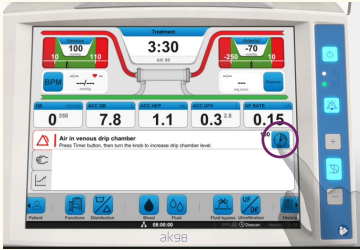



RESOURCE GUIDE | TROUBLESHOOTING

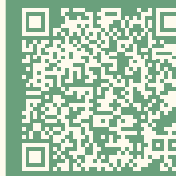
Code	Machine Screen Guidance	Resolution
100	<p>Air in Venous Drip Chamber Press Timer button, then turn the knob to increase drip chamber level.</p> 	<ul style="list-style-type: none"> > If level has dropped or foam is present in the chamber, touch the clock symbol on the screen. > Attempt to resolve by SLOWLY increasing the level in the venous chamber using the level adjustment knob, ensure that the blood pump is moving. <ol style="list-style-type: none"> 1. Press the timer button that appears on the alert tab to turn on the blood pump. 2. At this point, the blood pump will rotate slowly at 50 mL/min and the speed cannot be changed. > Simultaneously rotate the chamber level adjustment knob counter-clockwise to raise the blood level. > Be sure to watch for the message "Air no longer detected" and confirm on the screen if appropriate. > May also require multiple attempts depending on the amount of air present. <p>Note: May also indicate clotting in the venous chamber. Be sure to visually inspect the chamber for signs of clotting.</p>
101	<p>Blood Detected in Dialysate Path To start blood pump for {0} sec. to rinse detector, press Timer button.</p>	<ul style="list-style-type: none"> > Indicates that a blood leak may have occurred during treatment. > Follow your facility specific policy when a blood leak alarm occurs during patient treatment.
102	<p>Blood is Detected During Functional Check Blood in priming detector. Functional check is stopped.</p>	<ul style="list-style-type: none"> > Make sure that the patient is not connected to the blood lines. > Clean the priming detector lens with isopropyl alcohol and allow to dry.
107	<p>Blood Pump is Stopped too Long</p>	<ul style="list-style-type: none"> > Prompts the user to restart the blood pump when it has not been restarted in 180 seconds. > Manually start the blood pump using the blood pump button to the right of the screen. > If another alarm has caused the stoppage, resolve the primary alarm so the blood pump can start. > This may require going back to messaging under the flashing hand.



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Code	Machine Screen Guidance	Resolution
108	<p>Dialysate Path Obstruction</p> <p>Too high blood circuit pressure. Check circuit, start blood pump.</p>	<ul style="list-style-type: none"> > Press the Fluid bypass button. > If the alarm disappears, the obstruction is external (e.g., located in the blood lines, the dialysate lines or the dialyzer). Check for obstructions in the blood lines, the dialysate lines or the dialyzer and remove them if you find any. > If the alarm does not disappear, the obstruction is internal. Call an authorized technician.
109	<p>High Arterial Pressure</p>	<ul style="list-style-type: none"> > Stop the blood pump. The arterial and venous pressure alarm limits are automatically widened. > Consider needle dislodgement, check connection of arterial needle with arterial line. > Correct the cause of the alarm and restart the blood pump. Adjust blood flow rate per your procedure. > Check the transducer protector for potential strikethrough; if blood has contacted the protector membrane, replace with a sterile transducer protector if necessary. > Ensure there are no kinks or clamps closed on the blood tubing. <p> Note: This may be a secondary alarm, resulting from a stop of the blood pump.</p>
114	<p>High Venous Pressure</p>	<ul style="list-style-type: none"> > Stop the blood pump. The arterial and venous pressure alarm limits are automatically widened. > Consider access complications, check that there are no kinks or clamps on the venous blood line between the needle and the drip chamber, and check the position of the venous needle. > Consider lowering the pump speed while the pump is stopped using the blood pump down button (-) to the right of the screen. > Correct the cause of the alarm and restart the blood pump. > Check the transducer protector for potential strikethrough; if blood has contacted the protector membrane, replace with a sterile transducer protector if necessary. > May also indicate clotting in the venous chamber.
115	<p>Low Arterial Pressure</p>	<ul style="list-style-type: none"> > Stop the blood pump. The arterial and venous pressure alarm limits are automatically widened. > Check the patient's blood pressure. > Check the position of the arterial needle. > Consider lowering the pump speed while the pump is stopped using the blood pump down button (-) to the right of the screen. > Correct the cause of the alarm and restart the blood pump. > May indicate a mechanical obstruction - access patency issues, kinks, or poor flow within vascular access related to the set pump speed. > Check the transducers for potential strikethrough.



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If the issue persists after attempting to resolve, please contact our 24/7 Technical Support at **1-800-525-2623 Option #2**. Due to call volumes, you may need to leave a message in which someone will contact you within 24 hours or less. A Technical Service Representative will get back to you shortly.



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Code	Machine Screen Guidance	Resolution
120	<p>Low Venous Pressure Check the venous needle position or catheter lumen.</p>	<ul style="list-style-type: none"> > Stop the blood pump. The arterial and venous pressure alarm limits are automatically widened. > Check that the venous blood line is properly attached to the dialyzer. > Check that the venous needle is in proper position. > If this alarm occurs during functional check, restart the machine using the On/Off button and the machine will perform a new functional check. > Check that there are no clots before or in the dialyzer. > Adjust the blood flow rate and restart the blood pump. > Check the transducers for potential strikethrough. > Consider needle dislodgement, potential clotting before the dialyzer, or a wet transducer protector.
123	<p>Technical Error The machine has been automatically restarted. To continue press Confirm.</p>	<ul style="list-style-type: none"> > Press the Confirm key on the screen to continue treatment. > If the alarm recurs, contact Technical Services and provide the full error code. AK 98 is continuously supervising the computers used to run treatment. If the system identifies a problem, it will generate an automatic restart to restore a fully operational system.
124	<p>Technical Error Contact technical service.</p>	<ul style="list-style-type: none"> > If this alarm occurs during functional check, restart the machine using the On/Off button and the machine will perform a new functional check. > Ensure the dialysate line connector nuts are tight. > Ensure the dialysate connectors are properly seated on their dialysate ports. > Ensure there are no parts of the blood tubing strung on the machine before the blood pump button is flashing. > Verify that the acid concentrate connector and BiCart arms are free of build-up. > Power the machine on. If the alarm recurs, consider contacting Technical Services. > Proceed to the Functions key, Service, and then to the Error List tab at the top of the screen. Note the error code on the Error List (most recent at the top). <p> Note: If the Technical Error cannot be cleared during treatment, you may be able to complete a rinse back. Follow your procedures.</p>




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Code	Machine Screen Guidance	Resolution
203	<p>Heparin Pump is Overloaded Check heparin line for obstruction.</p>	<ul style="list-style-type: none"> > May occur during machine start up if the heparin pump is too close to the housing; pull piston out to the right. > May be triggered by a closed clamp on the heparin infusion line or the heparin syringe is empty. > Consider setting the heparin flow rate to 0 mL if the syringe is empty. > If alarm recurs, consider removing the syringe from the pump and pulling the piston out to the right.
208	<p>Incorrect Dialysate Composition Check set values and connected concentrates.</p>	<ul style="list-style-type: none"> > Ensure the acid jug container is filled or that the wall connection is secure and that the right concentrate is connected to the machine. > Check for air in the concentrate line. Verify that the red concentrate connector is free from build-up and that the blue O-rings are intact. > If needed, remove BiCart cartridge and close the latches for at least 2 seconds. If clumping is present in the cartridge shake to eliminate. > Press the Fluid key and go to the Cond tab. If the " Actual" conductivity number is not fluctuating after a few minutes, send the machine into a Rinse. Select Disinfection key, then select Rinse tab, then select Rinse. When completed – reconnect the concentrates and monitor the conductivity. > If air is present in the acid line, wait – the air may need to be cleared from the acid line by the machine. The machine will not airlock. <p> Note: Pressure may build up in the BiCart cartridge. Lift the top latch to release the pressure, reattach.</p>
211	<p>Conductivity Out of Limits When the dialysis fluid conductivity is outside the set alarm limit.</p>	<ul style="list-style-type: none"> > Ensure the concentrate containers/BiCart cartridge are correctly connected, filled and not empty. > Ensure there is no kinking in the concentrate line and that wands are not sucking air. > Ensure the BiCart cartridge has primed if the cartridge was dry when added to the machine – if not, consider removing, shaking to eliminate clumping, and reattaching to the arms. > Check acid connector and BiCart arms for buildup and/or leaking.
566	<p>Incorrect Conductivity When the conductivity is not correct during a functional check.</p>	<ul style="list-style-type: none"> > Press fluid button and select Cond tab and see if the concentrate selected for the treatment is the same as the acid jug connected to the machine. > Wait until set conductivity is achieved. <p> Note: When priming a BiCart cartridge during therapy, the BiCart arms must be closed for at least 2 seconds to initiate the priming process.</p>

RESOURCE GUIDE | TROUBLESHOOTING

Code	Machine Screen Guidance	Resolution
607	<p>Wrong Disinfectant Check disinfectant. To continue press Confirm.</p>	<p> Note: Always follow the manufacturer’s instructions when reconstituting citric acid.</p> <ul style="list-style-type: none"> > Ensure the correct type and concentration of disinfectant is connected to the machine – citric acid or bleach. > Verify that the citric acid wand is below the level of the fluid in the jug and that the jug is not empty. > If powder is found at the bottom of the citric acid jug, remove the wand and mix the jug. > Ensure BiCart holder arms are clean and closed fully. > Ensure acid and bicarbonate concentrate connectors are clean and fully inserted in their ports. > Try using a different citric acid jug from a machine that did not alarm during heat citric disinfection. > Consider that crystallization of the citric acid wand may have occurred, and the line may have to be purged with RO water. > If unable to clear the alarm, perform a heat disinfection and contact Technical Services.
538 - 543	<p>Dialysate Line Sensor Test Remove and attach the dialysate lines from the dialysate ports to restart the test.</p>	<ul style="list-style-type: none"> > May occur if five disinfection programs have been run in a row, without running function checks in between. > Remove the dialysate lines from the dialysate ports on the machine. > Ensure the lines are resealed properly. > Once resealed, the test will continue and message on screen will clear shortly.
571	<p>Leakage Test Failed Check dialysate lines. To continue press Confirm.</p>	<ul style="list-style-type: none"> > Appears when the dialysate lines are not properly attached to the dialysate ports. > Check the dialysate lines are properly attached to the dialysate ports. > Confirm the attention.

RESOURCE GUIDE | HELPFUL TIPS

Air Detector Activation

To avoid unnecessary air detector alarms during set up, wait to activate the air detector until all air has been removed from the circuit.

Note: The air detector is automatically activated when **Connect patient** is selected.

The “Flashing” Attention Hand

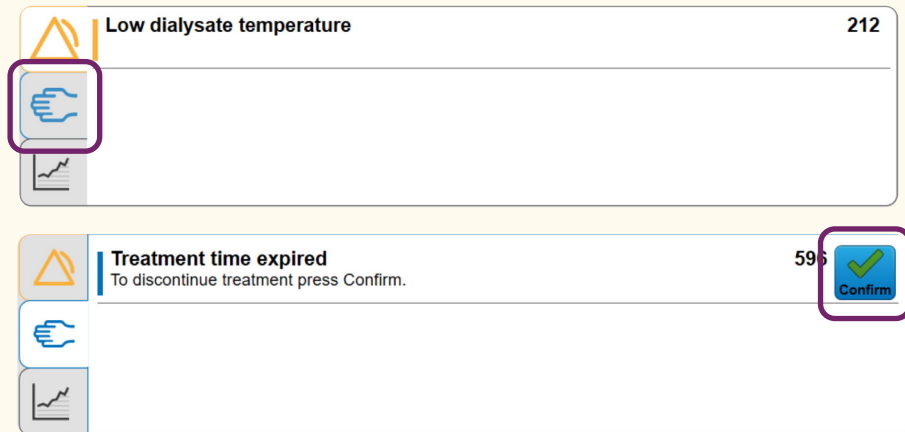
Alarms have higher priority than attention messages on the screen.

If an alarm occurs and cannot be resolved and you choose to return the blood to the patient, the “Confirm treatment time expired” message will appear after you set the treatment time to zero.

The **flashing attention hand** will appear. Press the **flashing attention hand** and follow the on-screen prompts.

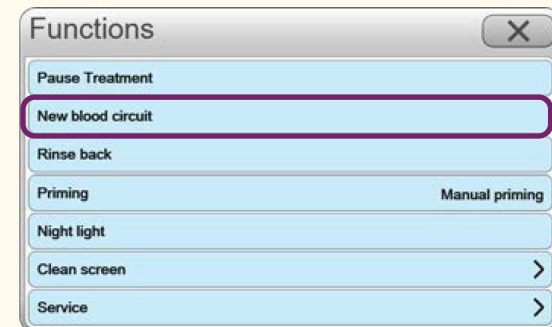
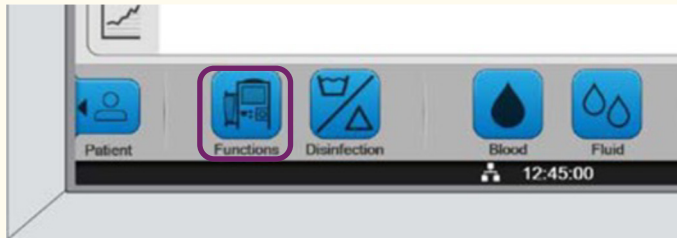
Once the **flashing attention hand** is selected, the “Confirm treatment time expired” message will be accessible.

Note: It may be necessary to repeat this sequence to complete the treatment discontinuation procedure.



New Blood Circuit

In the event the dialyzer and bloodlines need to be replaced, go to the **Functions** menu and select **New blood circuit**.



Follow the instructions on the screen. It is not necessary to end the treatment and start again to replace the circuit. Once the procedure is complete, the treatment will continue from when it was stopped.

It is important to follow the instructions provided on the operator's panel in the sequence listed. Steps performed out of sequence may delay the option for priming and return to treatment mode. Once started, the new blood circuit procedure must be completed.

Change Blood Flow

To increase/decrease blood flow faster than repeated single pushes, hold down the + or - button to the right of the operator's panel.



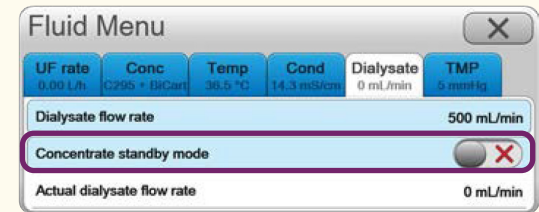
RESOURCE GUIDE | HELPFUL TIPS

Reactivate Concentrate Standby Mode (CSBM)

CSBM will automatically deactivate after 1 hour.

To reactivate CSBM press the **Fluid** key followed by the **Dialysate** tab and activate CSBM.

Repeat every hour as needed.

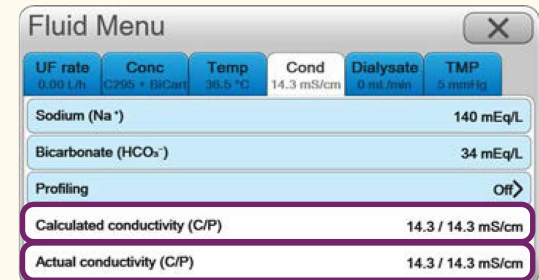


Conductivity Actual and Calculated - C/P Values

The **actual value** is the current value seen on the operator's panel.

The **calculated value** is based on the type of concentrate selected and the set values for sodium and bicarbonate.

Note: If the two values do not match, the dialysate will automatically bypass the dialyzer. Follow your procedure for allowable limits.

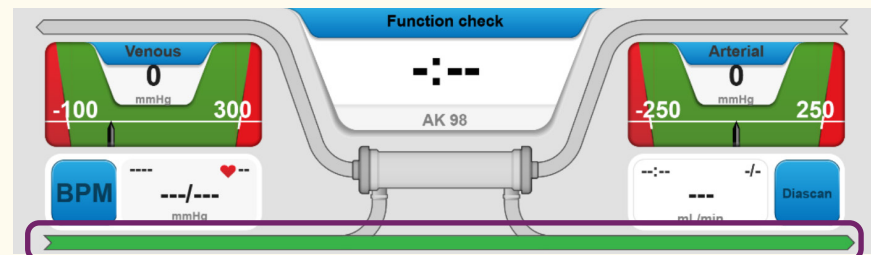


Connect Patient after CSBM

Connect patient mode can only be entered if the correct conductivity has been achieved (dialysate line is green).

If **Connect patient** is pressed immediately following CSBM deactivation, the message *"Incorrect dialysate composition, check dialysate. To close message, press Confirm"* may appear.

Wait to press **Connect patient** until dialysate line on the operator's panel is green.

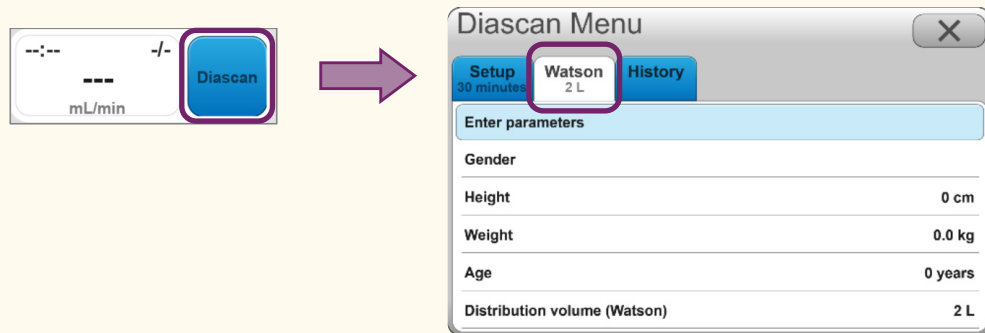


RESOURCE GUIDE | HELPFUL TIPS

Diascan

The Diascan function can be programmed via the presets to be activated automatically.

It is also possible to enter the patient parameters (Watson) after treatment has started so that the Kt/V calculation can be displayed.



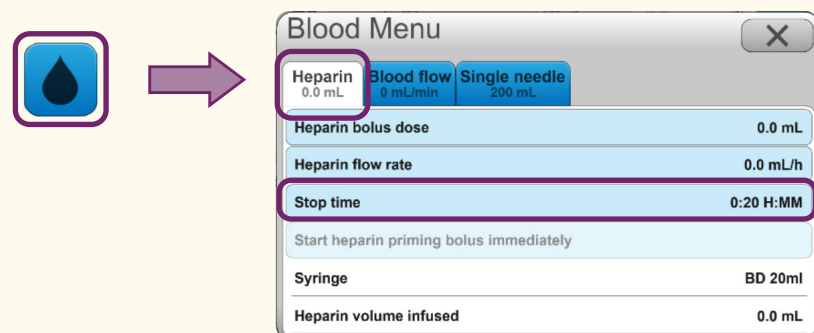
Heparin

Tips to support accurate heparin delivery:

- > Ensure the syringe used is the same as the brand and size programmed into the **AK 98** presets, or the heparin delivery may not be accurate.
- > Confirm that heparin line is fully primed.

Note: Prime volume is 0.6mL.

To view the syringe brand and size, go to **Blood Menu** and select **Heparin**.

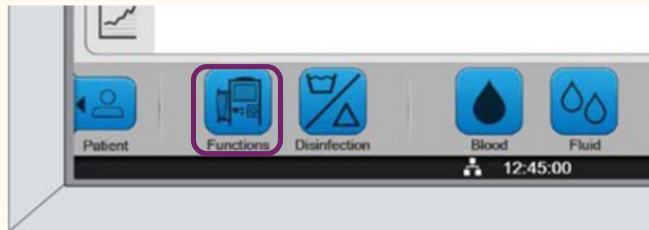


Isolated UF (Ultrafiltration)

- > To stop UF before the set isolated UF goals are met, deactivate **Isolated UF** and change the time and volume to values that have already been achieved (i.e., **Isolated UF acc values**).
 - > If only isolated UF is being performed, the remaining treatment time must also be set to zero to get the “*Treatment time expired*” message.
 - > If “*Value out of range. The value can’t be higher than 0.00 L*” appears, first set the **Total UF** and then the **Isolated UF** goal.
- Note:** The dialysate flow will not stop, as **AK 98** needs dialysate to measure ultrafiltration. It is not possible nor advisable to decrease dialysate flow rate or set it to zero.

Pause Treatment

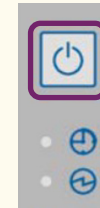
If a temporary disconnection of the patient from the **AK 98** machine is needed, go to the **Functions** menu and select **Pause Treatment**.



Follow the instructions on the screen. The treatment will be paused during the disconnection. When treatment is resumed, the treatment will continue from when it was paused.

Restart

If restarting using the **On/Off** button located on the operator’s panel, to the right of the screen, ensure the dialysate lines are properly connected to the color-coded standby ports on the machine before restarting the **AK 98**. This will avoid unnecessary error messages.



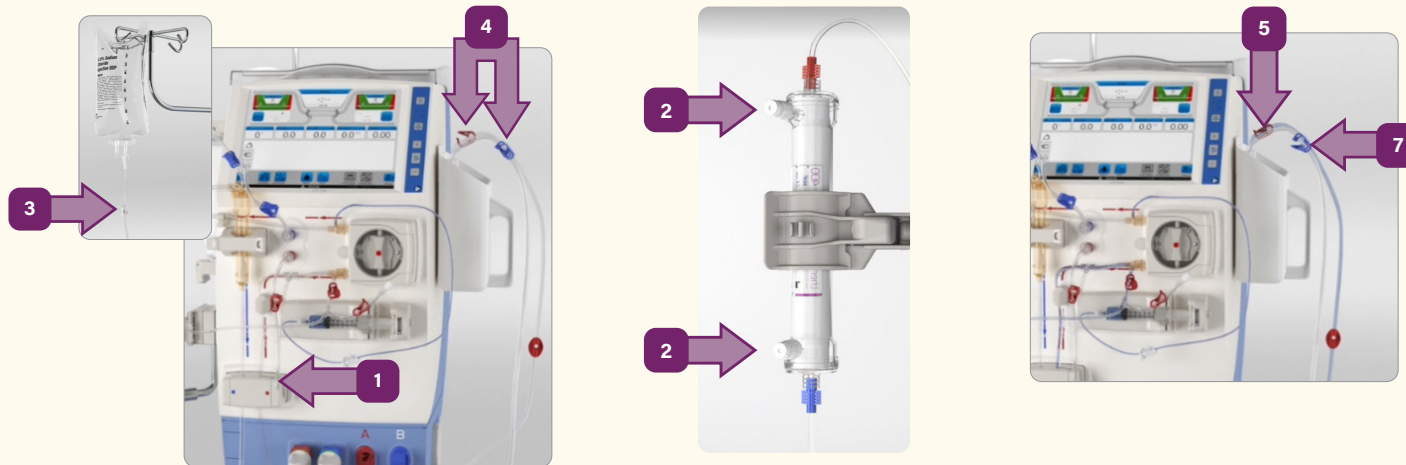
Saline Loss

The arterial patient line is primed by gravity and is not counted in the preset prime volume.

Example: If the priming volume is set to 300ml, the remaining saline volume in a 1-liter saline bag after the complete prime procedure would be less than 700ml.

Tips to minimize saline loss during set up:

1. Verify the venous line is properly inserted in the venous clamp.
2. Ensure the caps are secured on the dialyzer dialysate ports.
3. Clamp the infusion line before spiking the saline bag.
4. Ensure the arterial bloodline clamp is open and venous clamp is closed when gravity priming of arterial line.
5. Clamp the arterial line as soon as saline has reached the prime bucket (some air may still be present).
6. Ensure priming via the blood pump occurs as soon as the arterial line is primed.
7. Unclamp the blue venous clamp before starting the blood pump.
8. Raise the venous chamber level during the initial prime cycle.
9. Connect arterial and venous lines for recirculation before selecting the **Recirculation** option.



If the issue persists after attempting to resolve, please contact our 24/7 Technical Support at **1-800-525-2623 Option #2**.

Due to call volumes, you may need to leave a message in which someone will contact you within 24 hours or less.

A Technical Service Representative will get back to you shortly.

For safe and proper use of **AK 98**, refer to the Operator's Manual.

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