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wellsystem

Legal notice





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These service instructions are intended solely for specialists who have been trained and authorized by JK-Global Service.

These service manual describe how to remove and replace components in wellsystem devices:

wellsystem WAVE_TOUCH with SPA COMPLETE

Further information on assembling and dismantling the devices can be found in the documents:

1028522-.. Assembly instructions wellsystem WAVE_TOUCH or operating instructions # 1028521- ..

and

1024427-...Service information for retrofit kit for internal cooling/exhaust air.



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General

1.1 Symbol explanation

The following types of safety notices are employed in these operating instructions:

Authorized, trained and qualified staff

Qualified staff from an external company who have been trained and authorized by the manufacturer for assembly and maintenance work with specific devices.

JK Factory Certified Technician

Level 4

This individual is uniquely qualified to assess the condition of a unit and make a determination if the device meets the requirements for continued use ten (10) years from the date of manufacture.

1.1.1 Warning signs

Danger notices, nonobservance will lead to death or serious injury:

	A DANGER!
\bigwedge	Type and source of danger, e.g. 'DANGER – High volt- age!'
DANGER!	Description of the consequences, e.g. 'You can be killed or injured by an electric shock!'
	Countermeasures:
	– Disconnect device from power supply before opening.
	 Do not reach into the inside with the device switched on.

Warning notices, nonobservance can lead to death or serious injury.

WARNING!

Type and source of danger, e.g. 'WARNING – Risk of injury!'

Description of the consequences, e.g. 'You can burn your hand (skin, face)!'

Countermeasures:

- Do not touch hot parts and nearby surfaces.
- Wait until hot parts and surfaces have cooled down.

A WARNING!



WARNING!

Crushing hazard, e.g. when closing the bed base! Fingers can be jammed.

Do not hold fingers between bed base and front panel.



Caution notices, nonobservance can lead to less than serious injury or damage of property.

A CAUTION!



Heavy parts! Risk of injury!

The word 'Caution' together with the warning sign points out that less than serious injury can be expected here. Countermeasures:

Avoid doing this.

NOTICE

Damage to the device possible!

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The word 'NOTICE' without warning sign points out that danger for devices, materials and the environment can be expected here.

Countermeasures:

Avoid doing this.

Important information:



NOTE:

This symbol does not identify safety notices, but states information for a better understanding of the processes.

Glossary

Symbol	Notes/Screw type
/	Torx screw: loosen
	Torx screw: tighten
	Allen screw: loosen
	Allen screw: tighten
	Phillips screw: loosen
	Phillips screw: tighten

1.2 Safety information for assembly and disassembly

WARNING – when installing this massage device, basic precautions should always be followed, including the following:

Read and follow all instructions.



You can be killed or injured by an electric shock! Electricity throughout entire device!

Assembly and electrical connection must comply with national and local regulations.

- The unit may only be assembled, installed, upgraded or repaired by specially qualified personnel who have been trained by JK Global Service Division or an authorized partner.
- Install this unit in accordance with the National Electrical Code (USA) or the Canadian Electrical Code, part I in addition to all local codes.
- The unit must be installed indoors only.
- Install to permit access for servicing.
- Grounding is required.
- A green-colored terminal (or a wire connector marked 'G', 'GR', 'Ground', 'Grounding' or with this symbol: is provided within the terminal compartment. To reduce the risk of electric shock, ensure that this terminal is connected to the grounding terminal of your electric service or supply panel with a conductor equivalent in size to the circuit conductors supplying this equipment.
- The person responsible for assembling/installing the unit is obliged to release the unit for use only when completely installed with all components in working order.
- No safety equipment (e.g. switches) or safety notes may be removed or deactivated which can impair the safe operation of the device.
- The unit must be disconnected from any voltage source before any work is carried out on the unit (see page).
 Exceptions are permissible only for function tests by trained personnel!

1.3 Safety information for avoiding damage to the unit

The unit may be damaged or destroyed!

 Always perform assembly work in the sequence specified in the assembly instructions (# 1028522- ..).

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2 Information for service technicians

A DANGER! You can be killed or injured by an electric shock or injured by overexposure! Skin damage and sunburn possible. Danger of overheating by obstruction of the air routing. – No modification of this equipment is allowed.

Electricity throughout entire device!

- Only an authorized specialist company is permitted to make the on-site electrical connections (equipment connection socket)!
- Connect the device only to a circuit, protected by a Type F or similar ground fault circuit interrupter (GFCI).
- Only one device should be connected to each GFCI.
- The device must be connected to the mains via an all pole master switch. One power supply circuit (power supply lead) may only power one device.
- The electrical installation must have a freely accessible, all-pole disconnecting device (Master switch with clearly labelled On/Off settings, e.g. '0' and 'l' or additional indicator light) fitted externally on the site side.
 This switch must be lockable in the OFF position!
- A mains supply switch must not be incorporated in a power supply cord or external flexible lead.
- The unit assignment can be seen from the inscription.
- The equipment must be permanently connected to the public power supply via an all-pole main switch. The connections and the associated fuses must be readily accessible.
- The mains supply lines (THHN) must be installed in an insulated pipe.
- Data and/or control lines are to be laid with a minimum distance of at least 4 in / 10 cm from the mains cables.
- The mains supply lines must be laid before the unit is installed.



NOTE:

Additional information on the electrical connections can be found in the operating instructions. (3.10.1 Power rating, electrical specifications...)!



2.1 Electrical connection

2.2 Disconnecting the unit from the power supply and secure it against re-connection

	A DANGER!
DANGER!	 The device must be powered off before any work is performed. Switching off the device alone is insufficient, as certain points may remain energized. Therefore, switch off breakers before performing any work.
	Severe accidents can occur if the device is mistakenly switched on again.

Immediately after powering off, secure all switches or fuses used against being accidentally switched on again.

– Lock the fuse box with a padlock.

A strip of adhesive tape with the wording 'DANGER do not switch ON!' may be applied over the actuation levers of circuit breakers which cannot be removed (1 + 2).

A prohibition sign with the wording: 'Work in progress!'

- 'Place::'
- 'Sign may only be removed by:'

must always be securely displayed immediately.



⚠ DANGER!

Prohibition signs must not be hung on or touch live parts.





2.3 Maintenance



Once the maintenance work is complete, all safety equipment must be returned to their original operating status.



Risk of infection due to contaminated water! Wear safety gloves when performing maintenance work that



requires you to come into contact with water from the tank.

Should you come into contact with water from the tank, always wash your hands (and any other affected parts of your face or body) immediately.



Risk of damage to the unit due to contaminated water! Never use dirty water or water containing chemical additives.

- Always use water from the public water supply

2.4 Electrostatic discharge (ESD)

A CAUTION!



Power connection boards and electrical, electronic or optoelectronic components are sensitive to electrostatic discharge and can be terminally damaged on contact.

- Wear special ESD shoes.
- Always wear a grounding wrist strap when working in close proximity to electrical, electronic or opto-electronic components.

Before touching electrical / electronic components:

– Put on the wrist strap as per the manufacturer's instructions.



2.5 Technical data

2.5.1 Power, connection rating and noise level

The technical data can be found in the instructions for use: 1028521-..wellsystem Wave Touch (with SPA COMPLETE)



3 Checking and replacing components



3.1 Preparation

Covers can be opened or closed when checking and replacing components. Further information is available in the assembly instructions # 1028522-.. or operating instructions # 1028521- ..





- 1. Tank with rubber cover
- 2. Side frame panels
- 3. Frame panels at the head and foot ends
- 4. Front panel/rear panel
- 5. Control box
- 6. Cladding at the head and foot ends
- 7. Frame
- 8. Pump with frequency converter, hoses and fan
- 9. Air box
- 10. Drive motor with nozzle trolley
- 11. Control panel



NOTE!

Assembling and removing spare parts: See assembly instructions # 1028522-.. or operating instructions # 1028521- ..



- 1. Tank with rubber cover
- 2. Side frame panels
- 3. Frame panels at the head and foot ends
- 4. Front panel/rear panel
- 5. Control box
- 6. Cladding at the head and foot ends
- 7. Frame
- 8. Pump with frequency converter, hoses and fan
- 9. Air box
- 10. Drive motor with nozzle trolley
- 11. Operating unit with touch function
- 12. Middle station
- 13. Air/water cooling

SPA COMPLETE:



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- 1. Hood with rear panel
- 2. Front panel with loudspeakers



NOTE!

Additional documents for assembling and removing spare parts: see page 2.

3.2 Electrical connections

The electrical connections and cables are located throughout the entire unit: in the control box, on the pump, in the front panels, on the motors and on the nozzle trolley.



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3.2.1 1.1	Plug connectors
3.2.2 1.2	Connectors
3.2.3 1.3	Connection terminals
3.2.4 1.4	Internal terminals (spring-loaded)
3.2.5 1.5	Internal terminals (screw terminals)
3.2.6 1.6	Cable bushings
3.2.7 1.7	Electrical wires/cables



3.2.1 1.1 Plug connectors

- See circuit diagram in chapter 3.3.6 for the location of the plug connectors.
- Check or replace components in accordance with the checklist # 1016789-...

Overview of connector types

- Plugs for decorative element.
- These connections only fit in a particular direction.





- Circuit board edge connectors in a variety of sizes.



RJ 45 connector:

- Connector for control panel WAVE.
- Connector for data connection SPA COMPLETE.



- Connector for LED effect lighting.







Connector for heating.

- Connector for fan and pump.



- Crossover connector (SPA COMPLETE: only for RJ45 wire).



- Connector SPA COMPLETE: Bus connection.

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3.2.2 1.2 Connectors

	A DANGER!
	Switch off the unit before conducting any assembly/ disassembly work.
DANGER!	 Switching off the unit alone is insufficient, as certain points may remain energized. Therefore, switch off fuses before performing any work and – if possible – move them

A DANGER!

Risk of electric shock!

Severe accidents can occur due to mistaken re-connection. Immediately after the de-energization, all switches or fuses used for de-energization must be secured against re-connection _

Lock the fuse box with a padlock.



Only the wellsystem WAVE / WAVE_TOUCH is connected with a fixed connection.

Securely wire the mains cable. _

DANGER!

Further information can be found in the 'Electrical connection' chapter of the operating instructions.

3.2.3 1.3 Connection terminals

Does not apply to this unit.

3.2.4 1.4 Internal terminals (spring-loaded)

Optional connection (for external control)



3.2.5 1.6 Cable bushings

Check or replace components in accordance with the checklist # 1016789-...





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Cable bushings in the middle station – only in $\mathsf{WAVE_TOUCH}$

If present, check for wear and damage.



3.2.6 1.7 Electrical wires/cables

 Check or replace components in accordance with the checklist # 1016789-...



Designation	Information
BU21	JK coin device / external coin device connection
SD card	SD card insertion slot (software update)
ST1	LAN connection
ST6	Frequency converter fan
ST11	Cooling heat exchanger
ST12	Connection SPA COMPLETE
ST17	Frequency converter on the water pump
ST18	Heating element
ST20	Limit switch, solenoid
X01-1	Drive motor (1) beneath the well (nozzle trolley)
X02-1	Drive motor (2) on foot end (front nozzle)
X03-1	Drive motor (3) on foot end (rear nozzle)
X04-1	Circuit board and drive motor for power supply (3)
ST30	LED lighting
X016-1	Control panel connection
X018-1	Drive motor limit switches (1) - (3)



Designation	Information
X019-1	Frequency converter controller
X020-1	Safety chain and relay control
X021-1	JK coin device and external coin device connection
X024-1	Drive motor (1) voltage supply
X025-1	Drive motor (2) voltage supply
Not shown:	
2-pin BU13	Drive motor (1) voltage supply
4-pin BU23	Drive motor (1) controller
2-pin BU14	Drive motor (2) voltage supply
4-pin BU24	Drive motor (2) controller
2-pin BU15	Drive motor (3) voltage supply
4-pin BU25	Drive motor (3) controller



Middle station for units with an operating unit with touch function

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Designation	Information
X04	24 V voltage supply
X16	LED lighting, front
X600	Data cable for operating unit
ST2	Power E4
RJ45	Data transfer
X2	BUS PCB power supply
X05	Data bus



3.3 Electrical components

- Check or replace components in accordance with the checklist # 1018814-...



3.3.11 2.11	Solenoid switches
3.3.12 2.12	Heating element
3.3.13 2.13	Audio Does not apply to this unit.
3.3.14 2.14	Control system

3.3.1 2.1 Electrolytic capacitors

Does not apply to this unit.

3.3.2 2.2 Interference suppressor filter

Replacing the interference suppressor filter

- Pull out the plug.
- Loosen the screws.
- Replace the interference suppressor filter.



Replacing the protective earth choke

- Pull out the plug.
- Loosen the screws.
- Replace the interference suppressor filter.



3.3.3 2.3 Power connection boards

Before touching electrical / electronic components:

- Put on the wrist strap as per the manufacturer's instructions.



NOTE!

The number of power connection boards depends on the unit's functions. Please refer to the technical documentation for the PCB order numbers.

Overview of circuit boards WAVE





Circuit boards SPA COMPLETE



A CAUTION!

Always use compressed air to clean dusty circuit boards!



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NOTE SOFTWARE UPDATE!

All circuit boards must be updated at the same time using the same latest version of the software.

Replacing the main circuit board in the control box Main circuit board in the control box.





- Undo the two top cross-headed screws on the cover.
 - Remove the cover.



- Undo the screws on the main circuit board.
- Replace the circuit board.

The assembly is the same process in reverse order.

Replacing the circuit board for the operating unit (only units without an operating unit with touch function)

- Undo the connector (the connector is located in the control box)





- Loosen the screws.



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- Loosen the screws.
- Remove the circuit board.
- Open the operating unit.

The assembly is the same process in reverse order.

Replacing the circuit board for the operating unit with touch function: The operating unit's circuit board and display are glued together. For this reason, the entire operating unit must be replaced.

Releasing the arm on the bracket.

- Loosen the screws.
- Pull the arm and operating unit up and out and place them to one side.



NOTE!

Place a clean surface, e.g. a blanket or piece of cardboard on the unit's bed surface or use an additional table to place the arm to one side and perform the relevant assembly/dismantling steps.

Once the operating unit is on a surface:

Undo the screws on the cover.



After removing the cover to the operating unit:

- Loosen the screws.
- Remove the tube mounting clip.





- Undo the grub screw.

If the loosely fitted spring washers fall out during assembly/dismantling work, please note:



NOTE ON SPRING WASHERS!

Place the spring washers on top of one another in opposite directions, i.e. one washer with the curved side pointing up and the following washer with the curve pointing down so that the hinge effect is achieved.



- Loosen the screws.
 - Pull out the plug.



Pull out the arm.

After removing the operating unit, the new operating unit can be installed by following the steps in the reverse order.



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NOTE SOFTWARE UPDATE!

All circuit boards must be updated at the same time using the same latest version of the software.



Mounting the operating unit on the opposite side

If you need to change the side of the operating unit:

- 1. The arm must be released from the frame.
- 2. The rear panel to the operating unit must be opened.
- 3. Undo the screws on the tube mounting clip, remove the tube mounting clip. See 'Replacing the circuit board for the operating unit with touch function':

Then:

- Screw in the grub screw on the opposite side.





- Place the released arm on the other side.

The assembly is the same process in reverse order.

- Screw the tube mounting clip firmly in place.
- Then screw the operating unit cover back on.

Difference:

Mounting the operating unit on the left

Mounting the operating unit on the right







- Screw in the grub screw, do not screw it all the way down.



NOTE!

This grub screw enables the arm to move and acts as a form of brake. Sinking the grub screw therefore enables you to determine how well it moves. The following steps apply for both variants when dismantling and mounting the arm for the operating unit with touch function.

- Loosen the screws.





- Attach the operating unit and secure with 2 screws.



NOTE POSITIONING THE CABLES!

The position of the cables for the WAVE_TOUCH and the position of the cables for the WAVE_TOUCH is described in the assembly instructions 1028522-.. in chapter 6.10 Mounting the operating unit.

Changing the screen's direction of rotation



NOTE SCREEN!

After finishing dismantling/assembly work, the direction of the screen must be changed in the software.

On the touch display, touch these buttons in the specified order.
 'Settings' → 'System settings' → 'PIN login' → enter '0000' 'Confirm' → 'System settings' → 'Rotate screen by 180°' → confirm with 'Okay'.

Replacing the circuit board for the LED effect lighting

This circuit board is located in the unit's front panel.

- Removing the front panel: see chapter 5.1 of the assembly instructions.

The circuit board for the LED effect lighting is located on the back of the front panel.

- Unscrew the cover.
- Pull out the plug.
- Loosen the screws.



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- Loosen the screws.
- Replace the circuit board

The assembly is the same process in reverse order.

Removing the circuit boards in the SPA COMPLETE

Preparation: To replace the circuit boards and other components, the SPA COMPLETE's front panel and hood cover must be removed.

Removing the front panel:

- Loosen the screws.





Pull out the plug



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The bus node circuit board and audio circuit board with Bluetooth circuit board are located on the front of the SPA COMPLETE: Bus node circuit board:

- Undo the screws.
- Undo the circuit board edge connector and crossover connector.


Audio circuit board with Bluetooth circuit board:

- Undo the screws.
- Unplug the plugs.

One circuit board is located in the hood to the SPA COMPLETE. Removing the hood cover:

- Loosen the screws.



– Loosen the screws.



– Loosen the screws.

- Undo the screws.
- Pull out the plug.
- Remove the old circuit board and insert a new one.



NOTE CODING!

Please ensure that the circuit board edge connectors are coded correctly.



Replacing the NFC circuit board

The NFC circuit board is located on the fan box in the WAVE_TOUCH.

- Undo the screws. _
- Pull out the plug. _
- Remove the old circuit board and insert a new one. _

The assembly is the same process in reverse order.



NOTE NFC CARD!

Once the NFC circuit board has been replaced, the NFC card must be replaced.

Replacing circuit board on middle station control

- Unplug the connectors. _
- Undo the screws. _
- Remove the old circuit board and insert a new one.



- Unplug the connectors.
- Undo the screws.
- Remove the old circuit board and insert a new one.



- Unplug the connectors.
- Undo the screws.
- Remove the old circuit board and insert a new one.



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3.3.4 2.4 Relays/contactors

The following components are located in the bottom of the control box, in the fan box and, optionally, in the internal air/water cooling.

Replacing the relay on the top-hat rail

- Remove the cable.
- Remove the relay from the carrier.
- Insert a new relay and clamp firmly in place.
- Connect the cable.
- Make sure the cable is securely fitted.

Replacing the transformer

- Remove the wire.
- Undo the screws.
- Replace the transformer
- Connect the wire.
- Make sure the wire is securely fitted.



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Fuses in the transformer:

The glass fuses 10 A and 1.6 A are installed in the transformer.

Secure the wires at the mains inlet using cable ties.

Broken or loose wires must not touch any other components in the unit, so always use cable ties!

3.3.5 2.5 Skin sensor

Not applicable for this device.





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3.3.6 2.6 Power supply units and switching power supplies

- Unplug the connectors.
- Loosen the screws.
- Replace the power supply unit

The assembly is the same process in reverse order.

- Unplug the connectors.
- Undo the screws.
- Replace the power supply unit

The assembly is the same process in reverse order.





3.3.7 2.7 Drive motors



- Unplug the connectors.

- Undo the cable ties
- Unscrew the nuts

The assembly is the same process in reverse order.

Check the play and security of the drive motors on the mounting plate.



3.3.8 2.8 Solenoid valve

Only in units without internal air/water cooling!

Before the solenoid valve can be replaced, the front panel and fan box must be removed, see assembly instructions, chapter 5.1.



- Unscrew the hose clip
- Remove the hose
- Unplug the connectors.
- Undo the screws on the mounting plate
- Replace the solenoid valve

The assembly is the same process in reverse order.

3.3.9 2.9 Pump/frequency converter unit

The steps for removing and assembling the unit are described in the assembly instructions in chapters 5.4 and 6.3.



2

Replacing the frequency converter

- Remove the cable
- Undo the screws on the mounting plate
- Remove the mounting plate with the frequency converter



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Replacing the pump

- Remove the cable
- Undo the screws on the mounting plate
- Remove the mounting place with the pump

- 3.3.10 2.10 Limit switches for the front and rear panel
- See chapter 3.10 Switches/sliding switches/safety switches, 60.

3.3.11 2.11 Solenoid switches

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The solenoid switches are located under the tank and head end.

- Loosen the screws.
- Insert new solenoid switches and screw firmly in place (only in units without internal air/water cooling).
- Check that they are positioned and fitted correctly
- Check the switching states

3.3.12 2.12 Heating element

Replacing the heating element

Before the heating element can be replaced,

- the water must be drained from the tank,
- and at least half of the rubber cover must be folded back or the entire component can be removed.

More detailed information can be found in the assembly instructions.

- Remove the cable lugs
- Unplug the plug connectors
- Remove the temperature sensor



- Hold the heating element inside the tank and rotate it gently from outside
- Replace the heating element

The assembly is the same process in reverse order.







3.3.13 2.13 Audio

After the front panel to the SPA COMPLETE has been removed:

- Undo the screws for the respective speaker on the back of the front panel.
- Replace the speaker.

The assembly is the same process in reverse order.

Replacing the SD cards

- Unscrew the cover and remove.



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Insert the SD card with the rear side facing forward.
There are two slots: SD music card and SD voice guide card.



- The assembly is the same process in reverse order.
- Fit the cover and close.
- Tighten the screw.

3.4.1	AF compressor Does not apply to this unit.
3.4.2	AF valves / Aroma Does not apply to this unit.
3.4.3	AF pumps Does not apply to this unit.
3.4.4	AF aroma hoses Does not apply to this unit.
3.4.5	Aqua Fresh liquid Does not apply to this unit.
3.4.6	Aroma liquid Does not apply to this unit.

3.4 Aqua Fresh

Does not apply to this unit.

3.5 Air conditioning

3.5.1	Condensate pump
4.1	Does not apply to this unit.
3.5.2	Floating switch
4.2	Does not apply to this unit.
3.5.3	Air conditioning unit
4.3	Does not apply to this unit.
3.5.4	Heating element
4.4	Does not apply to this unit.

3.6 Acrylic

3.6.1	Acrylic bed
5.1	Does not apply to this unit.
3.6.2	Acrylic panel canopy/side/front doors
5.2	Does not apply to this unit.
3.6.3	Acrylic panel intermediate panel
5.3	Does not apply to this unit.
3.6.4	Acrylic panel shoulder tanning unit
5.4	Does not apply to this unit.
3.6.5	Headrest
5.5	Does not apply to this unit.

Does not apply to this unit.

3.6.1 5.1 Acrylic bed panel

Does not apply to this unit.

3.6.2	5.2 Acrylic bed:
	Rear door / sides / front doors

Does not apply to this unit.

3.6.3	5.3 Acrylic bed:
	Intermediate panel

Does not apply to this unit.

3.6.4	5.4 Acrylic bed:
	Shoulder tanning unit

Does not apply to this unit.

3.6.5 5.5 Headrest/neck support

Before the neck support can be replaced, the cladding and rubber cover must be removed; see assembly instructions, chapter 'Cladding and frame' and 'Removing tank'.

- Loosen the screws.
- Replace the neck support.

The assembly is the same process in reverse order.





3.7 Electronic ballasts, ignition units

3.7.1	Conventional ballast
6.1	Does not apply to this unit.
3.7.2 6.2	Electrical ballast
3.7.3	Ignition unit
6.3	Does not apply to this unit.

Does not apply to this unit.

3.7.1 6.1 Conventional ballast

Does not apply to this unit.

3.7.2 6.2 Electrical ballast

Does not apply to this unit.

3.7.3 6.3 Ignition unit

Does not apply to this unit.

3.8 Exhaust air/ventilation

3.8.1	Exhaust flap spring
7.1	Does not apply to this unit.
3.8.2 7.2	Exhaust air hose
3.8.3	Internal air hoses
7.3	Does not apply to this unit.
3.8.4	Bellows/top to bottom
7.4	Does not apply to this unit.
3.8.5	EPP air ducts
7.5	Does not apply to this unit.
3.8.6	EPP control boxes
7.6	Does not apply to this unit.
3.8.7 7.7	Fan
3.8.8	Servo motors
7.8	Does not apply to this unit.
3.8.9 7.9	Air filter

3.8.1 7.1 Exhaust flap spring

Does not apply to this unit.

3.8.2 7.2 Exhaust air hose

The exhaust air hose is located in the internal air/water cooling unit. Removing the front and rear panel: see assembly instructions: 1028522-...

– If present, check for wear and damage.

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- Undo the screw on the hose clip.
- Remove the hose from the cooling unit.
- Remove the hose clip from the hose.



- Undo the screw on the hose clip.
- Remove the hose from the exhaust air pipe.
- Remove the hose clip from the hose.
- Replace the air hose.

The assembly is the same process in reverse order.

3.8.3 7.3 Internal air hoses

Does not apply to this unit.

3.8.4 7.4 Bellows/top to bottom

Does not apply to this unit.

3.8.5 7.5 EPP air ducts

Does not apply to this unit.

3.8.6 7.6 EPP control boxes

3.8.7 7.7 Fan



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The fan is located on the frequency converter.

 Check or replace components in accordance with the checklist # 1018814-...

Further information is available in the assembly instructions # 1028522- \ldots



NOTE! THE FAN'S DIRECTION OF OPERATION! Mount the fan in such a way that it is set up to rotate anticlockwise so that the air flows inwards towards the pump.

Replacing the fan:

- Remove the connector.
- Remove the screws.
- Replace the fan.

The assembly is the same process in reverse order.





Internal air/water cooling unit - Removing the cover

- Undo the screw on the hose clip.
- Remove the hoses.



- Undo the screws on the brackets.



- Loosen the screws.
- Remove the cover.



- Clean with a vacuum cleaner, compressed air or fin comb.
 - ✓ Order number for fin comb: 15720470-..



NOTE MAINTENANCE INTERVALS!

Observe the maintenance intervals for the fan and heat exchanger specified in the checklist # 1016789-....

After cleaning, reassemble in the reverse order.



Fan in front panel of SPA COMPLETE:

- Remove the screws.
- Remove the wire on the terminal.
- Remove the fan.

The assembly is the same process in reverse order.



NOTE THE FAN'S DIRECTION OF OPERATION!

Mount the fan in such a way that it is set up to rotate clockwise so that the air flows outwards.

Fan in the hood of the SPA COMPLETE

- Remove the screws.
- Remove the wire.

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The assembly is the same process in reverse order.



NOTE THE FAN'S DIRECTION OF OPERATION! Mount the fan in such a way that it is set up to rotate clockwise so that the air flows outwards.

3.8.8 7.8 Servo motors

Does not apply to this unit.

3.8.9 7.9 Air filters/air hose

- Check or replace components in accordance with the checklist # 1016789-...

Replacing the air filter

The filter is located in the fan box.

- Remove the filters.
- Clean the filter.
- Re-install the filter.

The assembly is the same process in reverse order.







Replacing the air hose

The air hose connects the pump and fan box.

- Undo one screw on the hose clip.
- Replace the air hose.

The assembly is the same process in reverse order.



3.9 Bearings, springs, shock absorbers



3.9.1	Springs
8.1	Does not apply to this unit.
3.9.2 8.2	Bearings/slide bearings
3.9.3	Rubber-metal buffer (lifting mechanism and fan)
8.3	Does not apply to this unit.
3.9.4	Cables and guide rollers
8.4	Does not apply to this unit.
3.9.5	Fall protection
8.5	Does not apply to this unit.
3.9.6	Lifting mechanism
8.6	Does not apply to this unit.
3.9.7	Gas pressure absorbers/oil dampers
8.7	Does not apply to this unit.
3.9.8	Transport castors
8.8	Does not apply to this unit.

3.9.1 8.1 Springs





- If present, check for wear and damage.
- Disassembling the nozzle trolley, see chapter 3.14.4.
- Replace the gear.

- Remove the axles.
- Replace the ball bearing.



- Remove the ball bearing.



Exchange guide bearing

- Loosen the nuts.

- Remove the bearing bracket at the foot end.





Remove the bearing bracket at the head end.

3.9.3 8.3 Rubber-metal buffer (lifting mechanism)

Does not apply to this unit.

3.9.4 8.4 Cables and guide rollers

Does not apply to this unit.

3.9.58.5 Fall protection

Does not apply to this unit.

3.9.6 8.6 Lifting mechanism

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3.9.7 8.7 Gas pressure absorbers/oil dampers

Both gas pressure absorbers are located in the hood to the SPA COMPLETE.

– If present, check for wear and damage.

- Use a screwdriver to lift the safety ball head.
- Remove the gas pressure absorber.



1

2

- Insert the new absorber.



3.10.1	Lamps / LP / HP
9.1	Does not apply to this unit.
3.10.2	Filter panels
9.2	Does not apply to this unit.
3.10.3	Reflectors
9.3	Does not apply to this unit.
3.10.4	Starter
9.4	Does not apply to this unit.
3.10.5	Chip cards
9.5	Does not apply to this unit.
3.10.6	Lamp sockets
9.6	Does not apply to this unit.
3.10.7 9.7	LED

3.10 UV components

3.10.1 9.1 Lamps / LP / HP

Does not apply to this unit.

3.10.2 9.2 Filter panels

Does not apply to this unit.

3.10.3 9.3 Reflectors

Does not apply to this unit.

3.10.4 9.4 Starter

Does not apply to this unit.

3.10.5 9.5 Chip cards

Does not apply to this unit.

3.10.6 9.6 Lamp sockets

3.10.7 9.7 LED Light Show

LED panels are located in the hood to the SPA COMPLETE. There are four panels, which can be replaced separately.

- Pull out the plug.





- Undo the screws.
- Remove the panel.

Insert the new panel: Install in reverse order.

3.11 Safety switch/locks

3.11.1 10.1.	Sensors (temperature, pressure, UV, etc.)
3.11.2 10.2	Temperature limiter
3.11.3 10.3	Switches/sliding switches/safety switches
3.11.4 10.4	Open/close mechanism Does not apply to this unit.

3.11.1 10.1. Sensors (temperature, pressure, UV, etc.)

Check the temperature sensor for damage.

3.11.2 10.2 Temperature limiter

Check for damage.

_

Replacing the thermal fuse

Pull the thermal fuse out of the immersion pocket

The thermal fuse switches off the circuit as soon as the maximum permitted operating temperature is exceeded. The thermal fuse is irreversible and therefore has to be replaced.



NOTE!

Note the exact installation position of the thermal fuse. The temperature limiter and thermal fuse are inside an immersion pocket.

Reset button

- Only press the reset button if the thermal fuse has been triggered
- Use a screwdriver to press the reset button







3.11.3 3.10 Switches/sliding switches/safety switches

Safety switch

There are two safety switches in the unit; one behind the front panel and one behind the rear panel

- If present, check for wear and damage.

3.11.4 10.4 Open/close mechanism

Does not apply to this unit.

3.12 Option: Vibra Shape

Does not apply to this unit.

3.13 Control

3.13.1	Handles/retaining cables
11.1.	Does not apply to this unit.
3.13.2 11.2	Control films/switching mat

3.13.1 11.1 Handles/retaining cables

Does not apply to this unit.

3.13.2 11.2 Control films/switching mats

- If present, check for wear and damage.
- Remove the protective film

Make sure that the adhesive surface is clean and dust-free.





3.14 Mechanical components

3.14.1 12.1	Seats Does not apply to this unit.
3.14.2 12.2	Plastic panels
3.14.3 12.3	Contact guard Does not apply to this unit.
3.14.4 12.4	Nozzle trolley

3.14.1 12.1 Seats

Does not apply to this unit.

3.14.2 Plastic panels

The steps for removing and assembling the panels are described in the assembly instructions in chapters 5.1 and 6.12.

3.14.3 12.3 Contact guard

Does not apply to this unit.

3.14.4 12.4 Nozzle trolley

Installing and removing the nozzle trolley

- Loosen the screws.
- Remove the neck support.



- Detach the ventilation hose.





Detach the magnetic arms. _

Undo the screws in the elongated holes on the metal plate in the mount-_ ing plate.

Release the tension rollers.

Unscrew the tension rollers on the guide track. _

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- Unhook the square tubes
- The nozzle trolley and square tube can be lifted out of the unit.



SW 10









Toothed belt

- Place the toothed belt into the belt tensioner.
- Tighten the screws.



- Insert the toothed belt with the belt tensioner into the unit.



- Tighten the toothed belt in the belt tensioner.



NOTE!

The tension of the toothed belt must be checked with a spring balance; the tension must be between 35 Nm and 40 Nm.

Inserting the nozzle trolley

- Insert the square tube.

Correct:

1

Incorrect:



The square tubes must fit tightly without any clearance. Please ensure the square tubes fit correctly!



- Securing the magnetic arms



NOTE!

The magnet holders must not be below the magnetic switches.

After installing the nozzle trolley, the magnetic arm must be readjusted using the MAN card. The nozzles are not installed until after this has taken place.

Position of the nozzle trolley

The nozzle trolley must be equidistant from the two longer sides.

Adjust the distances using the elongated holes on the neck support.





2

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Replacing the hoses



NOTE! The hoses are marked. The hose's marking must be pointing upwards.

- Unscrew the hose clips on the hoses.
- Remove and dispose of the old hoses.



- Apply lubricant to the new hose and thread

- Secure the hose with the hose clip and screw.





Replacing the hoses on the nozzles

- Unscrew the hose clips on the hoses.
- Remove and dispose of the old hoses.
- Apply lubricant to the new hose and thread.
- Secure the hose with the hose clip and screw.

The assembly is the same process in reverse order.



3.15	Tank	

3.15.1 13.1	Seals
3.15.2 13.2	Cooling coil



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The water must be drained before conducting any work on the tank.

- 3.15.1 13.1 Seals
- If present, check for wear and damage.

Seals of various sizes.







– If present, check for wear and damage.



- Undo the union nuts.



- Remove the connection.



- Remove the cooling coil from the holders.

3.16 14.1 MAN card

3.16	MAN card
14.1	

After installing the nozzle trolley, the magnetic arm must be readjusted using the MAN card.

- Remove the pump
- Fold the rubber cover halfway back
- Start the unit
- The nozzle trolley moves into position
- Acknowledge error message 531 (i.e. press buttons 1/5 at the same time)
- The reference sequence starts
- Insert the MAN card into the operating unit

The sequence can be programmed using the following buttons:



- 1. Right nozzle trolley moves outwards
- 2. Plus button: Nozzle trolleys move to the head end; Minus button: Nozzle trolley move down to the foot end
- 3. Right nozzle trolley moves inwards
- 4. Left nozzle trolley moves inwards
- 5. Left nozzle trolley moves outwards
- Press the plus/minus button (pos. 2)
 - ✓ The nozzle trolley moves until the buttons are released
- Adjust the magnetic arm to 5 mm (distance to the outer edge)
- The reference sequence starts
 - \checkmark to return to the original position.



3.17 Warning sticker



Further information is available in the operating instructions WAVE_TOUCH # 1028521-..

- 1a: Serial no. plate
- 1b: Type plate
- 2: ESD-sensitive component sticker (a) and 'Voltage present' warning sticker (b)(1020191-..)
- 3: Warning label (1020230-..)
- 4: Warning label pump 1020231-..
- 5: Not applicable for this device.
- 6: Not applicable for this device.
- 7: NFC card note sticker (1023746-..)



Further information is available in the operating instructions SPA COMPLETE # 1028521-..

- 1a: Serial no. plate
- 1b: Type plate

ESD-sensitive components (85662-..) This sticker is mounted in several places in the unit.



4 Acceptance test

After installing the device, an acceptance test must be carried out before handover and start-up. The result of the individual tests must be noted in the test report #1014113-...The report #1014113-... is attached in the Documentation folder.

Then send the signed test report to the Technical Service:

JK Products & Services 411 West Washington Avenue Suite B Jonesboro, Arkansas Fax: 870-935-9046 E-mail: support@jkamerica.com

NOTICE

The device may only be handed over and used if all test steps are completed successfully during the acceptance test.

The examiner must have the necessary technical knowledge for the performance of an acceptance test.

The examiner must be sure before starting the test of the perfect functioning of the test and measuring equipment used.



4.1 Storing the device

4.1.1 Decommissioning

The device must be disconnected from the power supply in order to temporarily or permanently decommission it.

You must abide by the legal disposal requirements when permanently decommissioning the device.

4.1.2 Storage

Store the devices in a dry location with a stable temperature. Once the device has cooled off, pack it in plastic wrapping to protect it against scratches.

- Storage temperature: Between -15 °C (5 ° F) and +60 °C (140 ° F) (the well, pump and the hoses must not contain any water)
- Air pressure: between 794 hPa and 1060 hPa
- Relative humidity: between 30 % and 75 %

4.1.3 Disposal

Environmental regulations – disposal of batteries

Batteries contain heavy metal compounds.

Dispose batteries according to the national waste disposal laws and in accordance with the municipal waste regulations.

Operating water disposal

The device is filled with normal tap water without additives. The water can be drained off into the public sewage system after it has been used.

Disposal of consumable supplies

Dispose of consumable supplies and their contents according to the national waste disposal laws and in accordance with the municipal waste regulations.

Packaging

All packaging consists of 100 % recyclable materials. Packaging brought into circulation by the JK Corporate Group that is no longer required can be returned to the JK Corporate Group. Your partner agency or dealer will be happy to advise.

Disposal of old units

The device has been manufactured using recyclable materials. The JK Products & Services will provide you with information on the content or potential hazards of the materials used.

Disposing of consumables

Dispose of any consumables in accordance with national waste disposal legislation and in accordance with municipal waste regulations.


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