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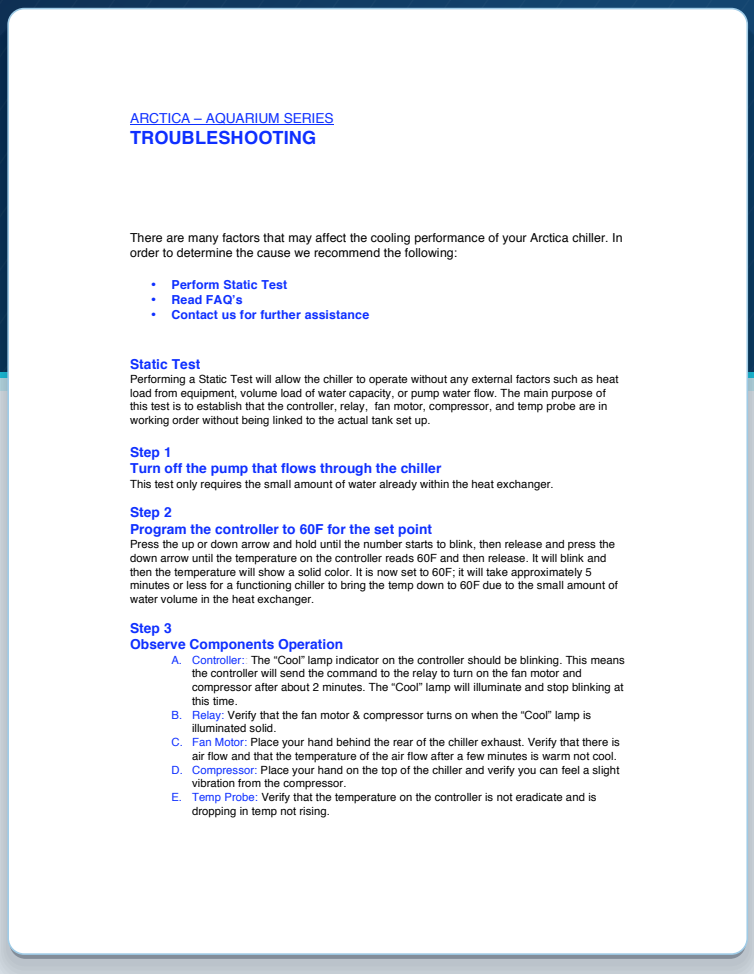
REPAIR GUIDE

JBJ ARCTICA

Troubleshooting Guide

Not cooling, odd noise or an error: start here

DBA / DBE / DBM | DA commercial



ARCTICA – AQUARIUM SERIES

TROUBLESHOOTING

There are many factors that may affect the cooling performance of your Arctica chiller. In order to determine the cause we recommend the following:

- **Perform Static Test**
- **Read FAQ's**
- **Contact us for further assistance**

Static Test

Performing a Static Test will allow the chiller to operate without any external factors such as heat load from equipment, volume load of water capacity, or pump water flow. The main purpose of this test is to establish that the controller, relay, fan motor, compressor, and temp probe are in working order without being linked to the actual tank set up.

Step 1

Turn off the pump that flows through the chiller

This test only requires the small amount of water already within the heat exchanger.

Step 2

Program the controller to 60F for the set point

Press the up or down arrow and hold until the number starts to blink, then release and press the down arrow until the temperature on the controller reads 60F and then release. It will blink and then the temperature will show a solid color. It is now set to 60F; it will take approximately 5 minutes or less for a functioning chiller to bring the temp down to 60F due to the small amount of water volume in the heat exchanger.

Step 3

Observe Components Operation

A. Controller: The "Cool" lamp indicator on the controller should be blinking. This means the controller will send the command to the relay to turn on the fan motor and compressor after about 2 minutes. The "Cool" lamp will illuminate and stop blinking at this time.
B. Relay: Verify that the fan motor & compressor turns on when the "Cool" lamp is illuminated solid.
C. Fan Motor: Place your hand behind the rear of the chiller exhaust. Verify that there is air flow and that the temperature of the air flow after a few minutes is warm not cool.
D. Compressor: Place your hand on the top of the chiller and verify you can feel a slight vibration from the compressor.
E. Temp Probe: Verify that the temperature on the controller is not eradicate and is dropping in temp not rising.

Original JBJ document inside, unchanged

Questions about this model?

Text us 916-800-COLD (2653)

Parts checker | **Size calculator**

Details by email: Jbjnanocubes@gmail.com

Chiller questions & help ›

3
original JBJ pages, unchanged

1 tap
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FAQ's :

Q: Why is there no digital display on the controller?

A: a. Make sure the power cord is plugged into a working electrical receptacle
b. The fuse may be blown; it is located at the rear of the chiller.

Q: What size fuse do I need to replace a blown fuse?

A: There are two types of fuses used for Aquarium Series Chillers

1. Chillers with a hardwired power cord and external black fuse cap
    a. DBA-075 – 10 Amp / 250 Volt Ceramic Fuse / Item No: DB-F2-10
    b. DBA-150 - 10 Amp / 250 Volt Ceramic Fuse / Item No: DB-F2-10
    c. DBE-200 - 15 Amp / 250 Volt Ceramic Fuse / Item No: DB-F2-15
    d. DBM-250 - 15 Amp / 250 Volt Ceramic Fuse / Item No: DB-F2-15

2. Chillers with a disconnect power cord which has an ON/OFF switch
    a. DBA-075 – 10 Amp / 250 Volt Glass Fuse / Item No: DB-F-10
    b. DBA-150 - 10 Amp / 250 Volt Glass Fuse / Item No: DB-F-10
    c. DBE-200 - 16 Amp / 250 Volt Glass Fuse / Item No: DB-F-16
    d. DBM-250 – 16 Amp / 250 Volt Glass Fuse / Item No: DB-F-16

Q: Why does my chiller take over an hour to drop the temperature?

A: Aquarium chillers are designed to gradually drop the water temperature, rapid temperature drops can adversely affect any living organism. You should be more concerned with the average cycle times of the chiller within a 24 hour period.

Example**:** A properly sized chiller should only cycle on 15-20 minutes an hour.
So in a 24 hour period the chiller would be running a total of 6-8 hours. It may be running for a 1.5 hours but it may stay off for 2-3 hours before the next cycle.

Q: What is the optimal flow rate for my chiller?

A:

a. DBA-075 (1/10 Hp) requires min/max of 240-960 gph
b. DBA-150 (1/5 Hp) requires min/max of 480/1320 gph
c. DBE-200 (1/4 Hp) requires min/max of 480-1920 gph
d. DBM-250 (1/3 Hp) requires min/max of 480-2400 gph

Q: What can I do to improve the efficiency of the chiller?

A: Regular maintenance is key for long term performance. Try these simple tips for tuning up your chiller:

a. Clean the front condenser fins to allow better airflow.
b. Increase the flow rate through the chiller. It is better to error on more flow than a slower flow rate to increase turnover of the warm water.
c. Back flush the chiller to prevent calcium build up on the heat exchanger will slows down the cooling performance.

Q: How do you Back Flush a chiller?

A: Over time, the titanium heat exchanger will accumulate calcium build up that will impede the cooling process. You may also have particulate matter and debris accumulating on the integrated temperature probe giving inaccurate readings. We recommend Back flushing the chiller every 6 months.

Step 1

Items needed:

a. 5 gallon bucket
b. 3 gallons fresh water
c. 1 gallon of household vinegar
d. Submersible pump
e. Vinly tubing

Step 2

Add 3 gallons of freshwater and 1 gallon of household vinegar into bucket

Step3

Connect vinly tubing to the submersible pump and other end into the “OUT” of the chiller
Connect vinly tubing to the “IN” of the chiller and place back into the 5 gallon bucket.

Step 4

Let the pump run through the chiller for 1 hour in the opposite direction. This will help clean the temperature probe as it is located on the “IN” of the chiller

Step 5

Turn off submersible pump after 1 hour, and discard liquid inside the bucket. Refill the bucket with 4 gallons of fresh water and run the submersible pump for another 30 minutes to remove any residual vinegar from the chiller.

Step 6

Reconnect chiller to original set up and re-program the set point back to your desired setting. Factory setting is 77F

Q: Why are the numbers on the temperature controller bouncing up and down?

A: You may need to back flush the chiller as there may be waste build up. You may have a malfunction with either the integrated temperature probe or digital controller.

Q: Where is the Best location for my chiller?

A: Keep chillers in an open area outside the stand for proper ventilation. The chiller requires at least 1 foot in the front and rear of the chiller for unobstructed air flow.

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CHILLERS · PARTS · SUPPORT

Keep your Arctica running cold.

Genuine JBJ parts, the chiller size calculator, and help by text or email.

Need parts?

Pick your chiller and see which fan, probe, controller, fuse or cord fits it.

Open parts checker

Size a chiller

Enter your tank size and temperatures. The calculator shows which HP fits.

Open size calculator

Text us

Send the model number or a photo of the label. 916-800-COLD (2653).

Text 916-800-COLD

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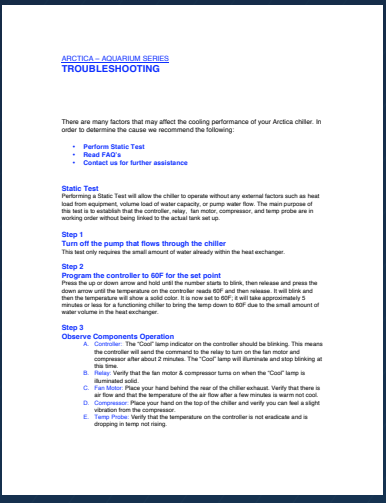
Text first for the fastest answer. Details by email: Jbjnanocubes@gmail.com



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