

Product Information Packet

Model AHP-150CP

Solid State Cold Plate

Part #1-8098-0-000

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 regarding your equipment, please do not hesitate to call us at 773-342-4900, and we will be happy to assist you. We are open from 8:00 am-4:30 pm Central Time.

Included in this packet you will find:

Product Literature and Specifications

Assembly Drawing # 151-A-A76

Wiring Drawing # 151-B-E1

Installation Drawing # 151-A-A75

Warranty Information



ThermoElectric Cooling America Corporation
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sales@thermoelectric.com www.thermoelectric.com

AHP-300CP AHP-150CP

Air Cooled

Thermoelectric Cold Plate

General Purpose VDC Input

FEATURES

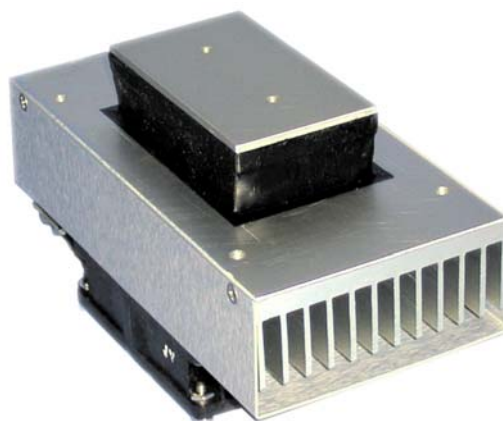
- Direct contact cooling as much as 56 °C below room temperature
- No compressor, fluorocarbons or filters
- Virtually maintenance-free operation
- Mounts in any orientation
- Works with TC-3500

INCLUDES

- Cold plate accessory tapped holes
- Machined surface
- Terminal strip for wire hook up



AHP-300CP



AHP-150CP

SPECIFICATIONS AHP-300CP

MODEL	PART NUMBER	NOTES	PERFORMANCE RATING BTU/HR	VOLTAGE VDC	CURRENT AMPS.	WEIGHT LBS. (KG)	TEMP. CONTROL	OPERATING AMBIENT °C
AHP-300CP	1-7097-0-000	Cool only	290-330	12/24/48	12/6/3	6(2.7)	none	-10/+70
AHP-300CPHC	1-7094-1-000	Heat/Cool	290-330	12	12	6(2.7)	none	-10/+70
AHP-300CPHC	1-7095-1-000	Heat/Cool	290-330	24	6	6(2.7)	none	-10/+70
AHP-300CPHC	1-7097-1-001	Heat/Cool Rev. Pol.*	290-330	12/24/48	12/6/3	6(2.7)	none	-10/+70

SPECIFICATIONS AHP-150CP

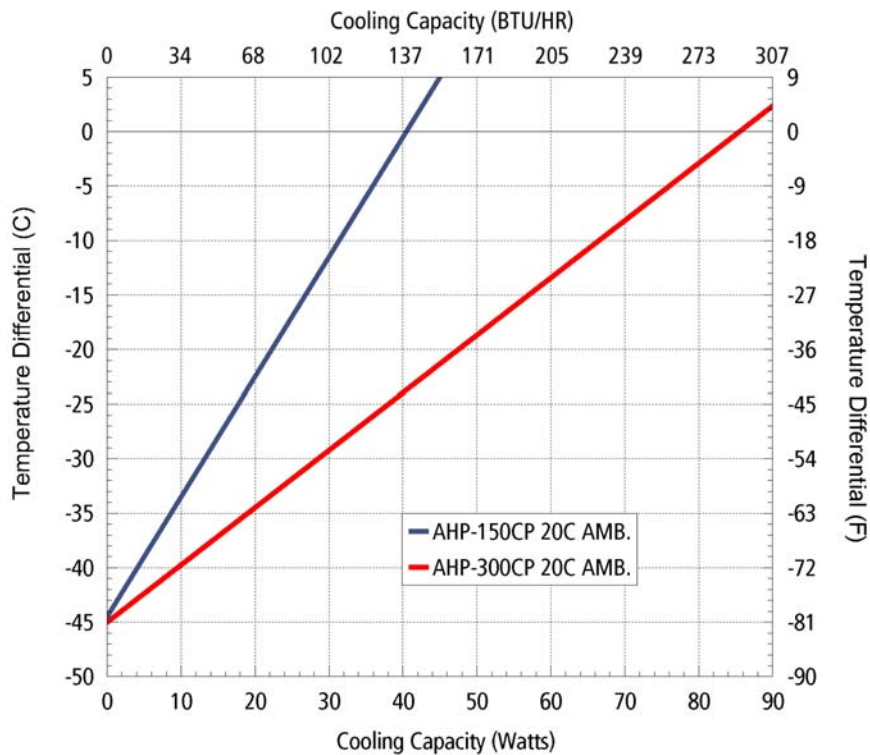
MODEL	PART NUMBER	NOTES	PERFORMANCE RATING BTU/HR	VOLTAGE VDC	CURRENT AMPS.	WEIGHT LBS. (KG)	TEMP. CONTROL	OPERATING AMBIENT °C
AHP-150CP	1-8098-0-000	Cool only	140-160	12/24	6/3	2.5(1.2)	None	-10/+70
AHP-150CPHC	1-8094-1-000	Heat/Cool	140-160	12	6	2.5(1.2)	None	-10/+70
AHP-150CPHC	1-8095-1-000	Heat/Cool	140-160	24	3	2.5(1.2)	None	-10/+70
AHP-150CPHC	1-8098-1-001	Heat/Cool Rev. Pol.*	140-160	12/24	6/3	2.5(1.2)	None	-10/+70

Note: Options for temperature control, consult factory.

* Reverse polarity unit can be used with external TC-3500 controller see P. 112

See also , "Power Supplies" , P. 117

PERFORMANCE CURVE



Cold Plate - Air Cooled

AHP-300CP

ENVIRONMENTS

Bench Top, Laboratory, Industrial

COOLING CAPACITY

85 Watts @ 0 °C ΔT

AHP-150CP

ENVIRONMENTS

Bench Top, Laboratory, Industrial

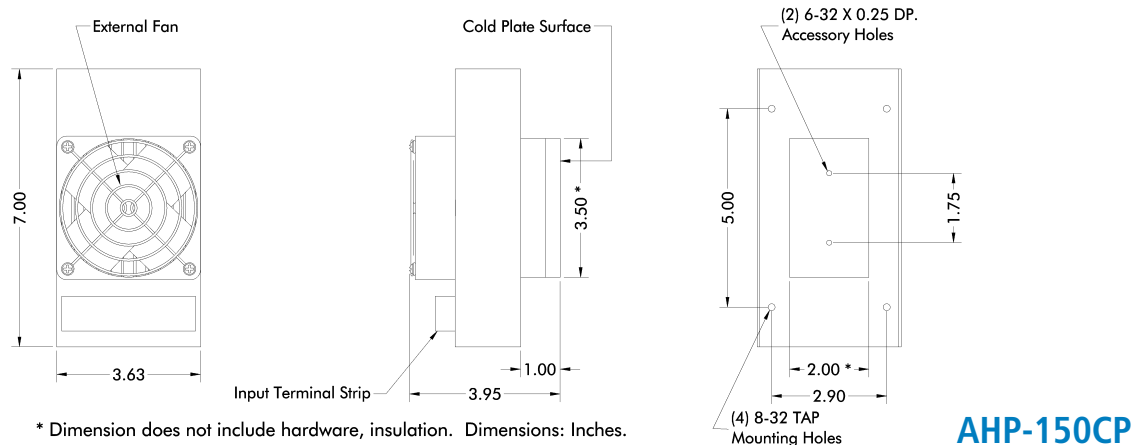
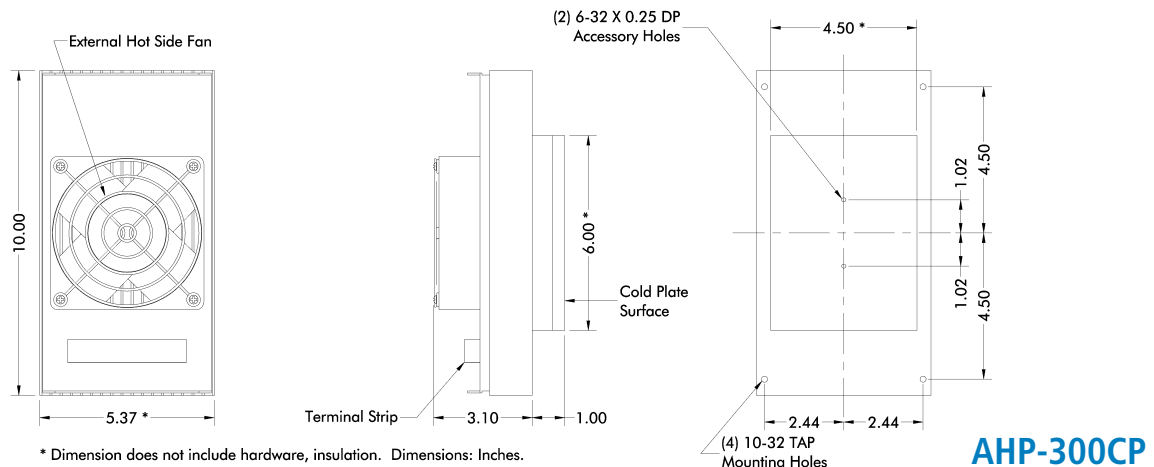
COOLING CAPACITY

40 Watts @ 0 °C ΔT

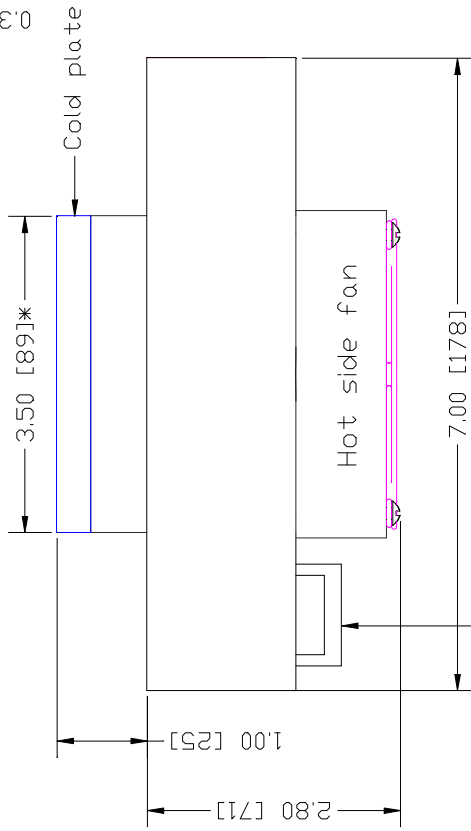
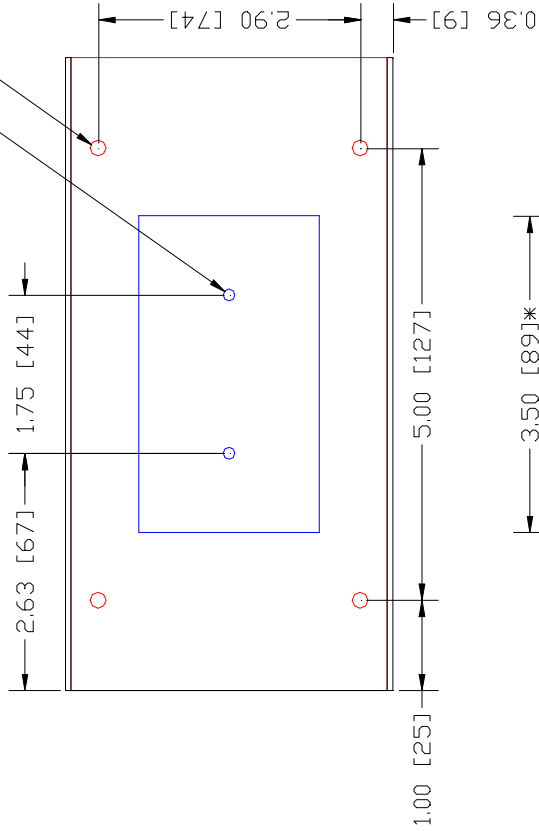
Equation of line: $y = \Delta T(^{\circ}\text{C})$ $x = \text{Capacity (Watts)}$

Ambient Temp	20°C	40°C	60°C
300CP Cold Plate	$y = .526x - 45.0$	$y = .526x - 48.0$	$y = .526x - 51.0$
150CP Cold Plate	$y = 1.1x - 44.5$	$y = 1.1x - 48$	$y = 1.1x - 51.5$

DIMENSIONS



2 X 6-32 Tap,
4 X 8-32 Tap



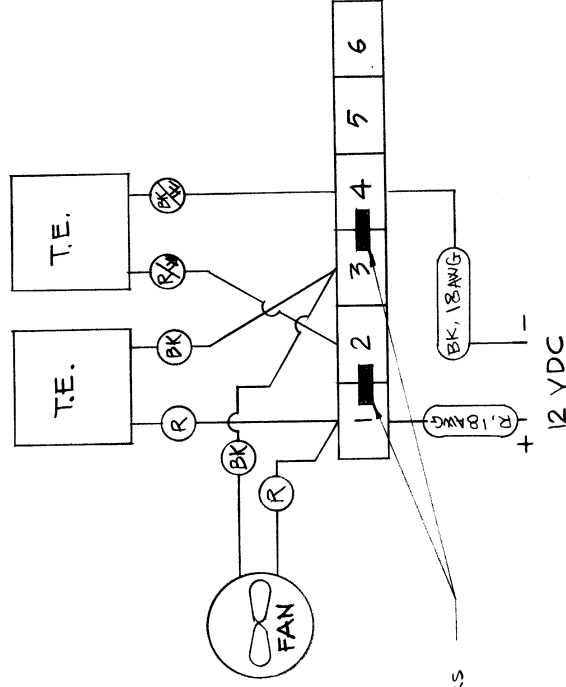
Terminal block
Power input

Dimensions: Inches [Millimeters]

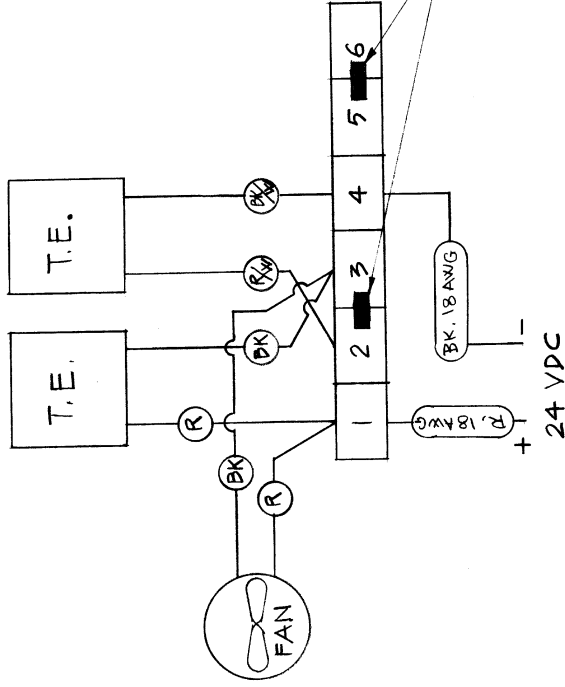
* Dimension does not include sealant thickness.

REV	DESCRIPTION	Date	APPROVED	FINISH:	MATERIAL:	DECIMALS .XX +/- .XXX +/-	ANGLE +/- FRACTION +/-	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			THERMOELECTRIC COOLING AMERICA CORP.			
											AHP-150 SERIES ASSEMBLY			
											DRAWN BY: AA	DRAWING #	REV LEVEL	
											DATE: 07/29/05	151-A-A76		
											D6484	SCALE	MASTER: 151-A-A75	SHEET

LTR	DESCRIPTION	DATE	APPROVED
A	INDICATED INPUT POLARITY	09.10.92	IN
B	ADD. NOTE REGARDING JUMPERS	6.02.97	AA
C	INSTALLATION ADD INPUT LEADS SPECS.	10.07.97	AA



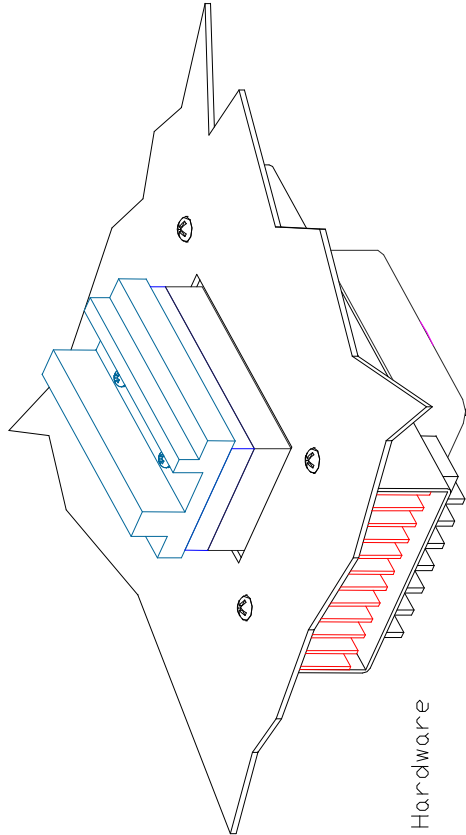
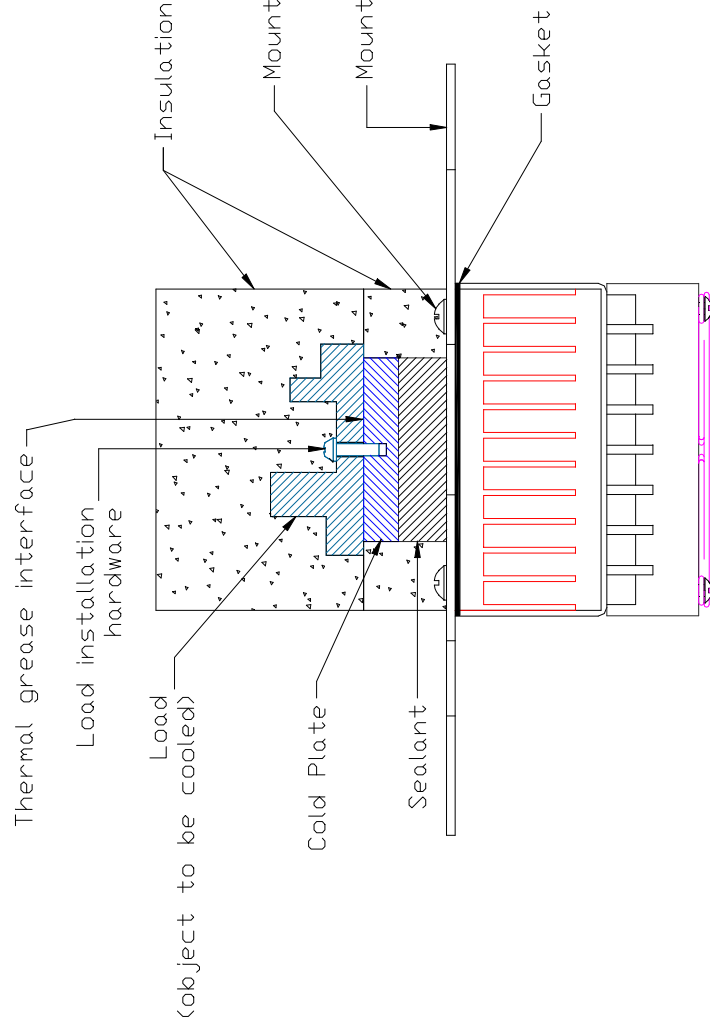
12 VDC OPERATION
(FACTORY WIRED)



24 VDC OPERATION

- NOTE:
- TO CHANGE FROM 24VDC TO 12 VDC OPERATION:
- REMOVE THE TERMINAL JUMPERS (INDICATED AS [X])
- REINSTALL AS SHOWN FOR 12VDC OPERATION.
 - TO CHANGE FROM 12VDC TO 24VDC OPERATION:
- REMOVE THE TERMINAL JUMPERS (INDICATED AS [X])
- REINSTALL AS SHOWN FOR 24VDC OPERATION.
 - INPUT LEADS ARE NOT ATTACHED BY TECA, INPUT LEADS ARE INCLUDED IN SHIPPING PACKAGE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		teca ThermoElectric Cooling America Corp.	
FRACTIONS DECIMALS ANGLES		AHP 150	
± .XX ± .015 ±		WIRING DIAGRAM	
MATERIAL		SIZE	
FINISH		DRAWING NO.	
APPROVALS		151-B-E1	
DRAWN		SCALE	
CHECKED		DOOTS	
		SHEET	
		OF	



INSTALLATION INSTRUCTIONS

- 1- Prepare mounting surface/component as indicated. Ideal component surface flatness is $\pm .001$ T.I.R.
- 2- Spread an even, approximately 10 MIL, layer of thermal grease (Dow type 340 or equivalent) on both thermal contact surfaces (component and cold plate). A speedball rubber roller works well for this.
- 3- Install unit without sliding against mating surface using stainless steel screws and lock washers if available. Rotate slightly to "seat" them. Torque screws until snug. Do not overtighten.
- 4- Fit insulation around cold plate surfaces as required.
- 5- If desired, caulk insulation to seal and secure insulation.
- 6- Connect power per appropriate wiring diagram.

REV	DESCRIPTION	Date	APPROVED
INFORMATION DISCLOSED HEREIN IS THE CONFIDENTIAL PROPERTY OF TECA CORP. RECIPIENT SHALL NOT USE THE INFORMATION IN ANY UNAUTHORIZED MANNER. FINISH:			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:			
DECIMALS		ANGLE	+/-
.XX +/-		FRACTION	+/-
.XXX +/-			+/-
MATERIAL:			
DRAWN BY: AA		DRAWING #	REV LEVEL
DATE: 07/29/05		151-A-A75	
		SCALE	MASTER: MASTER
		D6483	SHEET

THE THERMOELECTRIC COOLING AMERICA CORP.

AHP-150CP
INSTALLATION INSTRUCTION

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.