Product Information Packet

Model RLC-1400HC

19" Rack Mount Solid State Liquid Chiller

Heat/Cool with Integral TC-3400 Temperature Control

Part #8-B0G0-1-000

Thank you for your purchase. Information has been enclosed regarding the installation, specifications, and wiring of your solid state assembly.

Please read and follow all instructions carefully before installation. Only qualified technicians should install this equipment.

If you have any questions with your equipment, please do not hesitate to call us toll free at (888) TECA-USA (832-2872), we will be happy to assist. We are open from 8:00 am to 4:30 pm Central Time.

Included in this packet you will find:

Getting Started

Product Literature and Specifications

Wiring Drawing # SK100202

Assembly Drawing # SK020602

Temperature Control Literature Set-Up and Communications Information

Warranty Information

TC-3400 Manual and CD

teca

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GETTING STARTED:

(Read entire instructions before operating)

STEP #1 This unit should operate with the bottom feet resting on a flat surface. The internal heat exchanger is cooled by a tubeaxial fan. It is necessary to keep the inlet/outlet air path free from any restrictions that may impede your cooling performance. A 6" minimum spacing from the rear of the unit to any obstruction is required. External tubing with insulation has been provided for a total of 12' plumbing line. Trim the tubing and insulation as necessary to minimize the ambient thermal load. 4 clamps have been provided to attach the tubing (2 to the quick connectors provided and 2 for your load connectors). The tubing lines are a 3/8" inner diameter. Connect the external plumbing lines to the device(s) being cooled.

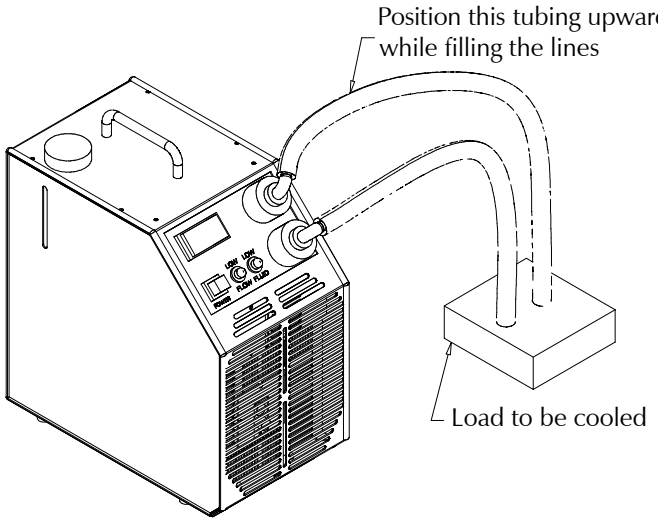
STEP #2 Low fluid and low flow indicators have been provided on the front panel. It is necessary to fill the internal reservoir before you apply power. FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE PUMP The internal reservoir holds approximately 500 ml of fluid. The "add fluid" light will come on when the reservoir is approximately ½ full. There is a visual indicator of the water level on the side of the unit. Distilled water is the recommended fluid for temperatures to 5°C. For temperatures below 5°C, a 30% glycol 70% distilled water mix is suggested. Remove the reservoir cap located at the top left corner of the unit and fill the reservoir. Keep the reservoir cap off until the external plumbing is filled and the reservoir is topped off.

STEP #3 Connect the power cord to an appropriate outlet. The power cord must be connected to a receptacle protected by a circuit protected per local and or national codes. While you are filling the external lines, position the supply quick connect upwards. (See Figure A) This will assist in removing air trapped in the lines. At this point, depress the power switch on the front panel to turn the system on. For a 12' plumbing line, it should take about 30 seconds before the "add fluid" light illuminates. At this point, turn the power off and add additional fluid. Re-apply power. Another 30 seconds or so should be enough time to completely fill the lines. Turn off the power switch and top off the reservoir. Reattach the reservoir cap securely.

Please Note: It may be necessary to add fluid to the reservoir from time to time. The "add fluid" indicator will illuminate if the reservoir requires a refill. If the "low flow" indicator light appears, check to see if there are any obstructions or leaks within the plumbing lines.
The "low flow" indicator appears when the flow is approximately 0.3 liter/min or less.

STEP #4 A digital temperature controller has been provided. Hold the * button and adjust ▾▴ to adjust the set point. More detailed temperature control information has been included with your product information packet. We suggest changing the temperature controllers programming to a PID control method and then performing an autotune for better temperature control.

We hope you enjoy your new Ameritemp™ series liquid chiller. If you have any questions, please do not hesitate to call our technical department @ 888-TECA-USA (888-832-2872).



RLC-1400 | Rack Mount Liquid Chiller

Air Cooled
Rack Mount

FEATURES

- Compact only 19" x 25" x 9"
- Standard 19" rack mounting
- Integral PID "Tuneable" temperature control
- Remote sensibility™
- Ambients to +50°C
- No compressor, fluorocarbons
- Virtually maintenance-free operation
- Stainless steel exterior housing
- Low fluid/flow warning

INCLUDES

- Integral power supply
- Self priming pump/reservoir
- TC-3400 temperature Control
- Low pressure drop fluid quick connects

OPTIONS

- Heating
- RS-485 interface, RS-232 interface (with external adapter)
- Computer communication software

SPECIFICATIONS

MODEL	PART NUMBER	PERFORMANCE RATING BTU/HR	VOLTAGE VAC 50/60 HZ	CURRENT AMPS.	WEIGHT LBS. (KG)	MAX OPERATING AMBIENT	HEATING OPTION (HC SUFFIX)	FLUID TEMP RANGE °C
RLC-1400	8-B0G0-0-000	1400-1450	120 VAC	7.0	59(26.7)	50 °C(+122 F)		-5/65
RLC-1400HC	8-B0G0-1-000	1400-1450	120 VAC	7.0	59(26.7)	50 °C(+122 F)	400 Watt	-5/65
RLC-1402	8-B0G2-0-000	1400-1450	240 VAC	7.0	59(26.7)	50 °C(+122 F)		-5/65
RLC-1402HC	8-B0G2-1-000	1400-1450	240 VAC	7.0	59(26.7)	50 °C(+122 F)	400 Watt	-5/65

RLC-1400

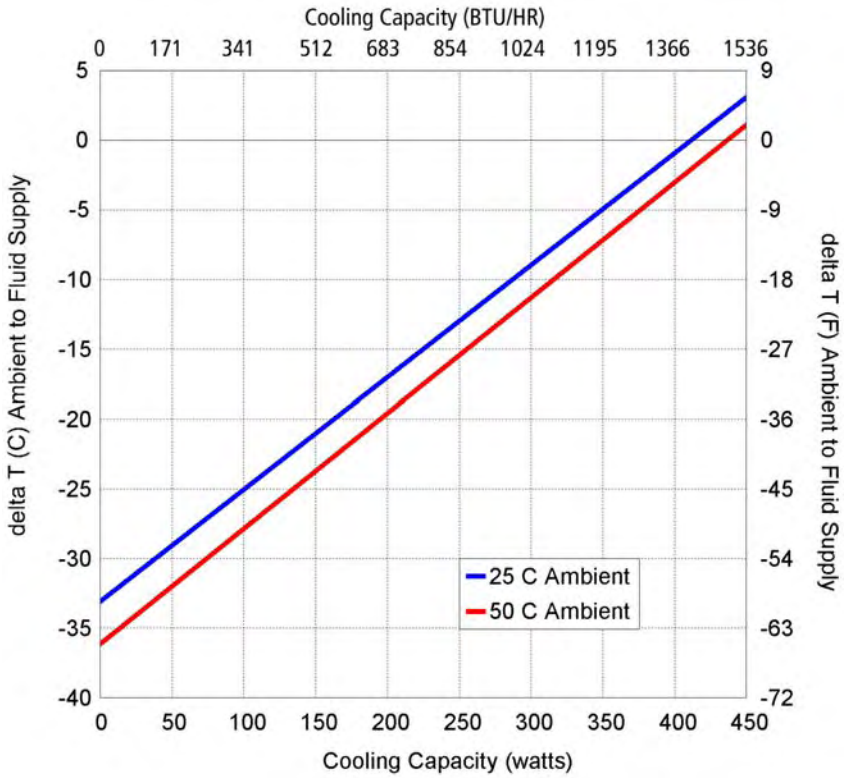
ENVIRONMENTS

19" rack mount
Laboratory
Industrial

COOLING CAPACITY

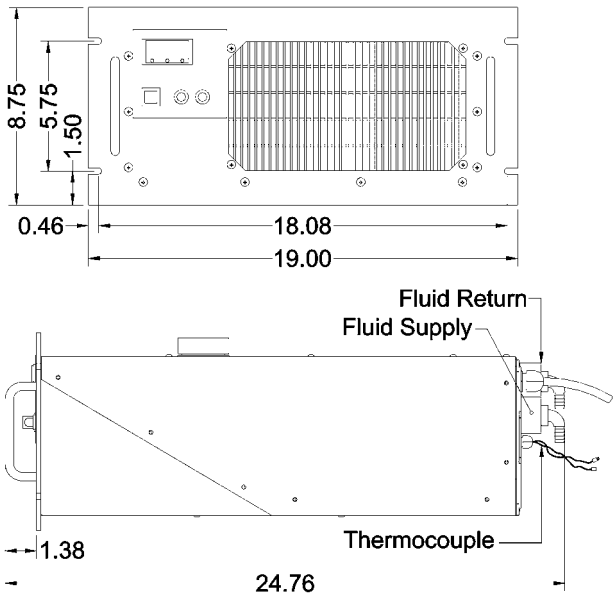
410 Watts @ 0 °C ΔT

PERFORMANCE CURVE



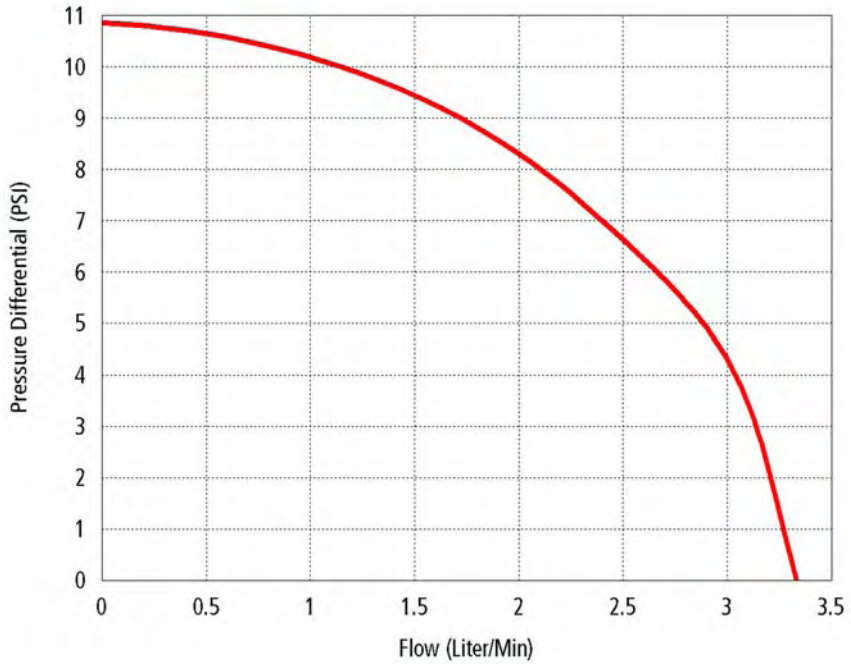
Equation of line: y=ΔT(°C) x=Capacity (Watts)		
Ambient Temp	**25°C**	**50°C**
Fluid Supply	y=.08x-33.1	y=.08x-36.1

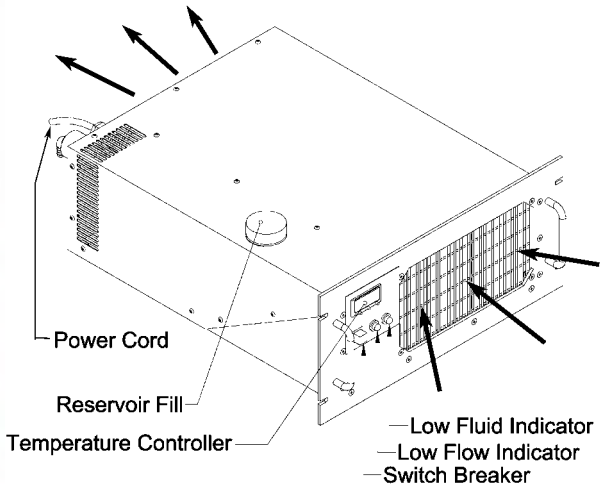
DIMENSIONS



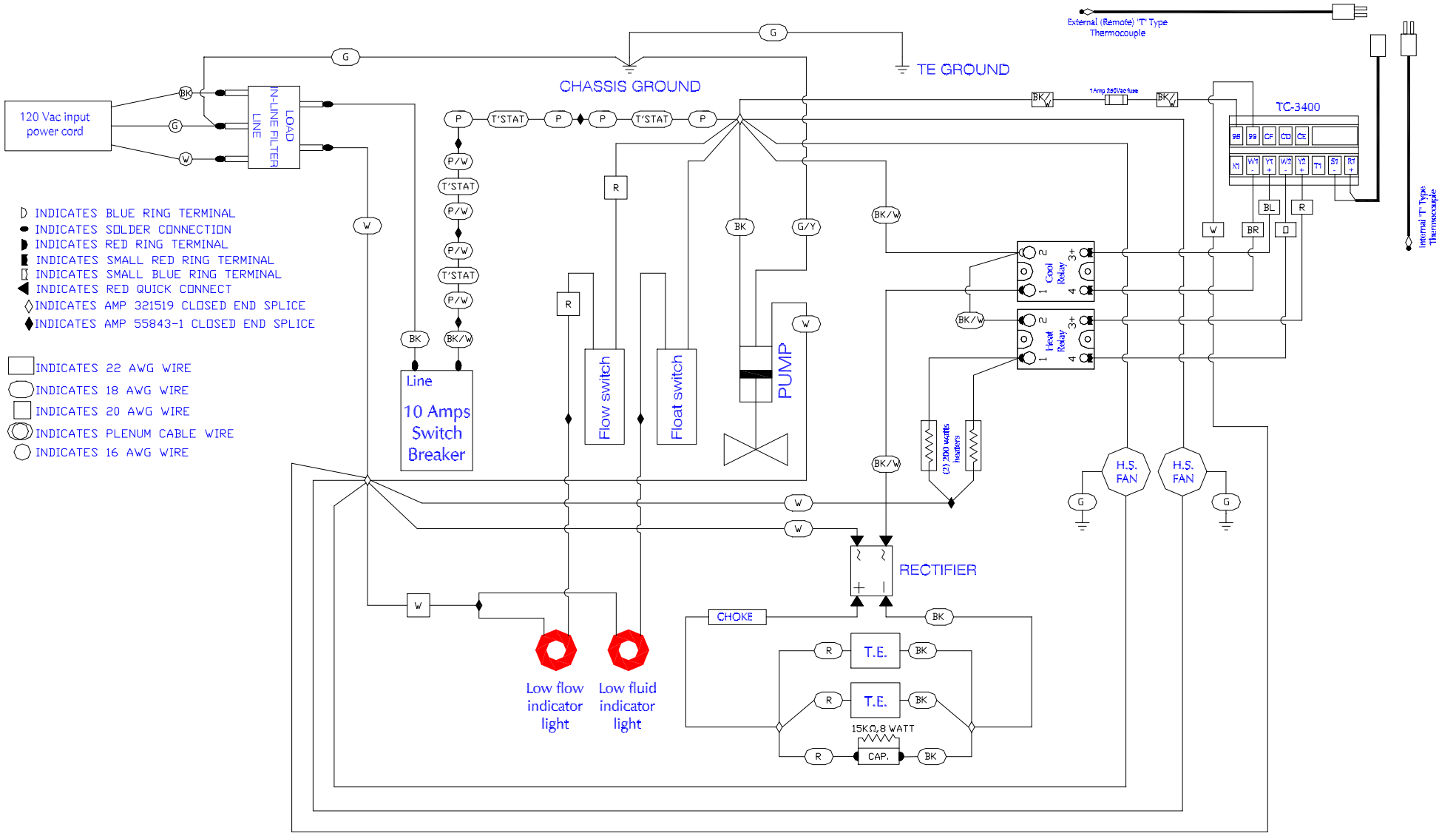
Dimensions: Inches

PUMP CURVE





Ambient Air Path



REV	DESCRIPTION	Date	APPROVED

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
DECIMALS .XX +/- .XXX+/-
ANGLE +/-
FRACTION +/-

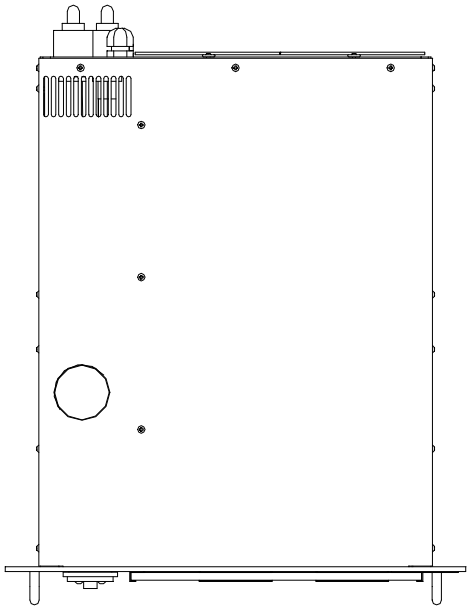
FINISH:

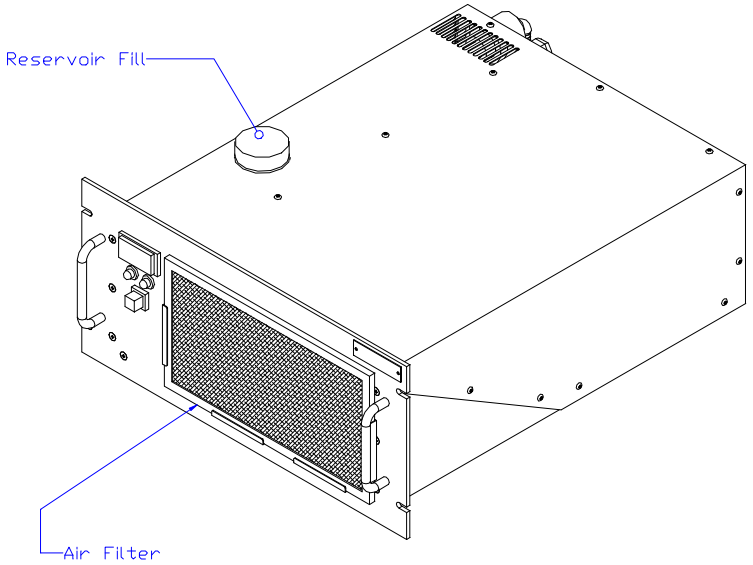
MATERIAL:

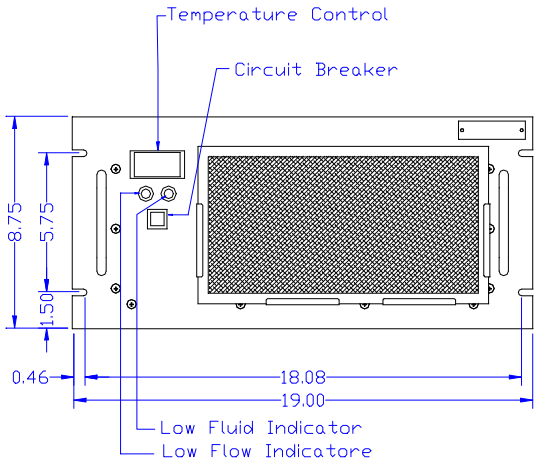
THERMOELECTRIC COOLING AMERICA CORP.

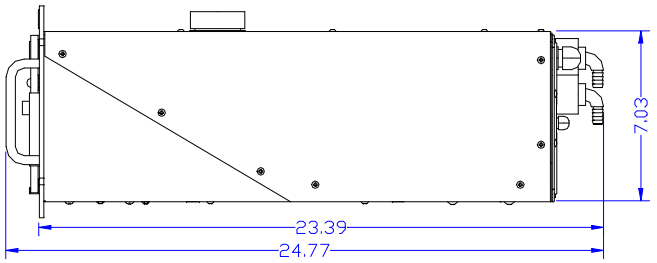
RLC-1400HC WITH TC-3400
WIRING DIAGRAM

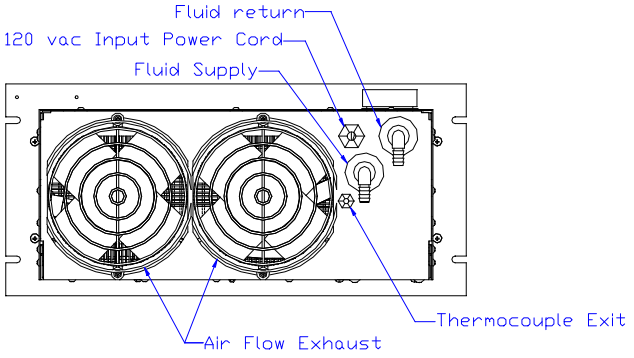
DRAWN BY:	DRAWING #	REV LEVEL
AA	SK100204	
DATE: 02/01/2010	SCALE	MASTER: SK100111
D7722		SHEET











REV	DESCRIPTION	Date	APPROVED
A	Revised and updated views to refelect the air filter & rack panel changes.	02/02/2010	AA

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
DECIMALS .XX +/- .XXX+/- ANGLE +/- FRACTION +/-
FINISH:
MATERIAL:

THERMOELECTRIC COOLING AMERICA CORP.

RLC-1400
RACK MOUNT LIQUID CHILLER

DRAWN BY: AA	DRAWING # SK020602		REV LEVEL A
DATE: 06/18/02			
D5846	SCALE	MASTER: SK020505	SHEET

LIMITED WARRANTY

In the event a defect in material or workmanship is discovered in any of TECA's products within one year after the date they are delivered to Buyer, and if: (a) TECA is notified of the defect in writing by certified mail within 14 days of the date of discovery; (b) TECA may then either, at its sole discretion, inspect the product at Buyer's location, or require that the product be made available at Buyer's expense at TECA's premises for TECA's inspection within 14 days of the date of notification; and (c) the products are defective and the defects result from faulty materials and/or workmanship and not in any way from accident, misuse, misapplication, mishandling, modification, or alteration by the Buyer or the shipper, then TECA shall, at its sole option, repair or exchange defective products free of charge to Buyer, or credit to buyer the price of the defective products. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE EXCLUDED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL TECA BE LIABLE FOR ANY CLAIM BASED UPON BREACH OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER DAMAGES WHETHER SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, LOST PROFITS, BUSINESS INTERRUPTION, OR LOSS OF BUSINESS OR CUSTOMER RELATIONSHIPS.

RETURNED GOODS, RESTOCKING CHARGES

In order to return merchandise for any reason (repair, replacement, or credit) a return authorization number must be issued by TECA. New merchandise may not be returned for credit beyond 60 days from shipment. Charges for incidental or other damages may also be made. All returned goods must be sent freight prepaid. A restocking charge of 15% will apply. On special equipment and custom modified equipment orders, additional incremental cancellation charges may be made.