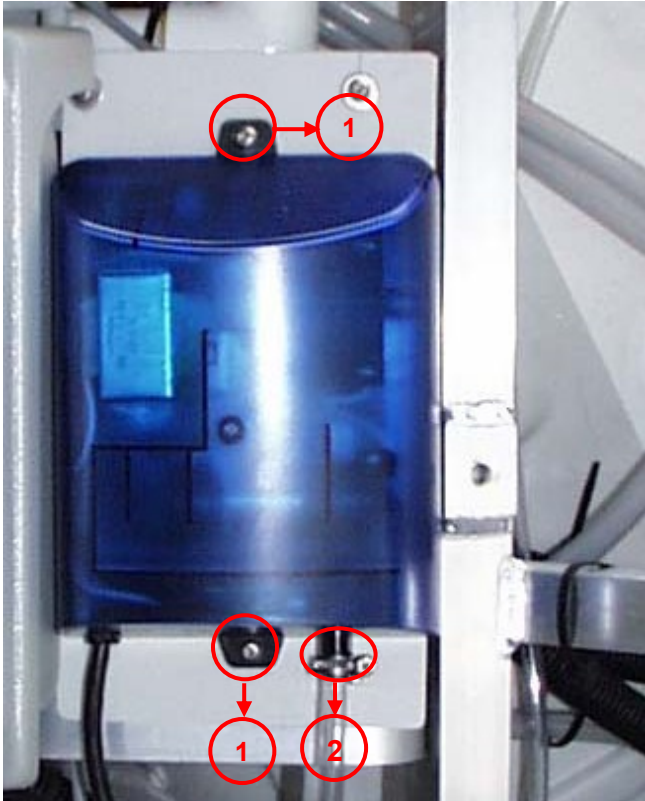


# Trouble Shooting

Ozone generator is defective – change ozone generator

To check this components step skirt must have been removed (see on page 26).

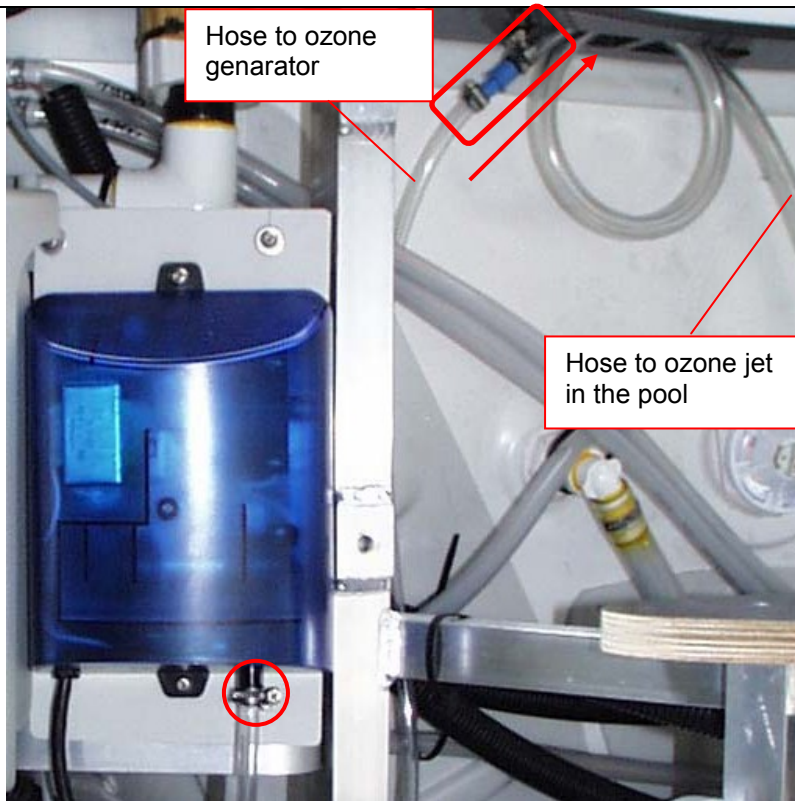
**Disconnect the pool from power supply before you are going to change the ozone generator (Remove the fuse!).**

	<p><u>Needed tools:</u></p> <table><tr><td>Crosstip screwdriver</td><td>Size: 2</td></tr><tr><td>Screwdriver</td><td>Size: 1</td></tr><tr><td>Allen key</td><td>Size: 3</td></tr></table>	Crosstip screwdriver	Size: 2	Screwdriver	Size: 1	Allen key	Size: 3
Crosstip screwdriver	Size: 2						
Screwdriver	Size: 1						
Allen key	Size: 3						
	<p>Remove crosstip screws Gr. 4 at control box</p> <p>Open control box</p> <p>Disconnect cable of ozon generator</p> <p>Unscrew screwed cable gland</p> <p>Pull out cable</p>						
	<p><b>1)</b> Remove Allen screws Gr. 3 of ozone generator</p> <p><b>2)</b> Unscrew hose clamp, then pull down ozone hose</p> <p>Remove ozone generator</p> <p>Install new ozone generator reconnect cable</p> <p>IMPORTANT: Reconnect green or yellow-green wire on „PE“</p>						

## Trouble Shooting

### Ozone generator defective – Change non-return valve

By changing the ozone generator we recommend also to change the non-return valve.



Unscrew hose clamps at non-return valve, then pull down hoses

Put the hoses at new non-return valve and retighten hose

!!pay attention to direction of flow of non-return valve. It has to get open from ozone generator to the pool!!

Ozone generator would be damaged by getting open of non-return valve in false direction.

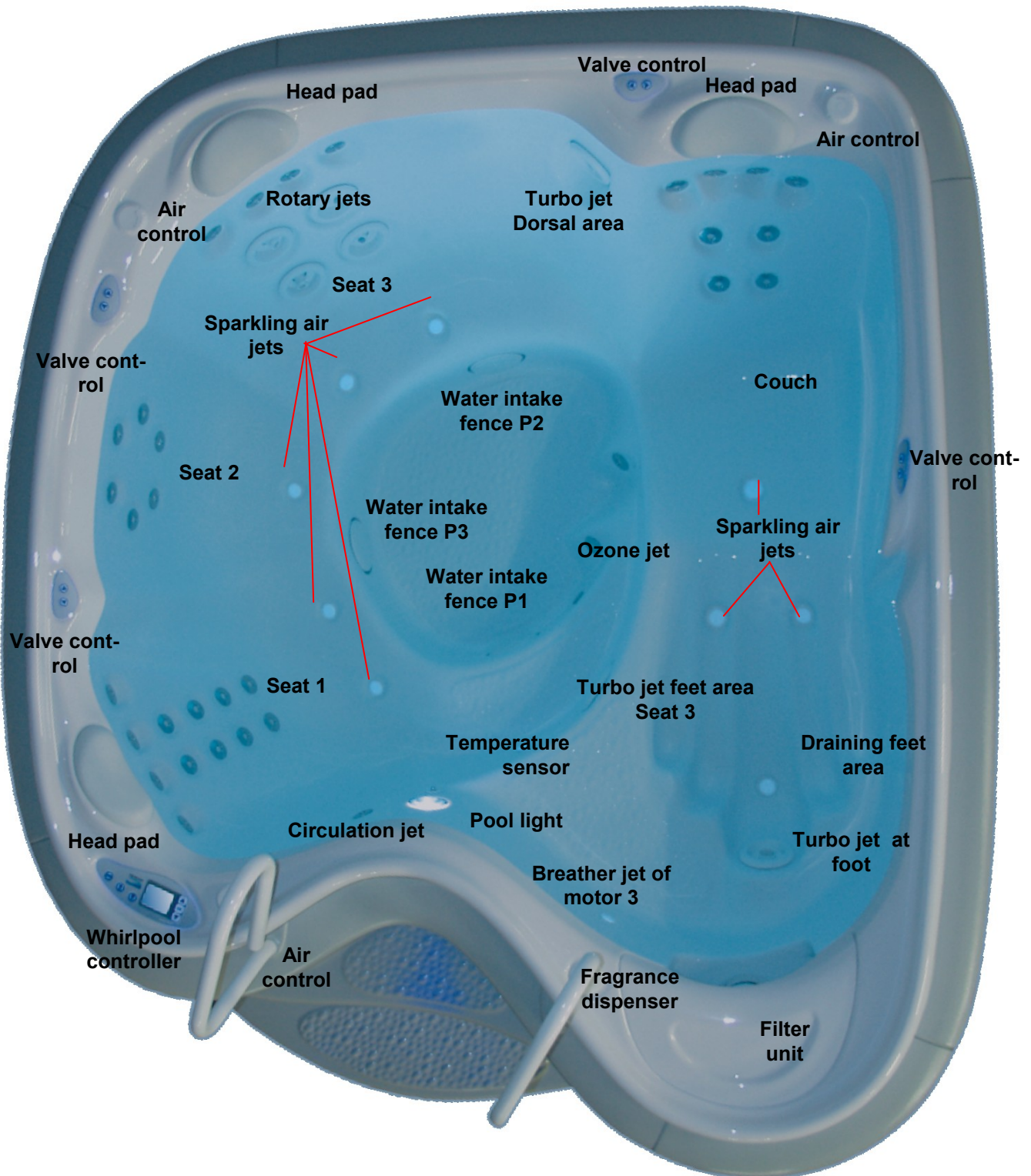
Fit hose on ozone generator with hose clamps.

For safety strongly blow in the hose before you fit it to check a continuous flow to ozone jet in the pool

#### Further test of non-return valve:

After switching on jet pump 1 there must be a vacuum at ozone hose (a little suction of air).

## Equipment Sania 1550





## Equipment

### Controlling jet output with electrical valve control

In the whirlpool are servo-valves integrated which can control water stream. With a servo-valve water pressure can be distributed continuously variable to different jets or groups of jets. Each servo-valve has its own valve control which is linked with the whirlpool controller.

Turning the servo valves is controlled by two arrow keys

(◀ „LINKS“ (left) and ▶ „RECHTS“ (right)) which are at valve control.

#### Notice for handling valve controls

With valve controls jets could be adjusted stronger or lower or they could be stopped. As an advantage servo-valves could be continuously adjustable and they can work at automatically rinse.



#### Sania 1550 includes 4 valve controls

##### Possible adjustments of valve control ①:

###### Controlling of jet pump 1

- Turbo jet at foot active
- Dorsal area at couch active
- Combination between both options (less pressure)

##### Possible adjustments of valve control ②:

###### Controlling of jet pump 2

- Turbo jet at dorsal area active
- Deviation of pressure to valve control ③
- Combination between both options (less pressure)

##### Possible adjustments of valve control ③:

###### Controlling of jet pump 2

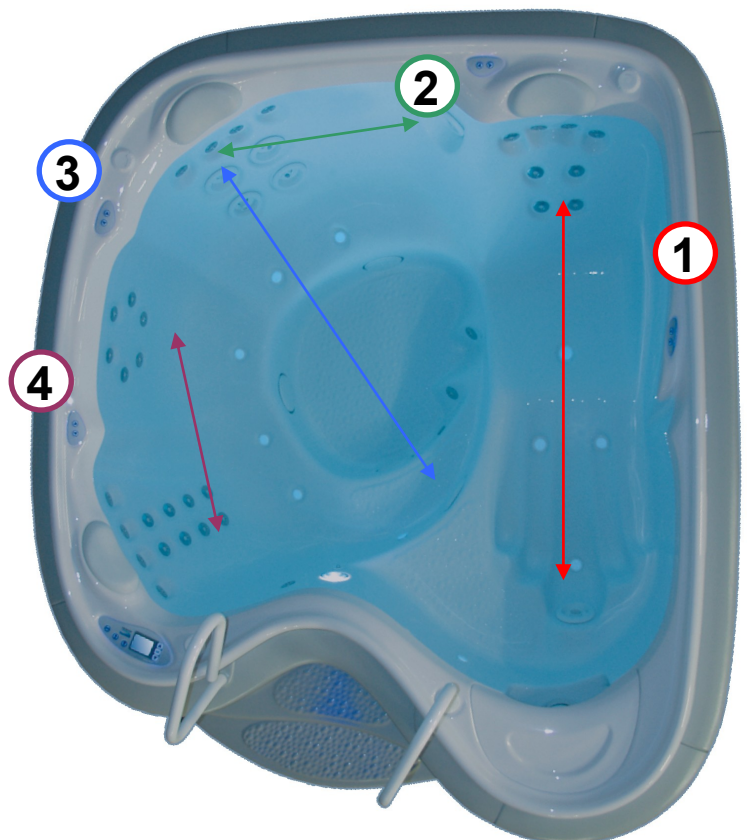
- Turbo jet at feet area of seat 3 active
- Dorsal area at seat 3 active
- Combination between both options (less pressure)

**Attention: There is only pressure at valve control ③ if turbo jet at valve control ② is closed!**

##### Possible adjustments of valve control ④:

###### Controlling of jet pump 3

- Dorsal area at seat 1 active
- Dorsal area at seat 2 active
- Combination between both options (less pressure)



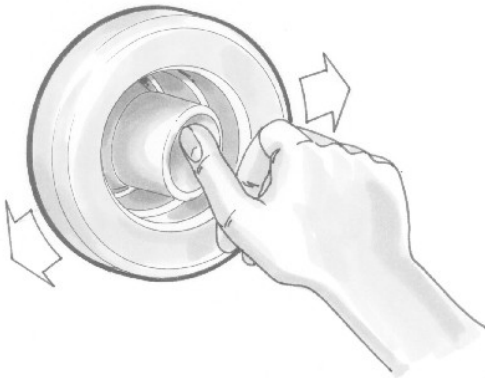


## Equipment

### Massage jets

#### Turbo jet

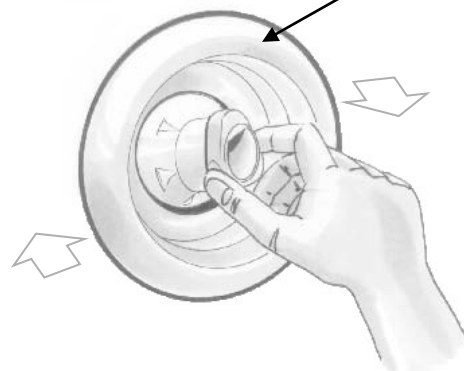
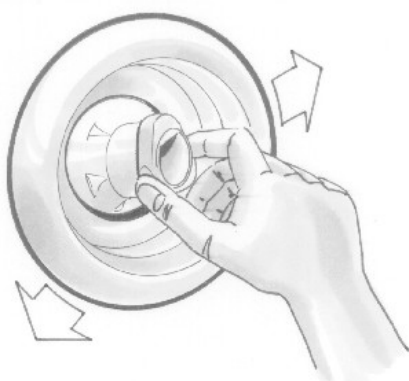
Turbo jets are the strongest massage jets in the whirlpool. Intensity can be adjusted by valve control. Jet direction could be adjusted how it is shown in the follow. By adjusting the controls at your seat you can adjust the pressure or the nozzle off completely. When folded down part of the nozzle, a circling jet can be generated.



**ATTENTION:** Do not move too close to this jet, the very strong jet could cause injury.

#### Rotary jet

The rotary jets are coupled to the acupressure jets and through the electronic mixing valves at will. By adjusting the controls on the seat can adjust the pressure or turn off the jets completely. By folding the jets inner part, a circling water jet can be produced.



Outer ring is rotational property

On the outer ring of rotating nozzles are adjustable. When rotating the ring clockwise direction, the nozzles are activated. When rotated counterclockwise, the nozzle is turned off or you can replace it.

#### Acupressure jet

Acupressure jets afford a point massage and can be adjusted by valve control.



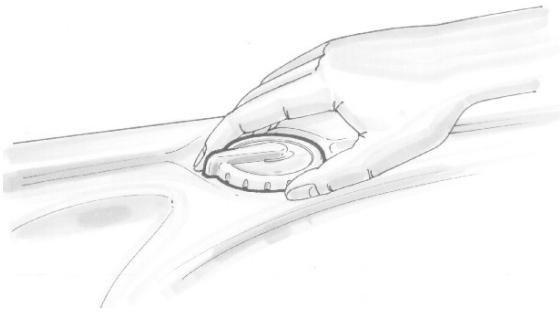
## Equipment

### Massage jets

#### Air control

With air control you can adjust air-water mixture at jets. If air control is closed there only will be led water through jets and so you have a softly jet. By opening air control water will be mixed with air, so you have a stronger jet.

If you do not use the poll (stand-by operation) air controls should have been opened that rinsing the lines during the rinsing cycles is assured.



#### Sparkling air jets

By sparkling air jets full body massage is afford. These non adjustable jets are flush countersunk in the pool ground. With air blower pre-heated air will be pressed through these jets.



## Equipment

### Coloured Light Therapy Module (optionally)

*Colours release specific moods and feelings and influence bodily functions and sense organs. Coloured light therapy is not only used for relaxing but also it gives an especially touch to the whirlpool. By purchasing coloured light therapy with different colour versions you have the possibility to give extra stroke to your psyche.*

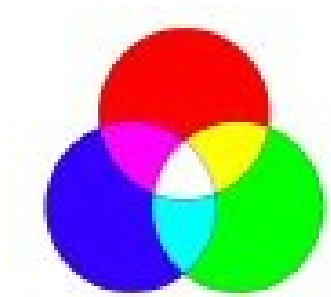
#### Colours and their effects

Red	- stimulating, tonically, warming
Green	- balancing, relaxing, regenerative
Blue	- assuasive, harmonizing, anit inflammatory
Magenta	- inspiring, balancing, expurgatory
Yellow	- exhilaratory, releasing, stimulating
Cyan	- exonerating

Coloured light therapy is good to combine with our aroma therapy.

#### Prinziple of additive colour mixture

Colour mixture of light is an additive colour mixture. Addition of elementary colours red, green and blue comes to white.



Additive colour mixture    Coloured light therapy lamp    Coloured light therapy module activated

Program sequence is run in the operating software WPS A3!

## Equipment

### Service Interior Light (optionally)

SMD RGB Light (0.5 W/12V) and pool illumination (3W/12V) to activate press light key button. The light makes more easy for service.



## Technical Specifications

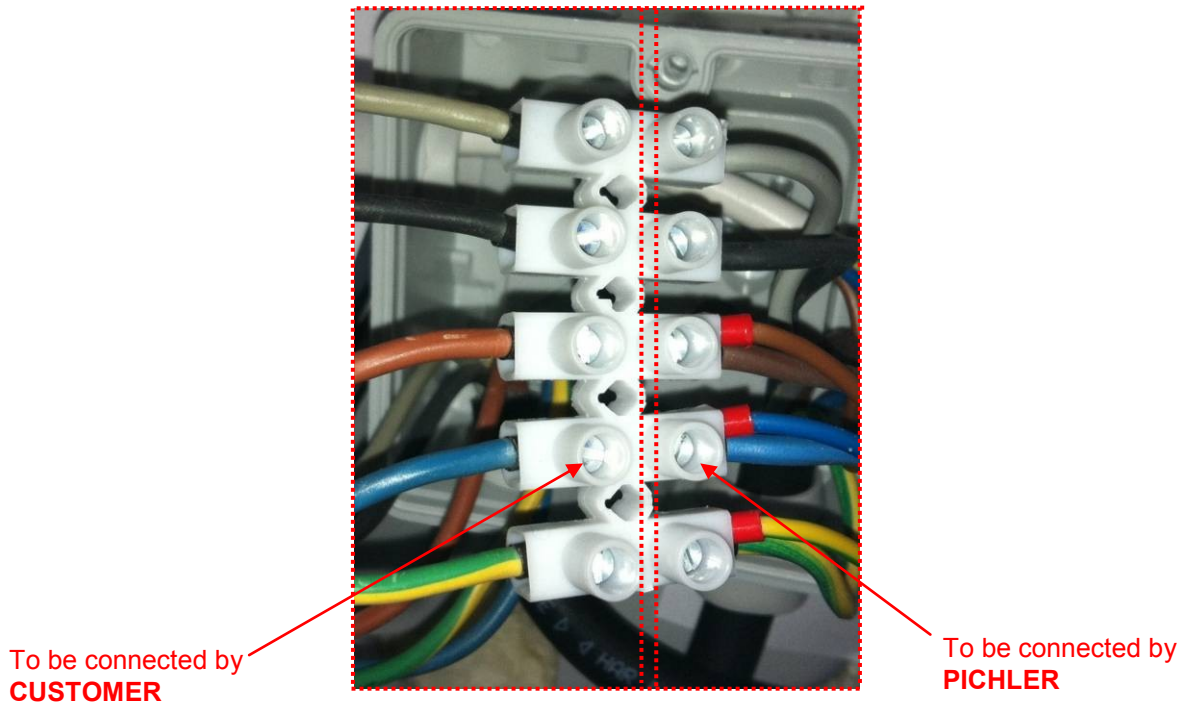
### Plug on the whirlpool on electric power supply

**Pay attention to our supplemental sheet: „References for plug on electric power supply on PICHLER - Whirlpools“ and wiring diagram of strip terminal on following pages!**

You have to drill a hole at an unremarkable place in external cladding or ground to lay a cable. Feed the cable through the hole and inside the pool to control unit.

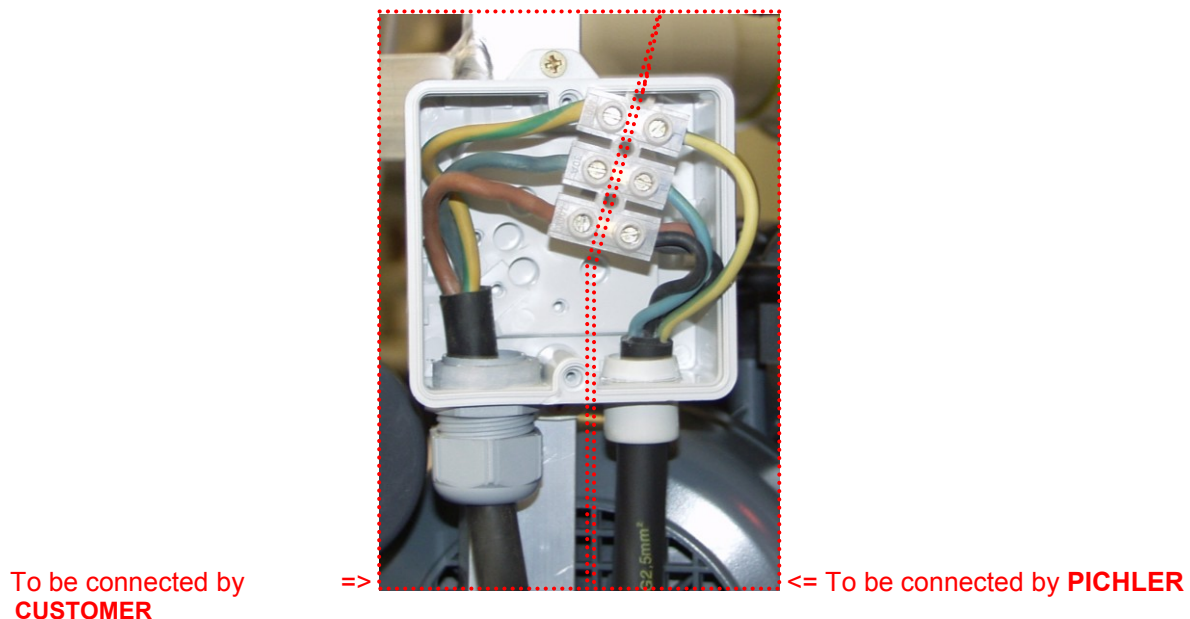
#### Electric power supply 400 V

In this case the 5 wired connection cable will be connected directly in the socket under the control unit prepared by us.



#### Electric power supply 230 V

In this case the 3 wired connection cable will be connected directly in the socket under the control unit prepared by us.





**Wiring diagram of strip terminal**

Sania 1550 (AC current 230V)

Sania 1500 (three-phase current 400V)



Alternating current 230V Pump, orange



Three-phase current 400V Pump, secondary red


**DOWN**

Marking	Function	Colour
L1	Power supply	brown
L2		black
L3		grey
N		blue(hell)
PE		yellowgreen
L2	E-Heating (1)	black
N		lue
PE		yellowgreen
L3	E-Heating (2)	black
N		blue
PE	Jet Pump 1 (1.speed)	yellowgreen
N		blue
L1	Filter speed	U1
L2	(only for 400V Pump connection)	V1
L3	(only for 400V Pump connection)	W1
PE	Jet Pump 1 (2.speed)	
N		
L1	Jet speed	U2
L2	(only for 400V Pump connection)	V2
L3	(only for 400V Pump connection)	W2
PE	Jet Pump 2	yellowgreen
N		
L1	(only for 400V Pump connection)	black
L2		black
L3	(only for 400V Pump connection)	black
PE	Jet Pump 3	yellowgreen
N		
L1	(only for 400V Pump connection)	black
L2	(only for 400V Pump connection)	black
L3		black
L1	Cycle pump Heat exchange	brown
N		blue
PE		yellowgreen
L1	Air blower	brown
N		blue
PE		yellowgreen
L1	Solid valve	brown
N		blue
PE		yellowgreen
L1	Ozone generator	brown
N		blue
PE		yellowgreen

**Sania 1500/1550**
**UP**

Marking	Function	Colour
GND	Stairs-lighting	yellowgreen
R		brown
G		green
B		white
GND	Pool-lighting	yellowgreen
R		brown
G		green
B		white
GND	Outboard-lighting	yellowgreen
R		brown
G		green
B		white
GND	Door-lighting	blue
Tür		brown
+U 1	Adjustment valve 1	brown
-U 1		blue
+U 2	Adjustment valve 2	brown
-U 2		blue
+U 3	Adjustment valve 3	brown
-U 3		blue
+U 4	Adjustment valve 4	brown
-U 4		blue
+A 1	Cover 1	
- A 1	Deactivated	
+A 2	Cover 2	
-A 2	Deactivated	
TW 1	Temperatur sensor of water	red
TW 2		yellow
PE		black
TS 1	Temperatur sensor Storages	red
TS 2		yellow
PE		black
TH 1	E-Hearing decontrol	brown
TH 2		blue
TFilt 1	Filter pump decontrol	
TFilt 2		
TJet 1.1	Jet pump 1 decontrol	bridge
TJet 1.2		
TJet 2.1	Jet pump 2 decontrol	bridge
TJet 2.2		
TJet 3.1	Jet pump 3 decontrol	bridge
TJet 3.2		
Wzus.1	Water level sensor	brown
Wzus.2	Maximum/ Injektion	black
Wzus.3		blue
Wmin.1	Water level sensor	brown
Wmin.2	Minimum	black
Wmin.3		blue
Pot 1	Vacant kontakt	
Pot 2	Deactivated	

## Layout Power Board

### Fuses

on board could be destroyed by lightning, over voltage or short circuit of device

- F3** Fuse 1,0 A T (delay) Transforma
- F8** Fuse 1,0 A T (delay) Heat exchanger and air blower
- F9** Fuse 6,3 A T (delay) Magnet valve, Ozone generator

