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CHILLERS · PARTS · SUPPORT

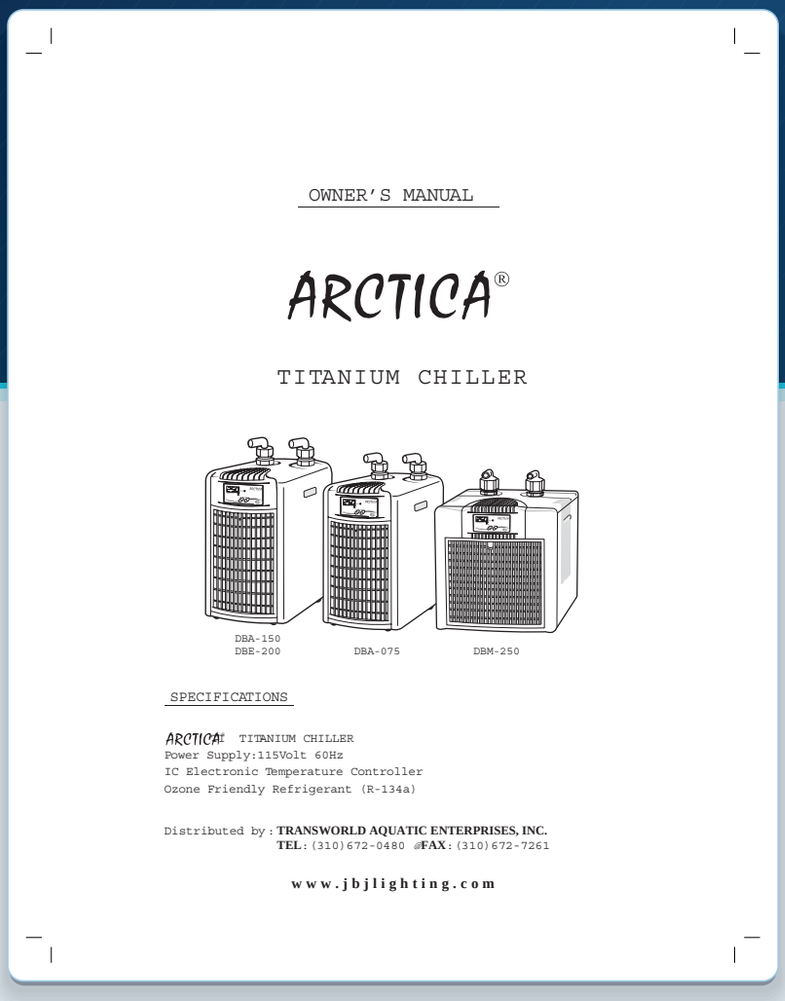
OWNER'S MANUAL

JBJ ARCTICA

Aquarium Series Chiller

1/10 - 1/3 HP titanium chillers

DBA-075 | DBA-150 | DBE-200 | DBM-250



OWNER'S MANUAL

ARCTICA®

TITANIUM CHILLER

DBA-150
DBE-200 DBA-075 DBM-250

SPECIFICATIONS

ARCTICA® TITANIUM CHILLER
Power Supply:115Volt 60Hz
IC Electronic Temperature Controller
Ozone Friendly Refrigerant (R-134a)

Distributed by : **TRANSWORLD AQUATIC ENTERPRISES, INC.**
TEL: (310)672-0480 **FAX**: (310)672-7261

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Questions about this model?

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Parts checker **Size calculator**

Details by email: Jbjnanocubes@gmail.com

Arctica 1/10-1/3 HP chillers ›

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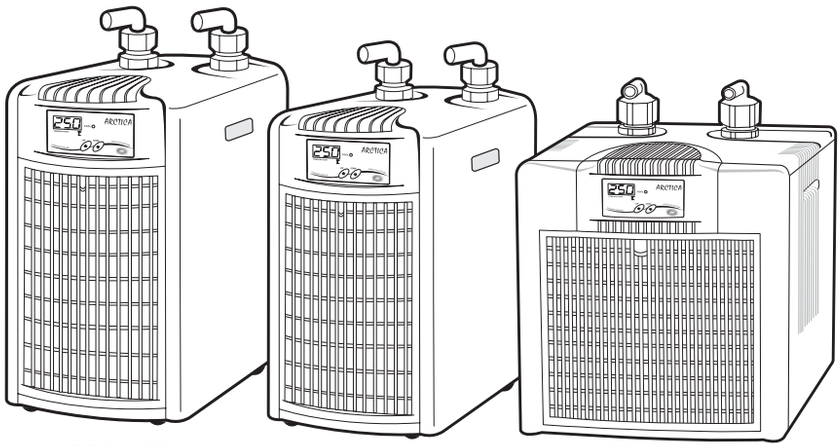
ARCTICA®

TITANIUM CHILLER



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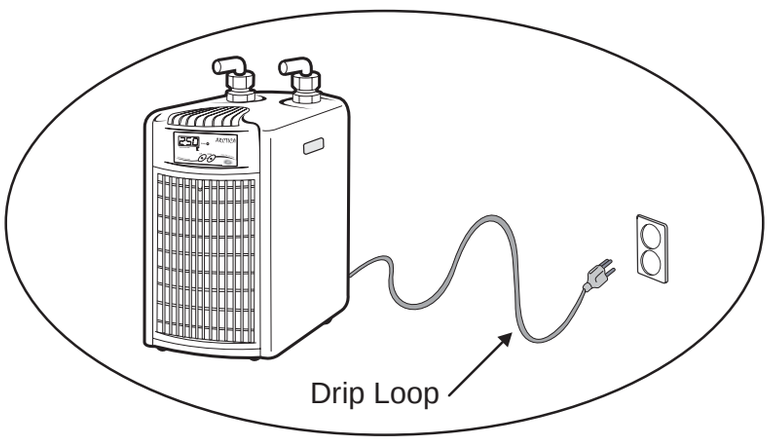
1. IMPORTANT SAFETY INSTRUCTIONS

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

a) READ AND FOLLOW ALL SAFETY INSTRUCTIONS

b) DANGER: To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself; return the appliance to an authorized service facility for service or discard the appliance:

1. If the appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately.
2. Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
3. Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
4. To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop", shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to a receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DON'T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for presence of water in the receptacle.



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c) Close supervision is necessary when any appliance is used by or near children.

d) To avoid injury, do not contact moving parts or hot parts such as heater, reflectors, lamp bulbs, and the like.

e) Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to to disconnect.

f) Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.

h) Make sure an appliance mounted on a tank is securely installed before operating it.

i) Read and observe all the important notices on the appliance.

j) If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

k) This appliance has a polarized plug (one blade is wider than the other). As a safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

l) Make sure the chiller is not allowed to overheat, chiller MUST have a minimum clearance of 1 foot before the intake of condenser and 1 foot behind the exhaust to evacuate heat.

m) Chiller should NOT be placed inside a cabinet stand. This will impede air flow and may reduce the efficiency of the chiller, and may cause permanent damage to appliance.

n) Always check water connections before operation for leaks.

CLEANING

It is important to keep this appliance clean. Always unplug the appliance before performing maintenance or cleaning of the exterior of this chiller. Wipe exposed surfaces carefully with a damp terry cloth to remove any dust or mineral deposits which may collect over time. Make sure all surfaces are dry before re-plugging into an electrical outlet.

SERVICING

In order to assure proper electrical connections and polarity, replacement parts and servicing should be performed by a qualified electrician.

OPERATION

Please carefully read the entire "Owner's Manual" for proper operation procedures before proceeding with turning on this appliance.

SAVE THESE INSTRUCTIONS

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1-1. Warning Icons

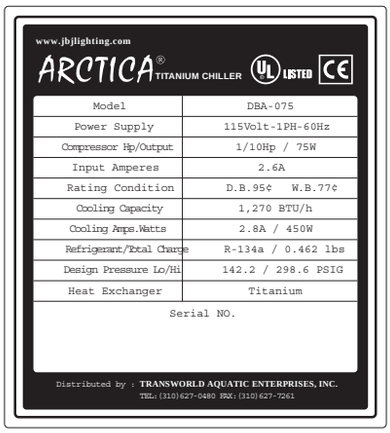
Warning Icons in this manual are boldfaced for emphasis.The signal words **DANGER**, **WARNING** and **CAUTION** are used to indicate hazard seriousness levels as follow:

DANGER - Immediate hazard which WILL result in severe injury or death.

WARNING - Hazard or unsafe practice which COULD result in severe injury or death

1-2. Data Label

The Chiller data lable contains identification information. If the data label is missing or damaged, contact your local distributor and request a replacement.



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ARCTICA® TITANIUM CHILLER UL LISTED CE

Model	DBA-075
Power Supply	115Volt-1PH-60Hz
Compressor Hp/Output	1/10Hp / 75W
Input Amperes	2.6A
Rating Condition	D.B.95¢ W.B.77¢
Cooling Capacity	1,270 BTU/h
Cooling Amps.Watts	2.8A / 450W
Refrigerant/Total Charge	R-134a / 0.462 lbs
Design Pressure Lo/Hi	142.2 / 298.6 PSIG
Heat Exchanger	Titanium

Serial NO.

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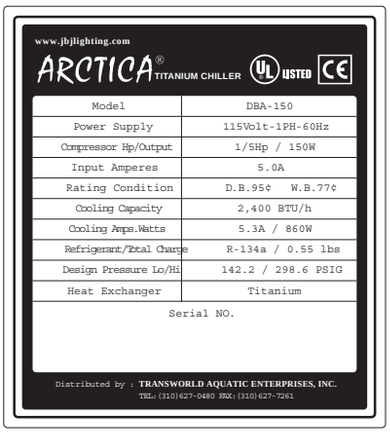

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ARCTICA® TITANIUM CHILLER UL LISTED CE

Model	DBA-150
Power Supply	115Volt-1PH-60Hz
Compressor Hp/Output	1/5Hp / 150W
Input Amperes	5.0A
Rating Condition	D.B.95¢ W.B.77¢
Cooling Capacity	2,400 BTU/h
Cooling Amps.Watts	5.3A / 860W
Refrigerant/Total Charge	R-134a / 0.55 lbs
Design Pressure Lo/Hi	142.2 / 298.6 PSIG
Heat Exchanger	Titanium

Serial NO.

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ARCTICA® TITANIUM CHILLER UL LISTED CE

Model	DBE-200
Power Supply	115Volt-1PH-60Hz
Compressor Hp/Output	1/4Hp / 180W
Input Amperes	6.0A
Rating Condition	D.B.95¢ W.B.77¢
Cooling Capacity	3,000 BTU/h
Cooling Amps.Watts	6.4 A / 1,000W
Refrigerant/Total Charge	R-134a / 0.66 lbs
Design Pressure Lo/Hi	142.2 / 298.6 PSIG
Heat Exchanger	Titanium

Serial NO.

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ARCTICA® TITANIUM CHILLER UL LISTED CE

Model	DBM-250
Power Supply	115Volt-1PH-60Hz
Compressor Hp/Output	1/3HP / 250W
Input Amperes	7.2A
Rating Condition	D.B.95¢ W.B.77¢
Cooling Capacity	4,000 BTU/h
Cooling Amps.Watts	7.7A / 1,300W
Refrigerant/Total Charge	R-134a / 0.803 lbs
Design Pressure Lo/Hi	142.2 / 298.6 PSIG
Heat Exchanger	Titanium

Serial NO.

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2. INTRODUCTION

Thank you for purchasing the ARCTICA® **Titanium Chiller**. This powerful cooling system guarantees consistent water temperatures with the most advanced features on the market.

All models are specifically designed for longterm performance with proper maintenance and operation and provide the **BEST VALUE** in the industry.

Quality: 2 Year Limited Warranty on all parts & labor from the date of purchase.

Safety: Arctica Chillers are listed by Underwriters Laboratories & are CE Certified to ensure that the y meet stringent U.S. & European Safety requirements.

Service: Qualified technicians are available for topics ranging from chiller sizing, performance troubleshooting, and providing detailed instructions for maintenance procedures.

3. RECEIVING AND INSPECTION

Inspect the chiller closely when it is received. Record any indication of damage on the delivery receipt, especially if the chiller will not be immediately uncrated. Obtain the delivery person's signed agreement to recorded damages to facilitate future insurance claims.

Since the chiller is shipped F.O.B. Factory, the manufacture's responsibility for the shipment ceases when the carrier signs the bill of lading.

If goods are received short or damaged condition, notify the carrier and insist on a notation of the loss or damage across the face of the freight bill. Otherwise no claim can be enforced against the carrier.

If concealed loss or damage is discovered, notify your carrier at once and request an inspection. This is absolutely necessary. Unless you do this, the carrier will not consider any claim for loss or damage. The carrier will make an inspection and may grant a concealed damage notation. If you give the carrier aclear receipt for the goods that have been damaged or lost in transit, you do so at your own risk and expense.

The manufacturer is willing to assist you in collecting claims for loss or damage. Willingness dose not make the manufacturer responsible for collecting claims or replacing material. Claim filing and processing is your responsibility.

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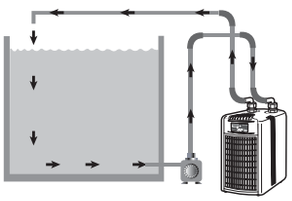
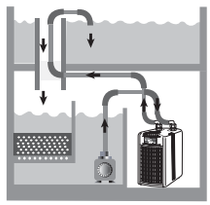
4. INSTALLATION

Place the chiller in a ventilated place and away from sources of heat, making sure that the front and rear of the chiller have at least 1 foot clearance for air flow. The chiller must have proper air flow to function correctly. **DO NOT PLACE INSIDE AQUARIUM STANDS THAT ARE ENCLOSED!**

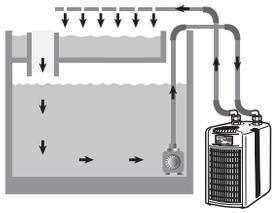
4-1. Installation to Aquarium (or Tank)



1. Connection of outside circulation pump



2. Connection of circulation pump in the filter



3. Connection of inside circulation pump

4-2. How to Connect Hose

1.) method of connecting hose to **chiller.**

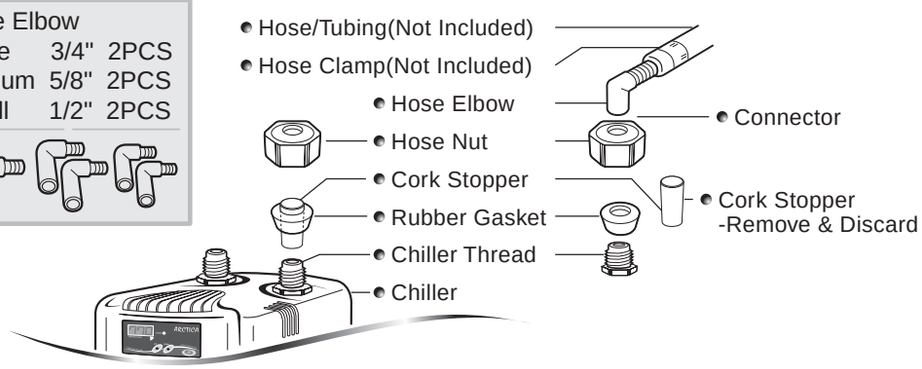
- ¤ Unscrew hose nut and remove rubber gasket.
- ¤Ł Pull out cork stopper (not needed to run **chiller**)-Discard.
- ¤Ø Insert hose elbow into hose nut.
- ¤Œ Insert hose elbow into rubber tighten.
- ¤° Screw onto **chiller** and hand tighten.
- ¤ Connect rubber tubing over threaded portion of hose elbow.
- ¤ Fasten hose clamp to secure hold.

2.) Checking equipment connection**.**

⚠ These units have been perfomance tested and may contain moisture in the heat exechange chamber.

⚠ Remove and discard cork stopper before connecting pipe/hose to the chiller.

Checking connections between parts		
Hose Elbow		
Large	3/4"	2PCS
Medium	5/8"	2PCS
Small	1/2"	2PCS



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5. GETTING STARTED

5-1. Start Up

1.) Once all connections are made, circulate water through chiller before turning on the unit.

2.) Check all connections for leaks.

3.) Verify electricity rating, and then plug power cord into a dedicated electrical outlet.

4.) This unit has been factory-set at 77¢ .

5.) The Digital Display will read the current water temperature.

6.) The light indicator will begin to blink.

7.) Chiller will automatically turn on within 3 minutes.

8.) Your chiller has now been activated.

* This unit contains an Auto Digital Temperature Control System. This built-in thermostat will turn itself on/off within +/-1¢ according to the desired set temperature.

Changing setting temperature — Example: To change setting temperature rang from 77¢ to 79¢

Press the UP button for 5 seconds.

The Decimal Point will blink. Depress the UP button once the number starts to blink.

Set to desired temperature setting by pressing UP or Down buttons.

The new temperature setting will blink and be stored in the memory chip after 10 seconds.

* Erro representationl

The thermostat has self-diagnostic funcition, so the letters below will be appeared display if error occurs

Indication	Descriptions	Please try to check and repair it following instructions below. Otherwise, contact us for warranty service.
Hr.1	Abnormal signal of sensor	Please check it if there is any damage to the sensor wiring. or water soaked into the joints before repairing.
Lo.1	Overcooling	Please check it if the water temperature is below -5¡ (celsius degree) the sensor is out of order, or there is bad connetion before repairing.
E.1 1	Short circuit	Please check it if there is short circuit due to pressed or torn sensor wire before repairing.
E.12	Short circuit	Please check it if the sensor wire is disconnected before repairing.

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Calibrating Water Temperature with Temperature Controller

It is recommended that you calibrate your chiller to your current water temperature upon intial installation.

Calibration Procedure

Example : The actual water temperature is 65¢ , but the thermostat indication is 70¢ (The actual temperature differs from the thermostat indication.)

Press the UP and DOWN buttons simultaneously for 5 seconds. "CA" will appear on display screen.

Depress both buttons when "CA" changes to numbers. The numbers on the display is a reading of the current water temperature from the chiller's integrated probe. Calibrate to you tank's current water temperature by pressing the UP or DOWN buttons and depress.

The newly calibrated temperature setting will blink and be stored in the memory chip after 10seconds.

6. MAINTENANCE

WARNING

Always unplug the chiller from the electrical outlet when performing maintenance procedures

6-1. Operations To Be Carried Out Every 6 Months

ƒUCleaning of the condenser

Remove the suction grill and clean the ribbed condenser fins with a vacuum cleaner or jet of air to clean dust and debris from impeding air flow.

ƒUCleaning of the Heat exchanger

The elimination of deposits of impurities, bacteria, or metabolic waste not captured by the pre-filter are vital for the performance of this chiller. Circulate clean water in the opposite direction through heat exchange chamber for 30 minutes.

Table 1 **CHILLER SPECIFICATIONS**

MODEL	DBA-075	DBA-150	DBE-200	DBM-250
*AQUARIUM CAPACITY	75 Gallons	150 Gallons	200 Gallons	250 Gallons
POWER SUPPLY	115Volt 1ph 60Hz			
COMPRESSOR	1/10 Hp	1/5 Hp	1/4 Hp	1/3 Hp
AMBIENT TEMPERATURE RANGE	50~95 Fahrenheit			
FLOW RATE in GPH (Min./Max.)	240 / 960	480 / 1320	480 / 1920	480 / 2400
REFRIGERANT TYPE	Ozone Friendly R-134a			
WEIGHT	44 LBS	49 LBS	51 LBS	61 LBS
INLET/OUTLET	3/4", 5/8", 1/2"			

*Aquarium Capacity is dependent on equipment used and pull down delta.

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ELECTRIC WIRING DIAGRAM OF ARCTICA
MODEL:DBA-075/DBA-150/DBE-200/DBM-250

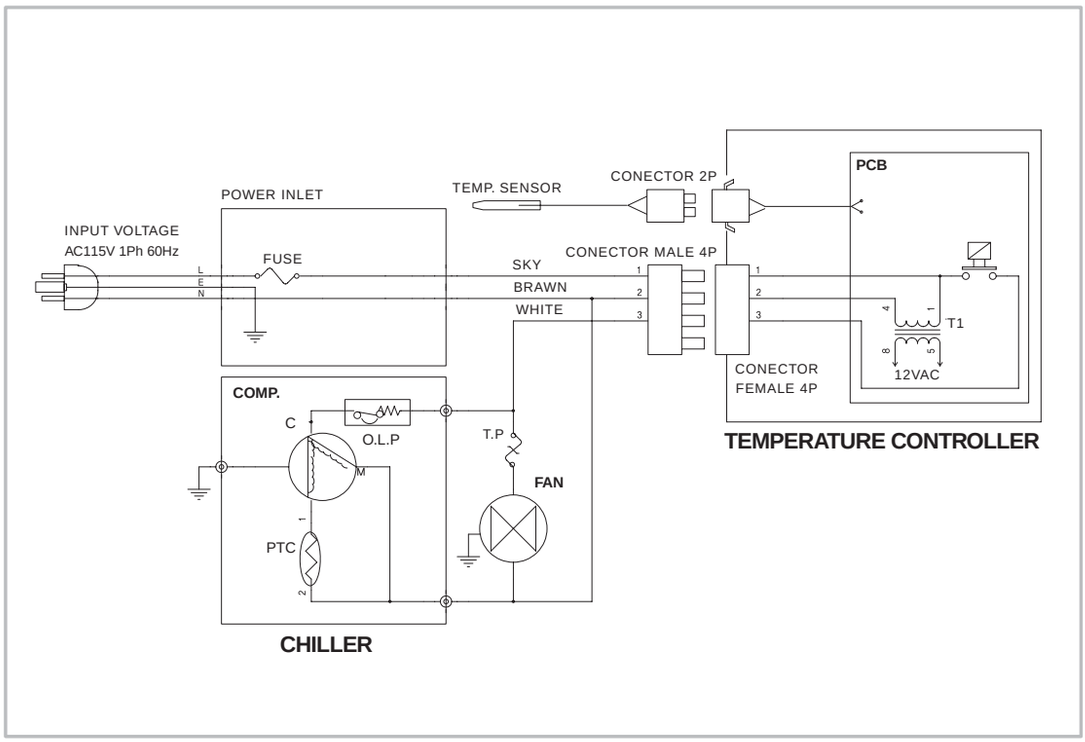

Figure 1
Electrical Diagram

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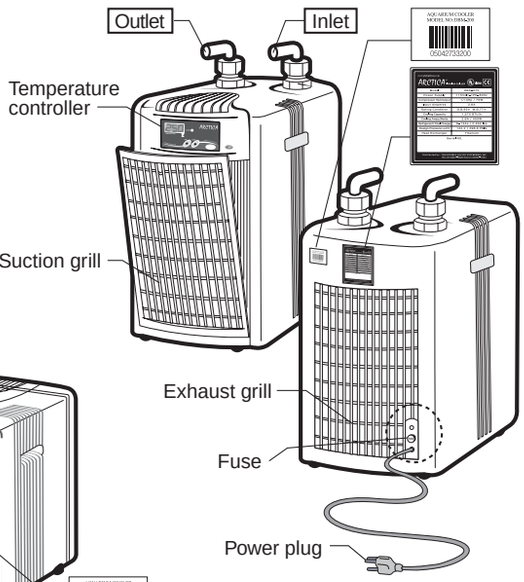
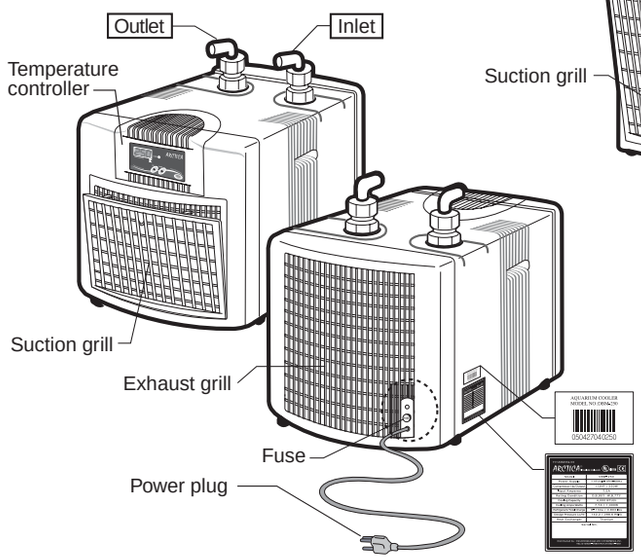
DBA-075/DBA-150/DBE-200



DBM-250



TEMPERATURE CONTROLLER

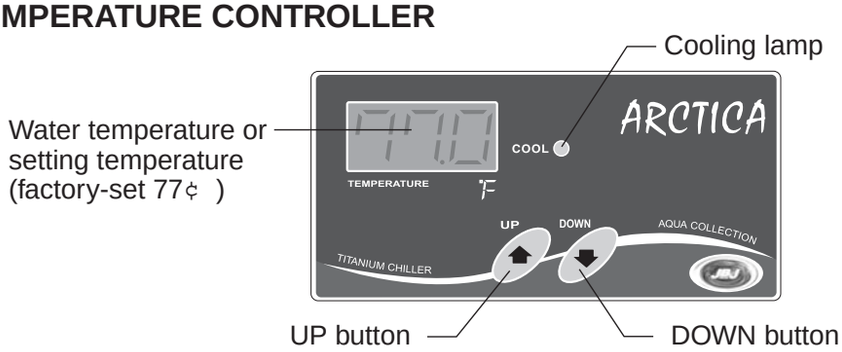


Figure 2
Part Name for Chiller

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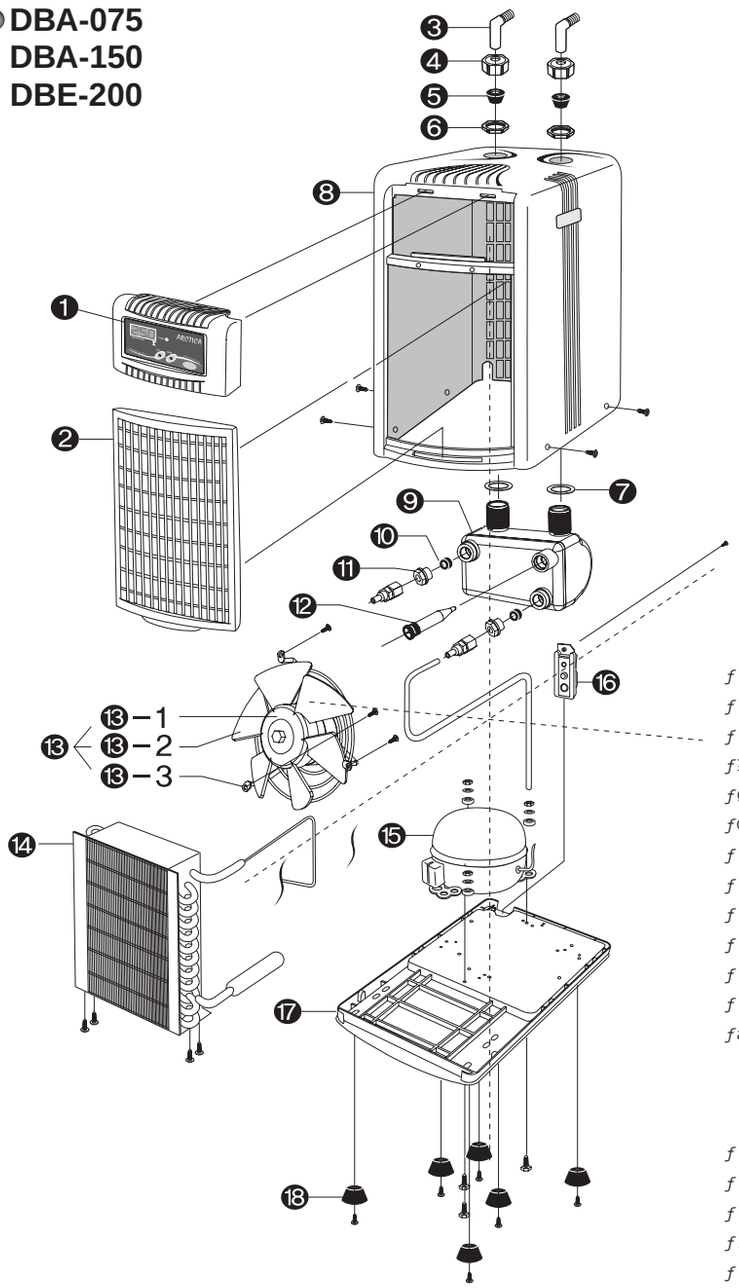
DBA-075
DBA-150
DBE-200



ƒ TEMPERATURE CONTROLLER
ƒ GRILL
ƒ HOSE ELBOW
ƒŁ SOCKET(1)
ƒØ RUBBER GASKET(1)
ƒŒ SOCKET(2)
ƒ° RUBBER GASKET(2)
ƒ CASE
ƒ CHILLER
ƒ RUBBER GASKET
ƒ SOCKET(3)
ƒ FAN BLADE
ƒæ FAN MOTOR ASS'Y
ƒæ-1 FAN BLADE
ƒæ-2 MOTOR
ƒæ-3 BRACKET
ƒ CONDENSER
ƒ REFRIGERANT COMPRESSOR
ƒ CABLE BRACKET
ƒ1 BASE PANEL
ƒ MOUNTING GROMMET

Figure 3
Exploded View and Part Name

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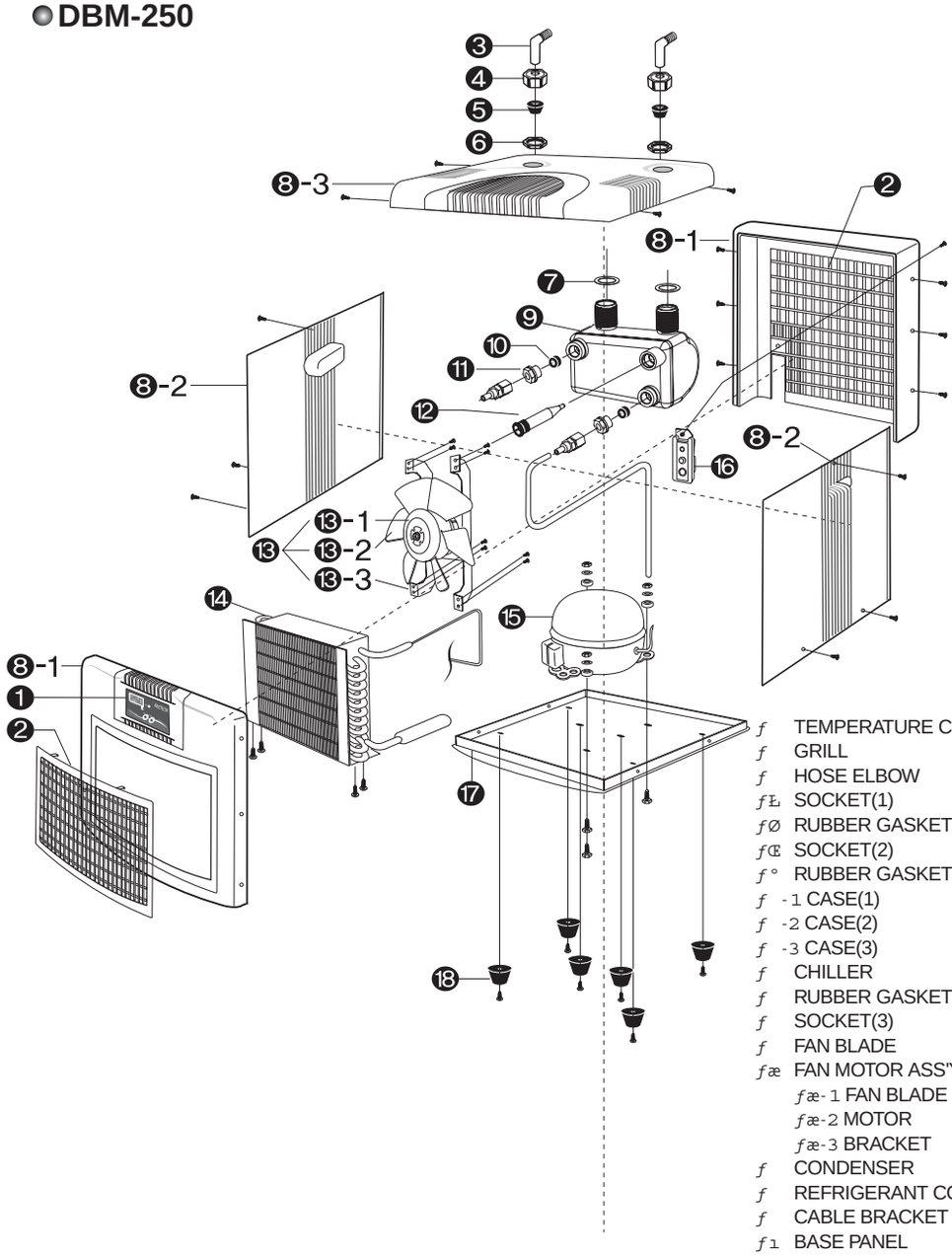
DBM-250



ƒ TEMPERATURE CONTROLLER
ƒ GRILL
ƒ HOSE ELBOW
ƒŁ SOCKET(1)
ƒØ RUBBER GASKET(1)
ƒŒ SOCKET(2)
ƒ° RUBBER GASKET(2)
ƒ -1 CASE(1)
ƒ -2 CASE(2)
ƒ -3 CASE(3)
ƒ CHILLER
ƒ RUBBER GASKET
ƒ SOCKET(3)
ƒ FAN BLADE
ƒæ FAN MOTOR ASS'Y
ƒæ-1 FAN BLADE
ƒæ-2 MOTOR
ƒæ-3 BRACKET
ƒ CONDENSER
ƒ REFRIGERANT COMPRESSOR
ƒ CABLE BRACKET
ƒı BASE PANEL
ƒ MOUNTING GROMMET

Figure 3
Exploded View and Part Name

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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).

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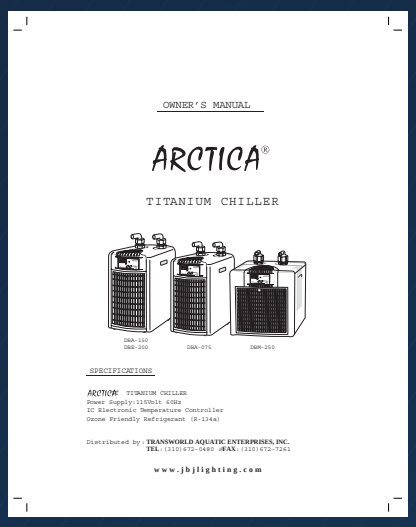
OWNER'S MANUAL

ARCTICA®

TITANIUM CHILLER

DBA-150
DBE-200
DBA-075
DBM-250

SPECIFICATIONS

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IC Electronic Temperature Controller
Ozone Friendly Refrigerant (R-134a)

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