

AHP-1700

(Air Cooled)

NEW

Solid State Air Conditioner

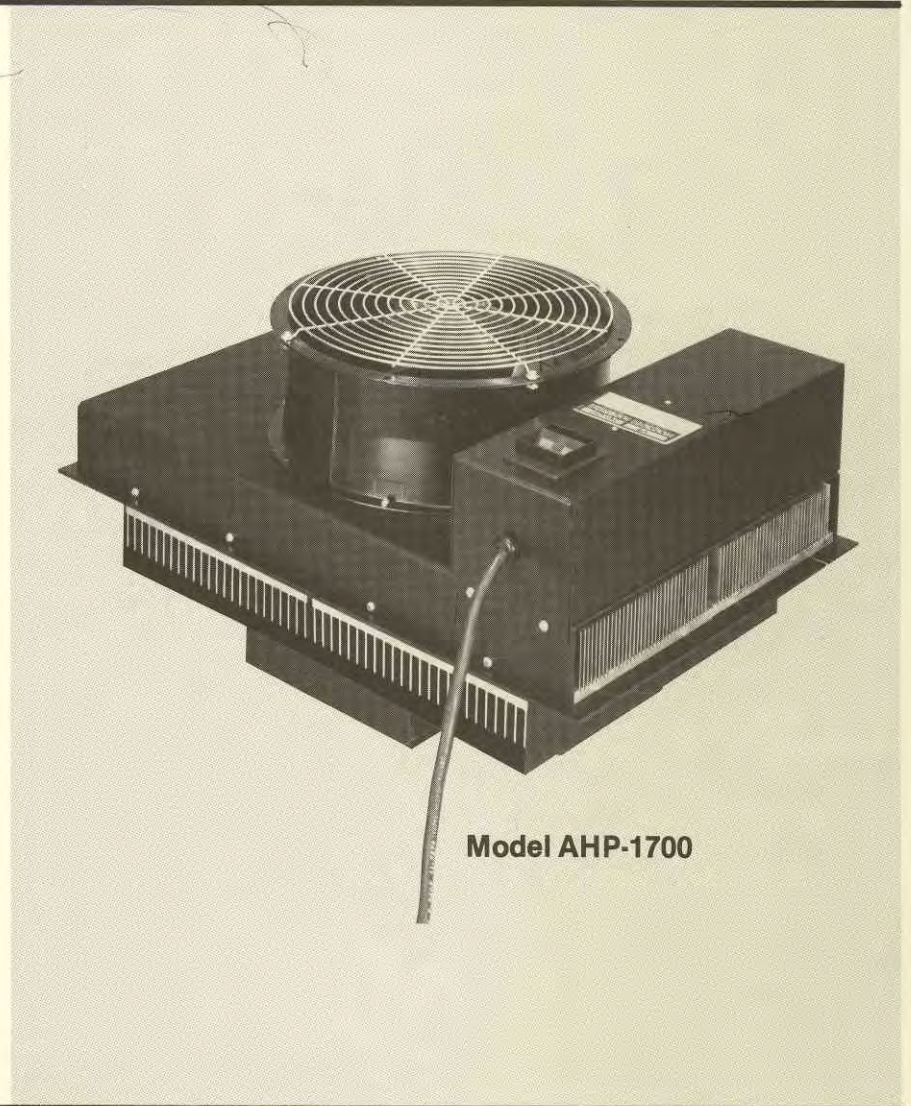
Rating 1100 BTU/Hr Cooling

Rating 1360 BTU/Hr Heating (optional)

Applications in computers, machine tools, electronic control systems

Features:

- No load cooling to -20°C (-5°F) at room temperature of 25°C (77°F)
- Standard 19" rack mount
- Weighs under 18.2 kg. (40 lbs.)
- No compressor
- Integral D.C. power supply
- Closed system protection from dust, chips, moisture
- Operates in any orientation horizontal, vertical, etc.
- Operates in -30°C (-20°F) to $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$)
- Heavy service cord included
- No moving parts except fans
- Low vibration, noise, maintenance
- Anodized aluminum finish



Model AHP-1700

Thousands of TECA's AHP-1700 NEMA-12 cabinet coolers are in use today in environments ranging from steel mills and assembly lines to computer rooms and robotics. Capable of cooling to temperatures below ambient without the use of a compressor, refrigerant or piping

makes the AHP-1700 a rugged, dependable air conditioner. Because the AHP-1700 does not exchange air between the outside and the inside of a cabinet, clean air environment is maintained in the electronic enclosure. This is accomplished by using solid state thermoelectric modules to

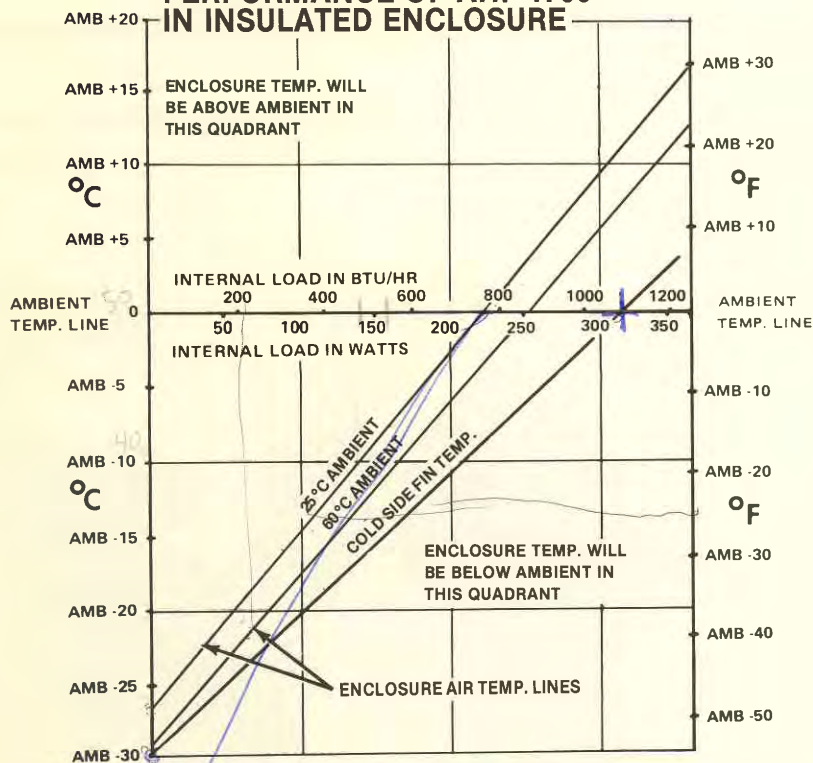
remove heat energy from any cabinet. Reliable fans are used to circulate cooling air and to dissipate output heat to the ambient air. Standard 19" rack and an integral power supply allow for ease of mounting and direct operation from 115 volt A.C.

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AHP-1700

PERFORMANCE OF AHP-1700 IN INSULATED ENCLOSURE



Power Required:

110 VAC at 6 Amps.

Weight:

18.2 Kg. (40 Lbs.)

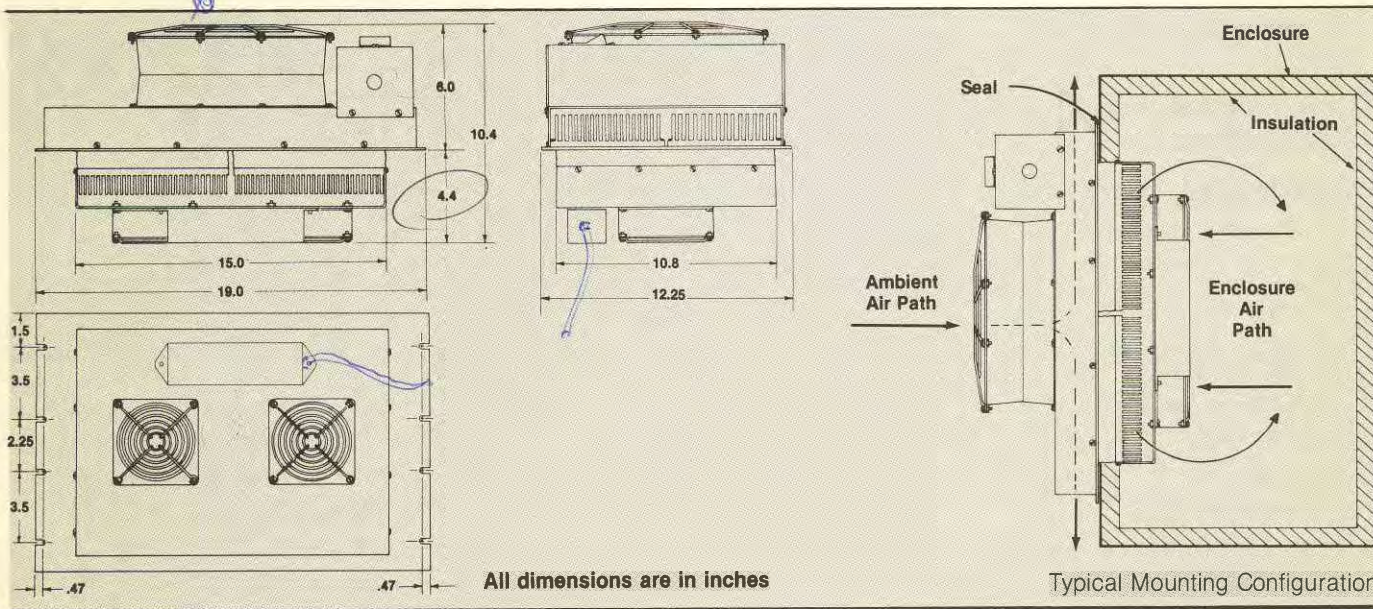
To Use Performance Curve:

REQUIRED INFORMATION:

- Desired temperature differential of enclosure air from the outside ambient air temperature.
- Total Heat Load (watts or BTU/Hr)

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect appropriate enclosure air temperature line (25°C or 60°C Ambient)
- From that point of intersection, extend a horizontal line to determine temperature differential from the outside ambient air to the enclosure air temperature.



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AHP-1000

(Air Cooled)

Solid State Heat Pump

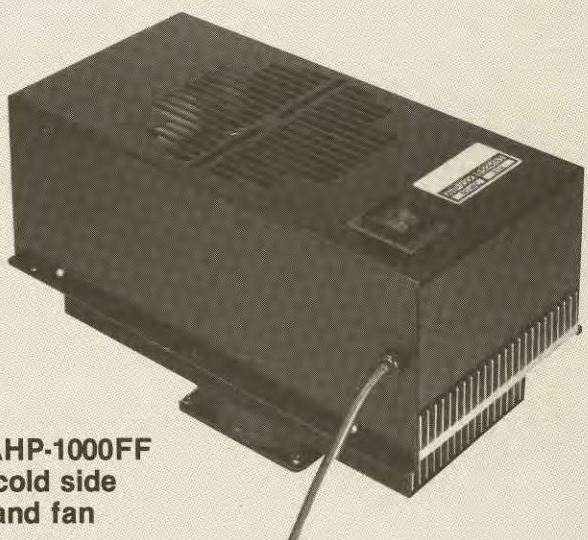
Rating 560 BTU/Hr. Cooling

Rating 680 BTU/Hr. Heating (optional)

Applications in computers, machine tools, instrumentation and electronic component or package cooling

Features:

- No load cooling to -20°C (-5°F) at room temperature
- Operates from 110VAC line current
- Weighs under 12.5 kg. (27 lbs.)
- Compact
- No compressor
- Closed system protection from dust, chips, moisture
- Operates in any orientation — horizontal, vertical, etc.
- Operates in -30°C (-20°F) to $+65^{\circ}\text{C}$ ($+149^{\circ}\text{F}$)
- No moving parts except fans
- Low vibration, noise, maintenance
- Metal finishes resist corrosion
- Heavy service cord included



Model AHP-1000FF
with cold side
fin and fan



Model AHP-1000CP
with cold plate

A combination of convenient size, light weight, and an integral power supply on either cold plate or fin and fan style make the AHP-1000 TECA's most versatile unit. Applications of the AHP-1000 range from the factory to the laboratory. Used as a NEMA-12

cabinet cooler, the AHP-1000FF removes heat energy without exchanging air between the outside and the inside of the cabinet. The AHP-1000CP conducts heat from its cold plate and in turn from the active load in contact. Heat removal and tempera-

tures below ambient are accomplished by an efficient combination of solid state thermoelectric modules, heat sinks and fans, used to move heat transfer air, which are the only moving parts in the system.

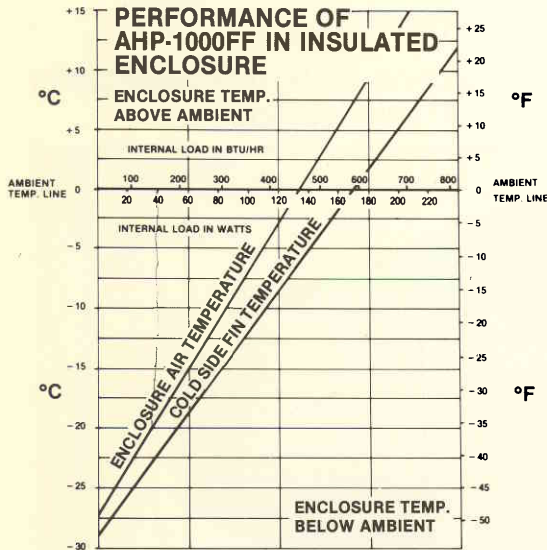


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AHP-1000FF

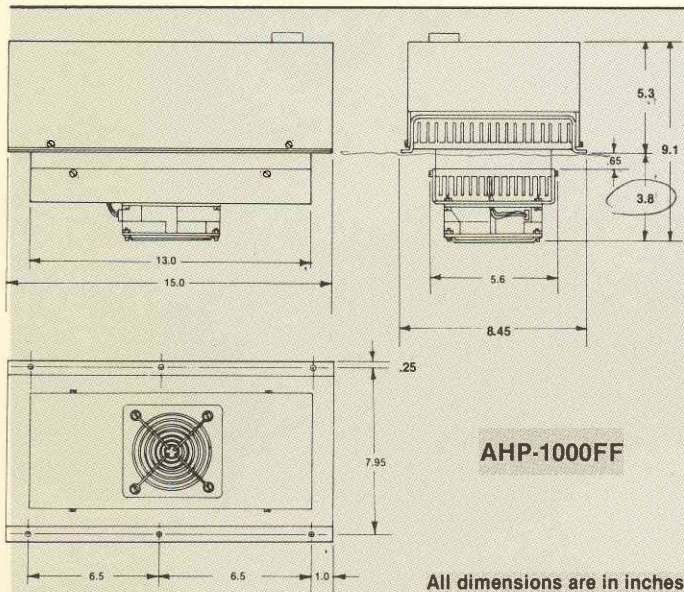
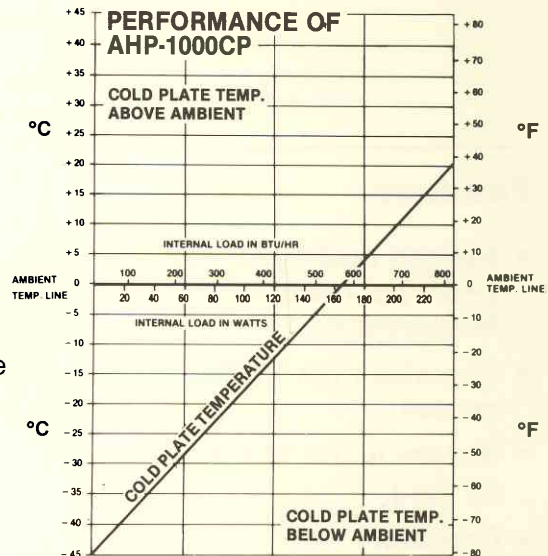
AHP-1000CP



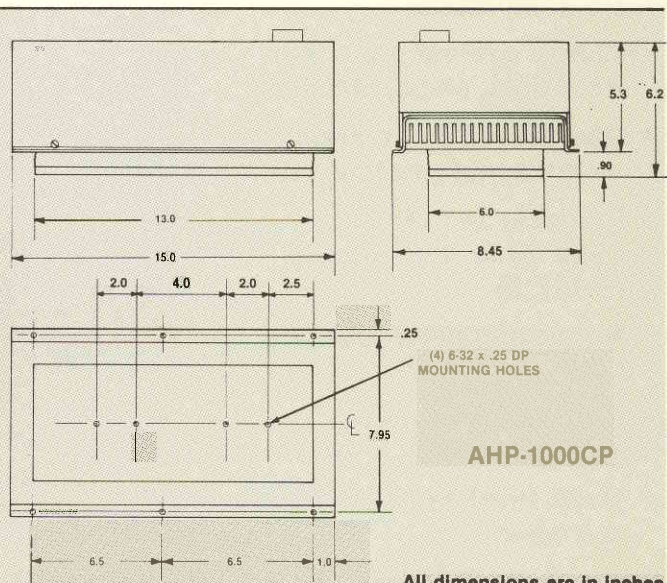
Power Required:
110 VAC at 2.7 Amps.

Weights:
AHP-1000FF
12.3 Kg. (27 Lbs.)
AHP-1000CP
11.7 Kg. (25.7 Lbs.)

Note: Performance curves relative to 25°C ambient air temp. test. Performance will improve approximately 10% as ambient temperature rises to 50°C.

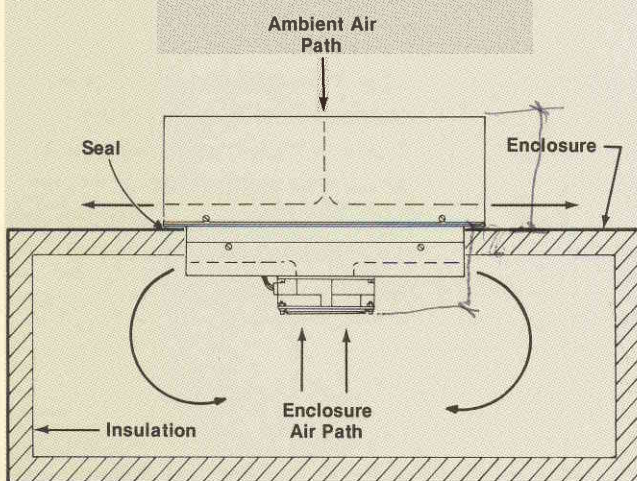


All dimensions are in inches



All dimensions are in inches

Typical Mounting Configuration



To Use Performance Curves:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from ambient temp. to enclosure air temp. or cold plate temp. (°F or °C)

AHP-800

(Air Cooled)

Solid State Heat Pump

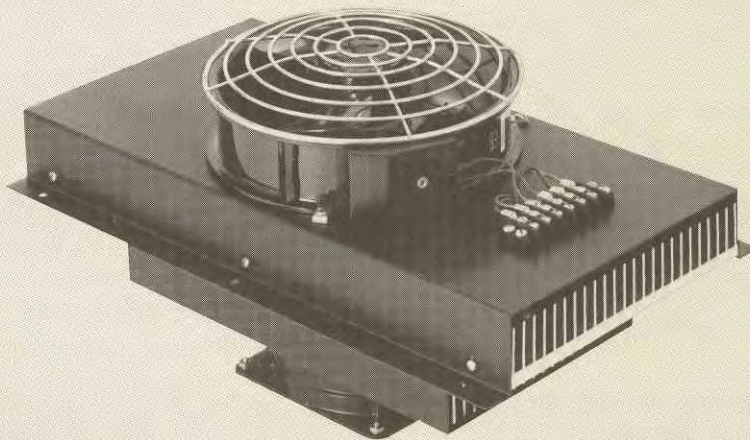
Rating 500 BTU/Hr. Cooling

Rating 680 BTU/Hr. Heating (optional)

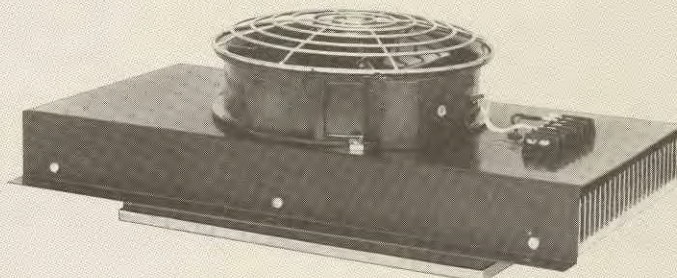
Applications in instrumentation and electronic component or package cooling

Features:

- No load cooling to -20°C (-5°F), hot side at 25°C (77°F)
- Weighs under 6.0 kg. (13.0 lbs.)
- No compressor
- Closed system protection from dust, chips, moisture
- No moving parts except fans
- Low vibration, noise, maintenance
- Operates in -30°C (-20°F) to $+65^{\circ}\text{C}$ ($+150^{\circ}\text{F}$)
- Operates in any orientation—horizontal, vertical, etc.
- Anodized aluminum finish



Model AHP-800FF
with cold side
fins and fan



Model AHP-800CP
with cold plate

The AHP-800 is a solid state cooling system which utilizes thermoelectric modules to transfer heat away from the medium being cooled. The AHP-800 is available in either the cold plate version for direct

contact cooling or the fin & fan version for NEMA-12 enclosure cooling. The AHP-800's capacity, weight and power requirements make it ideal for use in aircraft, naval vessels, locomotives, cranes, and fac-

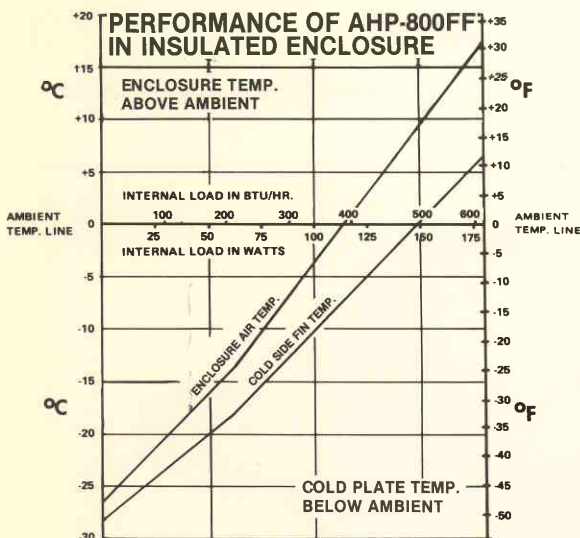
tories. The unit offers the same quality, reliability and closed loop cooling integrity inherent in all TECA designed thermoelectric heat pumps.

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AHP-800FF

AHP-800CP



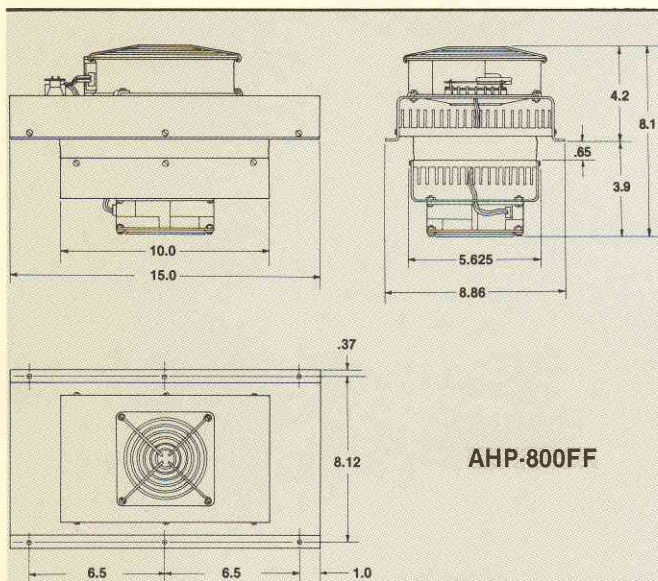
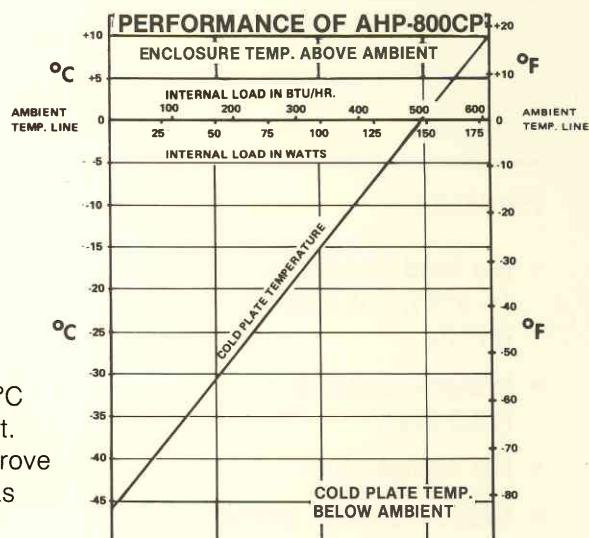
Power Required:

0-35 VDC
(Curves at 30 VDC
10 Amps.)
110 VAC for fans

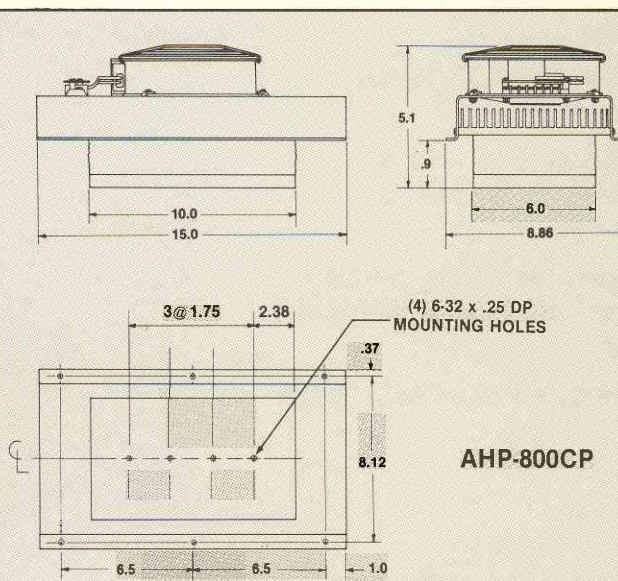
Weights:

AHP-800FF
5.9 Kg. (13.0 Lbs.)
AHP-800CP
4.8 Kg. (10.5 Lbs.)

Note: Performance curves relative to 25°C ambient air temp. test. Performance will improve approximately 10% as ambient temperature rises to 50°C.



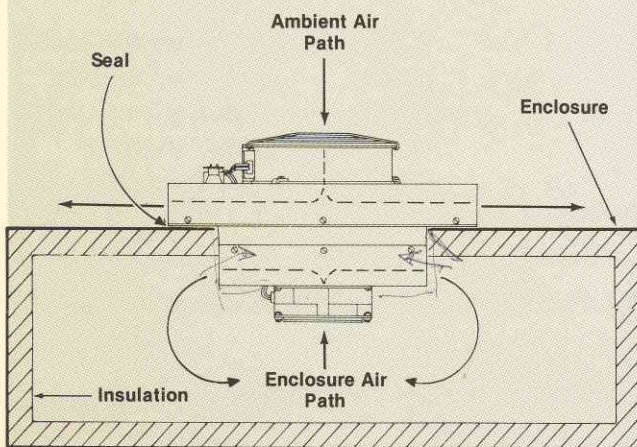
AHP-800FF



AHP-800CP

All dimensions are in inches.

Typical Mounting Method



To Use Performance Curves:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from ambient temp. to enclosure air temp. or cold plate temp. (°F or °C)

AHP-300

(Air Cooled)

Solid State Heat Pump

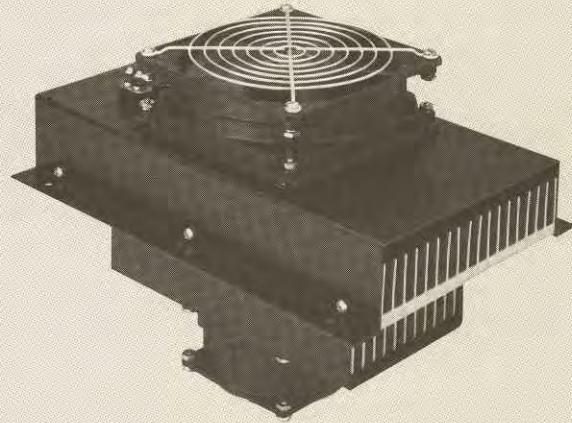
Rating 240 BTU/Hr. Cooling

Rating 340 BTU/Hr. Heating (optional)

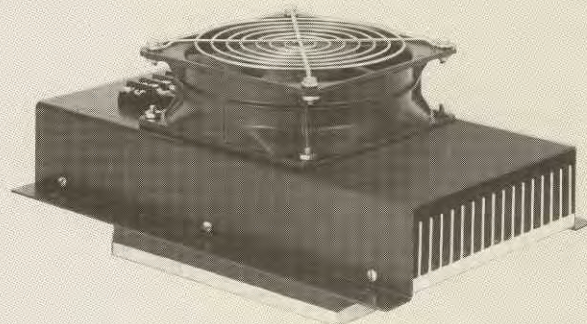
Applications in instrumentation and component cooling

Features:

- No load cooling to -20°C (-5°F), hot side at $+25^{\circ}\text{C}$ ($+77^{\circ}\text{F}$)
- Weighs only 3.3 kg. (7.3 lbs.)
- No compressor
- Closed system protection from dust, chips, moisture
- No moving parts except fan
- Low vibration, noise, maintenance
- Anodized aluminum finish
- Operates in any orientation—horizontal, vertical, etc.
- Operates in -30°C (-20°F) to $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$)



Model AHP-300FF
with cold side
fins and fan



Model AHP-300CP
with cold plate

TECA's model AHP-300 is the smallest air cooled heat pump which comes in both the cold plate and fin & fan style. Both styles use thermoelectric modules to transfer heat from

the cold side to the hot side. This makes the AHP-300FF ideal for cooling small enclosures where it will provide both cooling and a clean environment for sensitive elec-

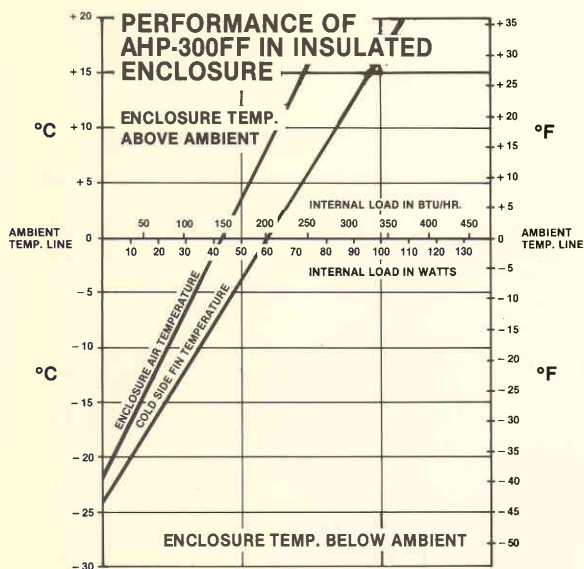
tronics. The AHP-300CP can be used as a laboratory cold plate, in line sample cooler, or specific component cooling in O.E.M. applications.

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AHP-300FF

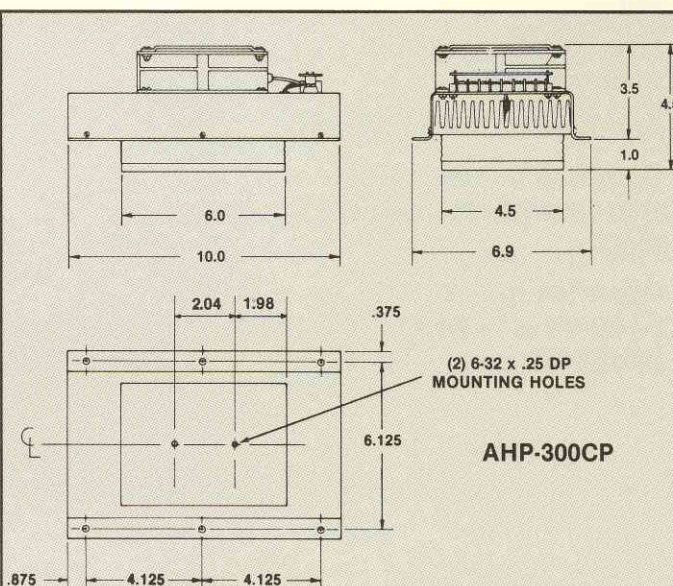
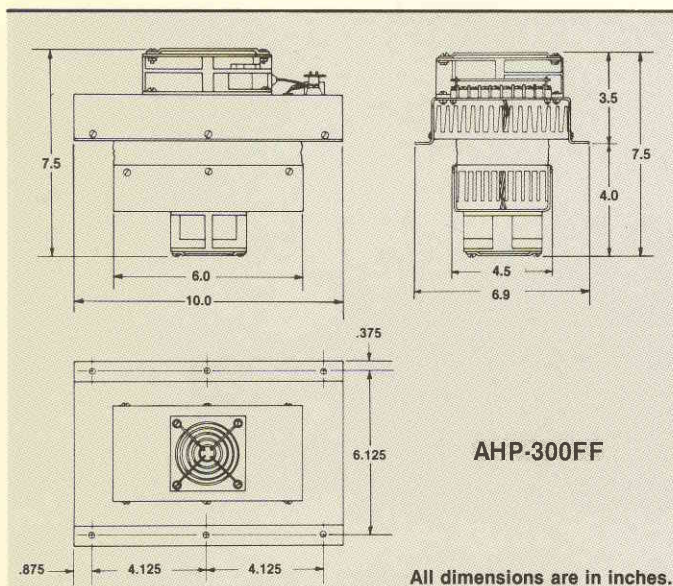
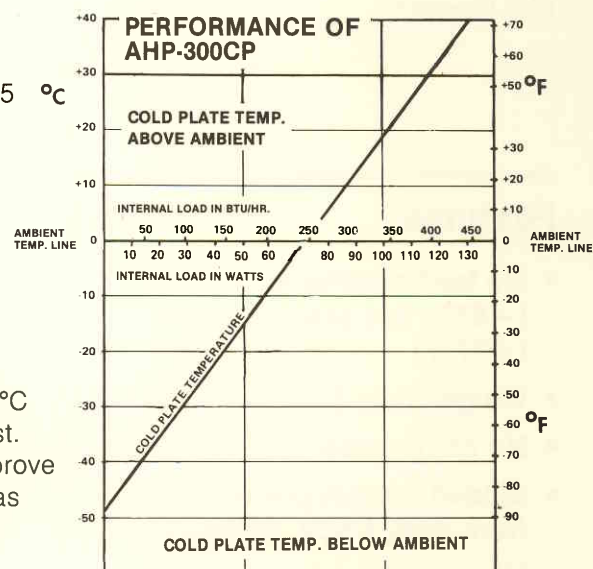
AHP-300CP



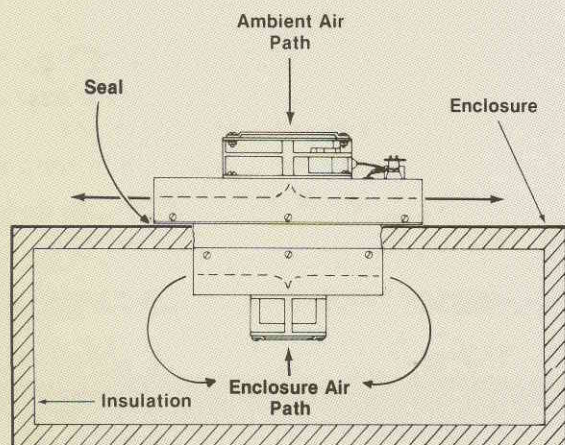
Power Required:
0-32 VDC
(Curves at 24 VDC 4.5 °C
Amps.)
110 VAC for fans

Weights:
AHP-300FF
3.3 Kg. (7.3 Lbs.)
AHP-300CP
2.6 Kg. (5.8 Lbs.)

Note: Performance curves relative to 25°C ambient air temp. test. Performance will improve approximately 10% as ambient temperature rises to 50°C.



Typical Mounting Method



To Use Performance Curves:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from ambient temp. to enclosure air temp. or cold plate temp. (°F or °C)

AHP-150

(Air Cooled)

Solid State Heat Pump

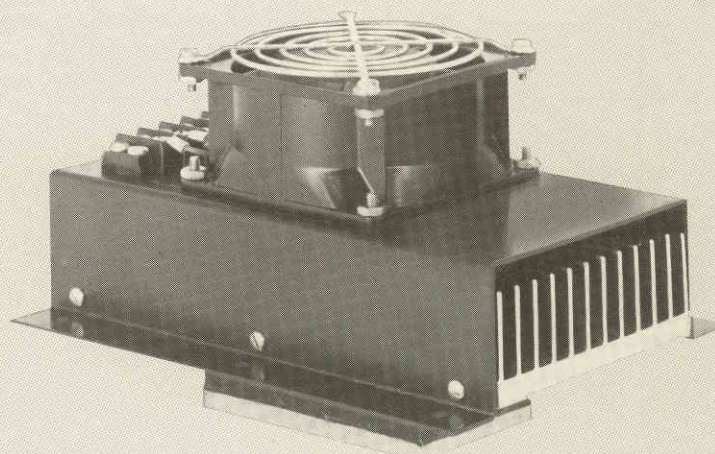
Rating 110 BTU/Hr. Cooling

Rating 170 BTU/Hr. Heating (optional)

Applications in industrial and consumer product cooling

Features:

- No load cooling to -20°C (-5°F), hot side at $+25^{\circ}\text{C}$ ($+77^{\circ}\text{F}$)
- Weighs under 1.4 kg. (3.0 lbs.)
- No compressor
- Operates in any orientation—horizontal, vertical, etc.
- Closed system protection from dust, chips, moisture
- Low vibration, noise, maintenance
- Operates in -30°C (-20°F) to $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$)
- No moving parts except fan
- Anodized aluminum finish



Model AHP-150CP

TECA's smallest air cooled heat pump, the AHP-150 comes only in the cold plate style. It's small size and D.C. voltage requirements make it ideal for mobile and laboratory applications. Heat is transferred from the cold plate via thermo-

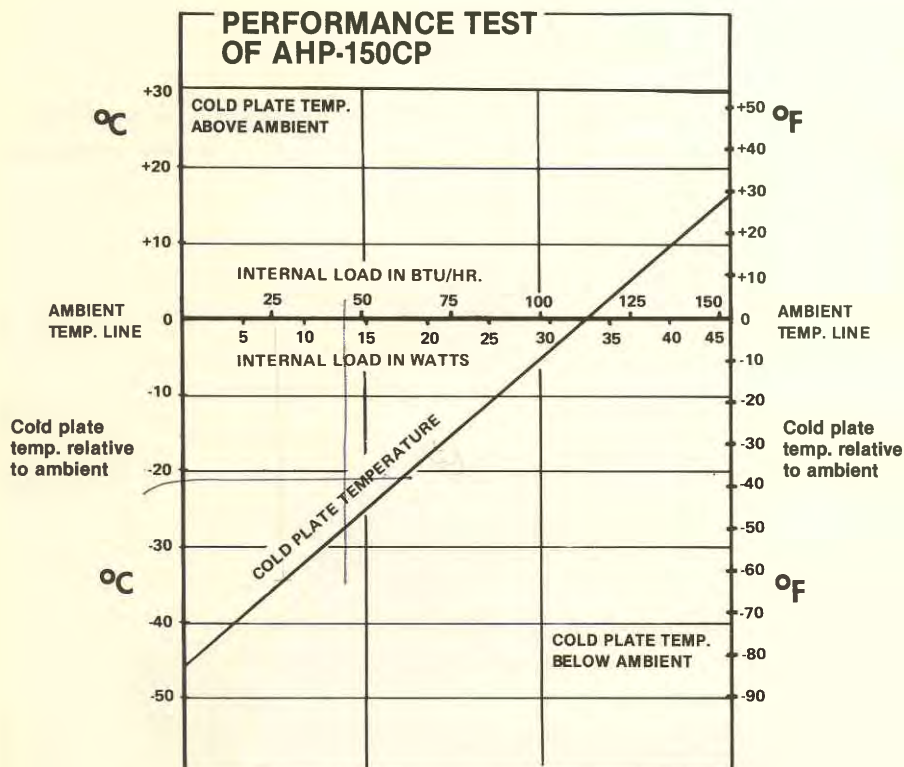
electric modules to the heat sink where it is dissipated into the ambient air. The unit is particularly useful anywhere small thermal loads require cooling below ambient temperatures. Examples include sensitive electronic

component cooling and laboratory or mobile sample cooling. Custom cold plates can be easily added to simplify component or sample mounting.

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AHP-150CP



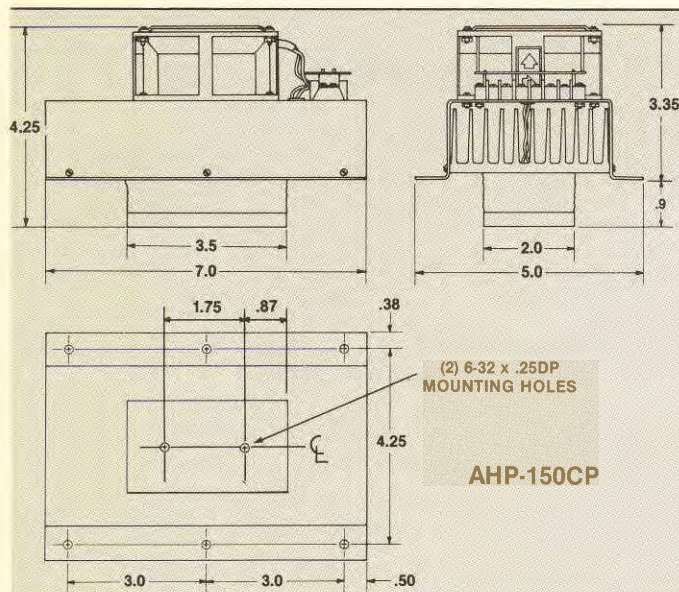
Power Required:

0-16 VDC
(Curve at 12 VDC 4.5 Amps.)
110 VAC for fans

Weight:

1.4 Kg. (3.0 Lbs.)

Note: Performance curve relative to 25°C ambient air temp test. Performance will improve approximately 10% as ambient air temperature rises to 50°C.



To Use Performance Curve:

REQUIRED INFORMATION:

- Total Heat Load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature.

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect cold plate temperature line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from ambient temp. to cold plate temp. (°F or °C)

All dimensions are in inches.

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LHP-1700

(Liquid Cooled)

Solid State Heat Pump

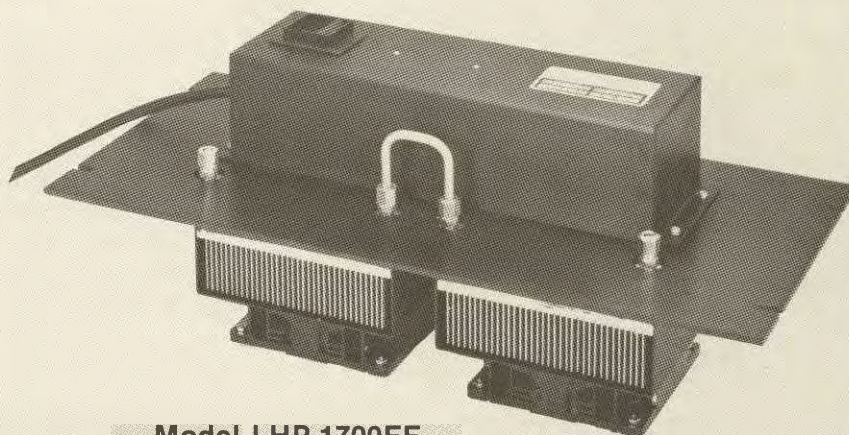
Rating 1500 BTU/Hr. Cooling

Rating 1360 BTU/Hr. Heating (optional)

Applications in computers, machine tools, electronics

Features:

- No load cooling to -25°C (-15°F) at room temperature
- Standard 19" rack mount
- Weights under 9.8 kg (21 lbs.)
- No compressor
- Integral D.C. power supply
- Closed system protection from dust, chips, moisture
- Operates in any orientation—horizontal, vertical, etc.
- Operates in -30°C (-20°F) to $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$)
- No moving parts except fans
- Low vibration, noise, maintenance
- No exposed fans
- Less than $1\frac{1}{4}$ sq. ft. panel space
- Adaptable to NEMA type explosion proof applications



Model LHP-1700FF
with cold side fins & fan



Model LHP-1700CP
with cold plate

The LHP-1700 is TECA's largest liquid cooled heat pump. The LHP-1700 is constructed of aluminum with stainless steel fasteners and uses a constant flow of liquid as a heat removal source. Combining these features with solid state

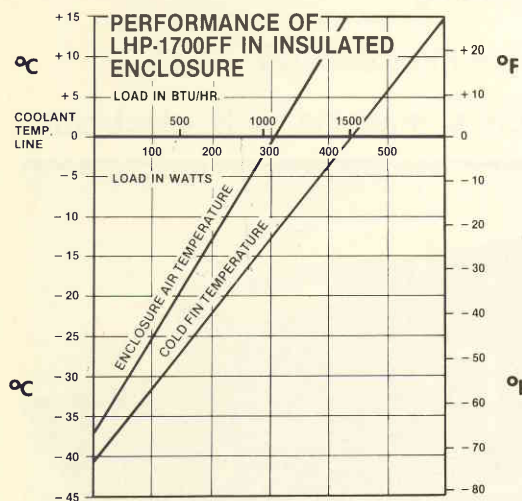
thermoelectric modules make the LHP-1700 capable of both high capacity and high temperature differentials. The unit comes complete with its own integral power supply, 19" rack panel for mounting, and easy to access liquid fittings. Available in

cold plate and fin & fan versions, the LHP-1700 is fast becoming TECA's most popular liquid cooled heat pump with applications in paper mills and other explosion-proof applications.

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LHP-1700FF



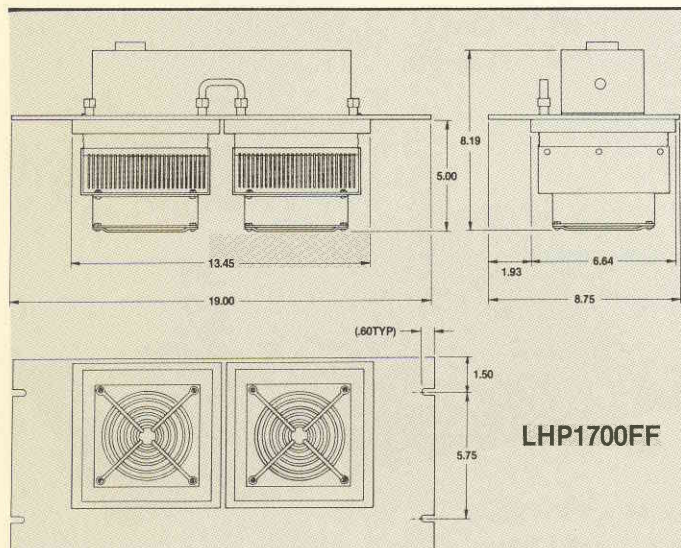
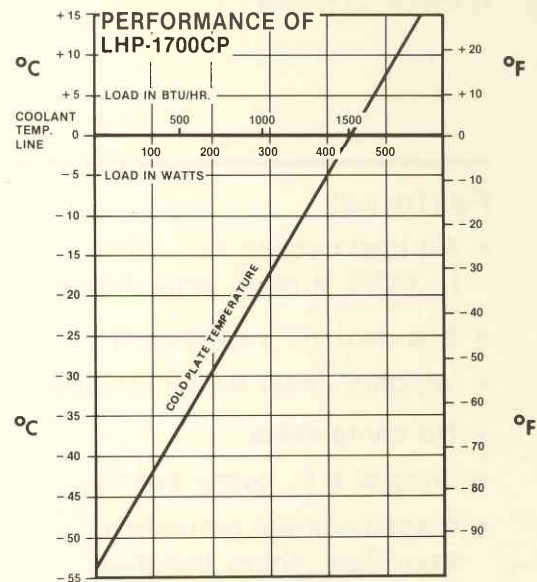
Power Required:
110 VAC at 5.0 Amps

Minimum Recommended Coolant Flow Rate:
2L/Min. (0.5 Gal./Min)

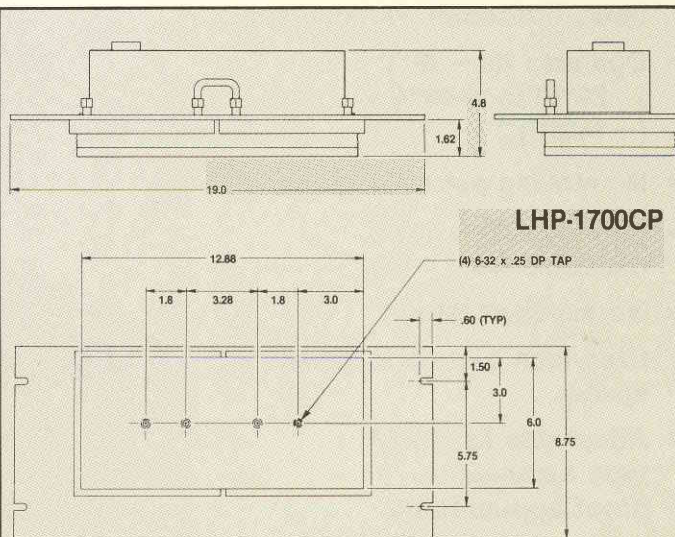
Weights:
LHP-1700FF
9.8 Kg (21 Lbs.)
LHP-1700CP
9.2 Kg (19.75 Lbs.)

Note: Performance curves relative to 25°C Coolant. Performance will improve approximately 10% as coolant temperature rises to 50°C.

LHP-1700CP

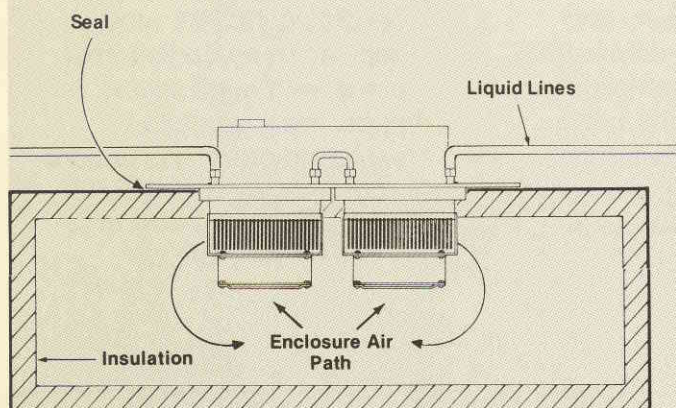


All dimensions are in inches.



All dimensions are in inches

Typical Mounting Method



To Use Performance Curves:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature
- Liquid coolant temperature

METHOD:

- Locate correct heat load on liquid coolant temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from liquid coolant temp. to enclosure air temp. or cold plate temp. (°F or °C)

LHP-800

(Liquid Cooled)

Solid State Heat Pump

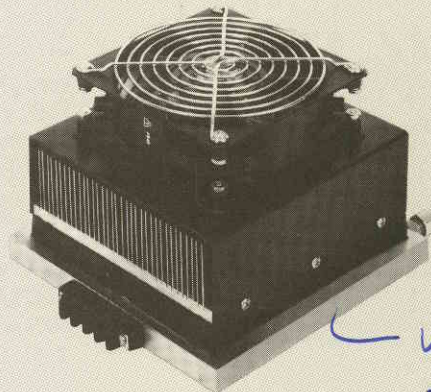
Rating 740 BTU/Hr. Cooling

Rating 680 BTU/Hr. Heating (optional)

Applications in electronics, instrumentation and laboratories

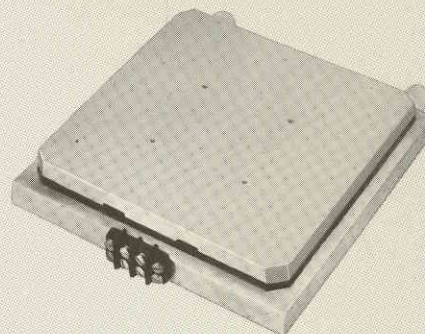
Features:

- Low profile is perfect for bench top test stands
- Weighs only 3.2 kg. (7.0 lbs.)
- No compressor
- Closed system protection from dust, chips, moisture
- No moving parts except fan
- Operates in any orientation—horizontal, vertical, etc.
- Low vibration, noise and maintenance
- Cold Plate Model operates in -30°C (-20°F) to $+100^{\circ}\text{C}$ ($+212^{\circ}\text{F}$)
- Cold Fin and Fan model operates in -30°C (-20°F) to $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$)



Model LHP-800FF
with cold side fin & fan

w/ ST. STL.
#1750-
5/10/81



Model LHP-800CP
with cold plate

The LHP-800CP provides a low profile, high capacity thermoelectric heat pump for both laboratory, and industrial uses. The LHP-800FF can be mounted entirely inside an enclosure or through an enclosure wall, leaving the liquid jacket outside the

enclosure. Mounted inside of an enclosure the unit becomes an ideal cooler for pressurized cabinets or NEMA- explosion proof application. The only intrusions to the cabinet would be the input and output liquid lines. High density cold side fins provide the necessary surface area

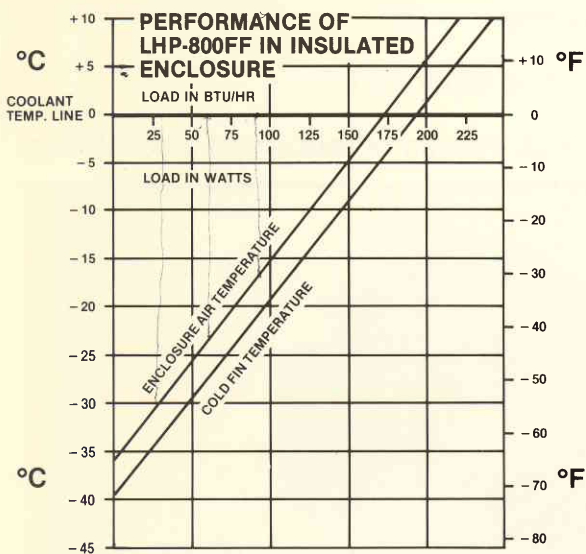
to handle the capacity and temperature differential generated by the thermoelectric modules. The C.P. model also offers an excellent base for high power cascades, where cooling in the minus 40°C range and lower is required.

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LHP-800FF

LHP-800CP



Power Required:

0-35 VDC

(Curves at 30 VDC

10 Amps.)

110 VAC for fan

Minimum Recommended Coolant Flow Rate:

2L/Min. (0.5 Gal./Min.)

Weights:

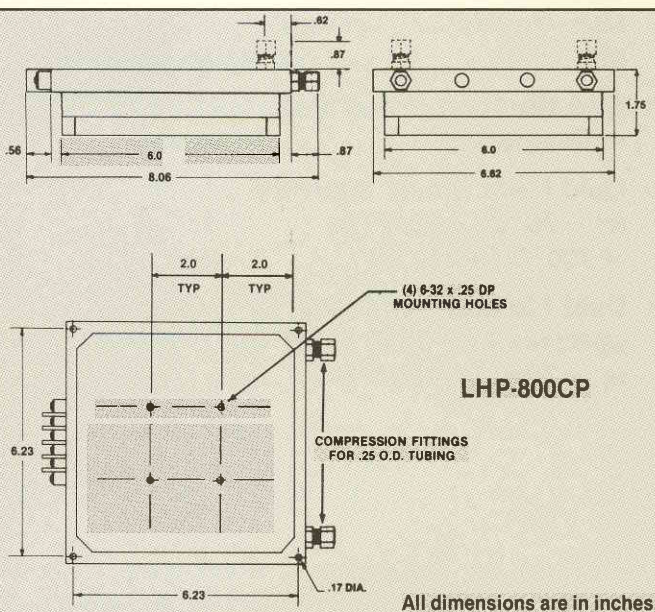
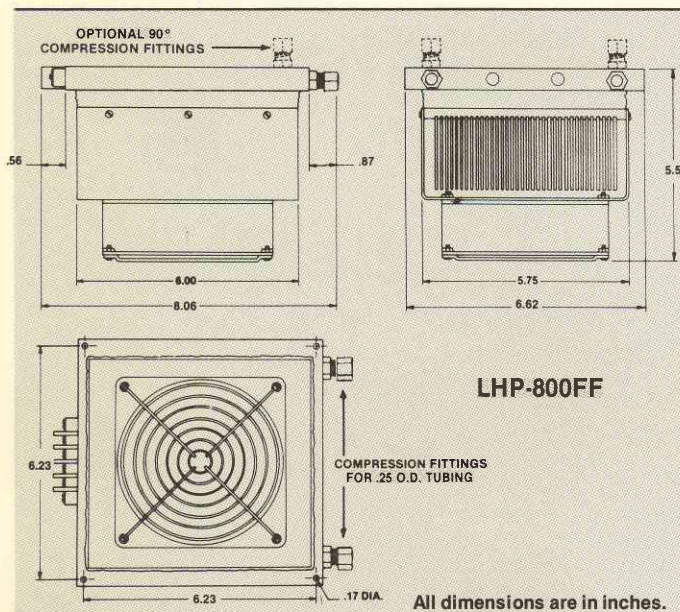
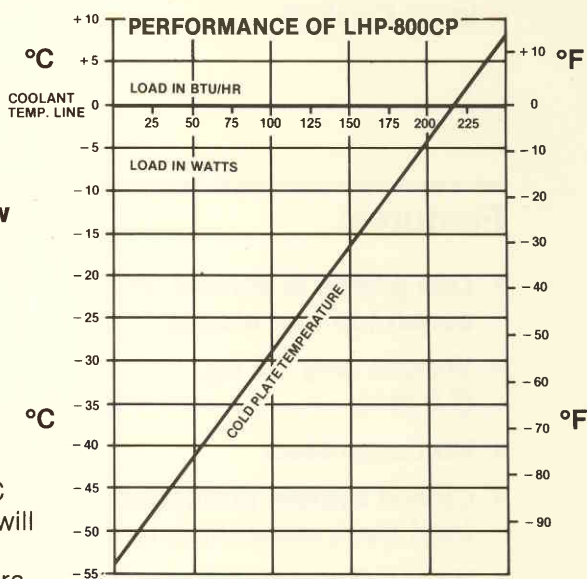
LHP-800FF

3.2 Kg. (7.0 Lbs.)

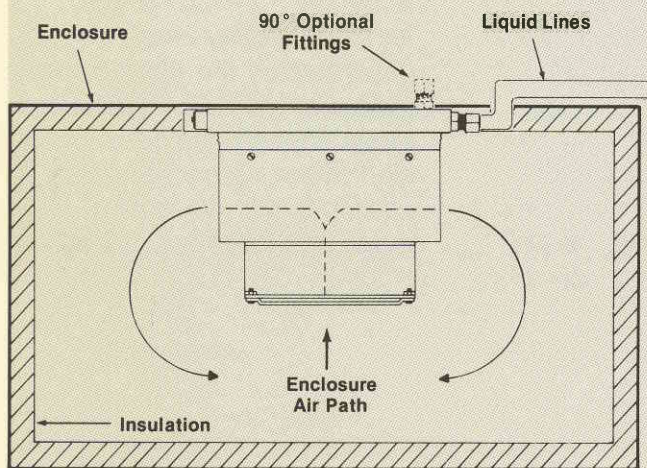
LHP-800CP

2.4 Kg. (5.2 Lbs.)

Note: Performance curves relative to 25°C Coolant. Performance will improve approximately 10% as coolant temperature rises to 50°C.



Typical Mounting Method



To Use Performance Curves:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature
- Liquid coolant temperature

METHOD:

- Locate correct heat load on liquid coolant temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from liquid coolant temp. to enclosure air temp. or cold plate temp. (°F or °C)

LHP-300

(Liquid Cooled)

Solid State Heat Pump

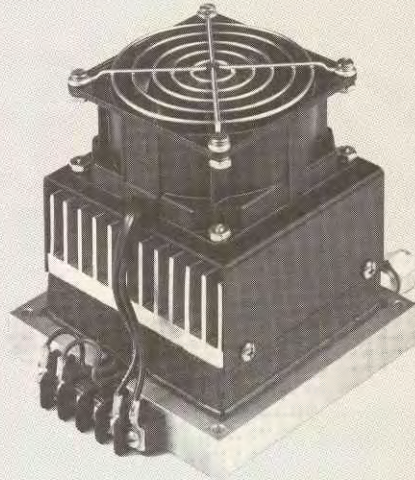
Rating 305 BTU/Hr. Cooling

Rating 340 BTU/Hr. Heating (optional)

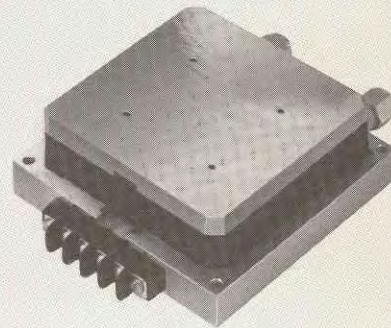
Applications in electronics, instrumentation and laboratories

Features:

- No load cooling to -30°C (-20°F), hot side at 25°C (77°F)
- Weighs only 1.25 kg. (2.75 lbs.)
- No compressor
- Closed system protection from dust, chips, moisture
- No moving parts
- Low vibration, noise
- Low maintenance
- Operates in any orientation—horizontal, vertical, etc.
- Cold Plate Model operates in -30°C (-20°F) to $+100^{\circ}\text{C}$ ($+212^{\circ}\text{F}$)
- Cold Fin & Fan Model operates in -30°C (-20°F) to $+70^{\circ}\text{C}$ ($+158^{\circ}\text{F}$)



**Model LHP-300FF
with cold sink & fan**



**Model LHP-300CP
with cold plate**

Possibly the smallest stock air conditioner made today, the LHP-300FF provides cooling while maintaining a clean environment for delicate electronics. The combination of fluid heat transfer and thermoelectric cooling allows for small size and high capacity.

Temperature differentials are determined from the cooling liquid temperature, which typically yields large temperature differentials from ambient. This model is also available in a cold plate version (LHP-300CP) for cooling of components, samples or

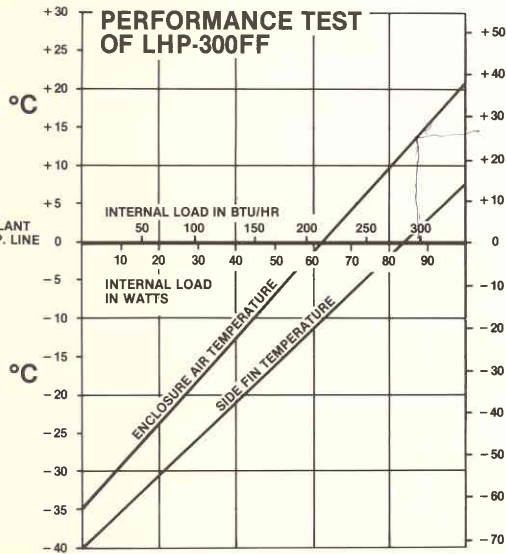
materials via direct contact. Temperature differentials of over 50°C from the liquid temperature are well within range, making this product ideal for the testing of temperature sensitive devices or for laboratory use.

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LHP-300FF

LHP-300CP



Power Required:

0-32 VDC
(Curves at 24 VDC 4.5 Amps.)
110 VAC for fan

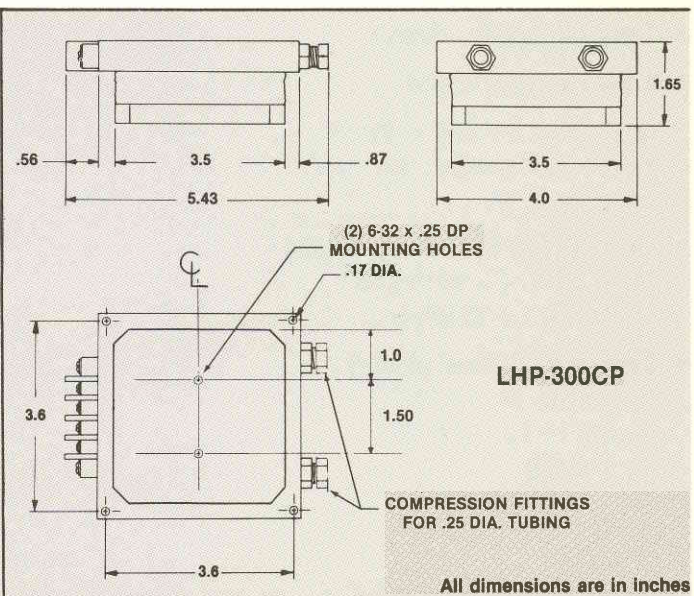
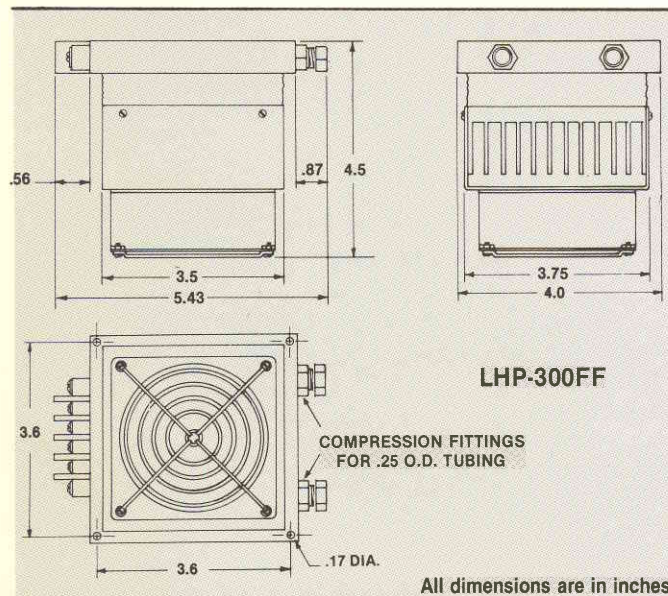
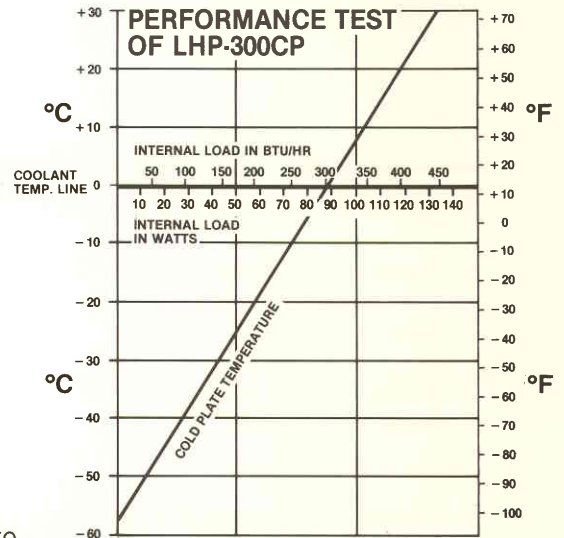
Minimum Recommended Coolant Flow Rate:

.2L/Min. (0.05 Gal./Min.)

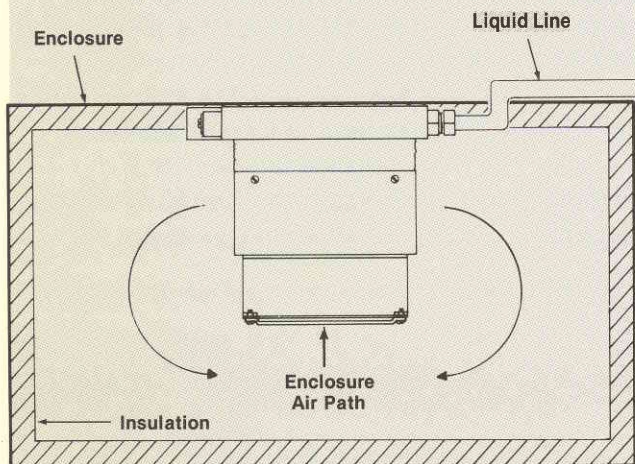
Weights:

LHP-300FF
1.25Kg. (2.75 Lbs.)
LHP-300CP
0.8 Kg. (1.75 Lbs.)

Note: Performance curves relative to 25°C Coolant. Performance will improve approximately 10% as coolant temperature rises to 50°C.



Typical Mounting Method



To Use Performance Curves:

REQUIRED INFORMATION:

- Total Heat Load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature.
- Liquid Coolant Temperature

METHOD:

- Locate correct heat load on liquid coolant temperature line (horizontal)
- Extend vertical line from heat load to intersect enclosure air temp. line or cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from liquid coolant temp. to enclosure air temp. or cold plate temp. (°F or °C)

LHP-150

(Liquid Cooled)

Solid State Heat Pump

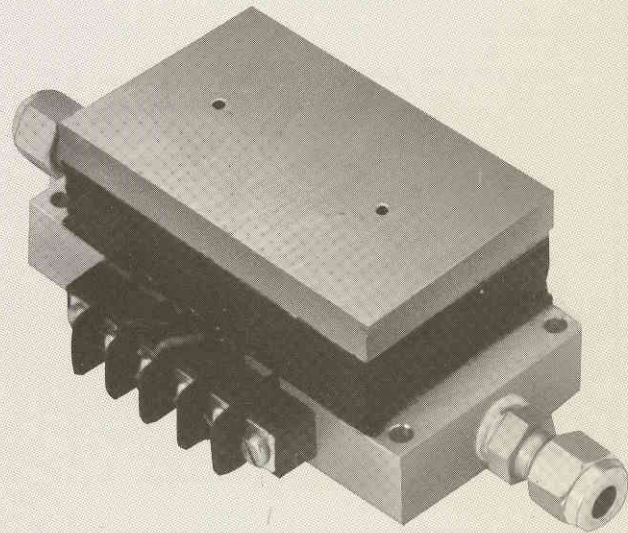
Rating 135 BTU/Hr. Cooling

Rating 170 BTU/Hr. Heating (optional)

Applications in industrial and consumer product cooling

Features:

- No load cooling to -25°C (-15°F), hot side at 25°C (77°F)
- Weighs under 0.34 kg. (0.75 lbs.)
- No compressor
- Operates in any orientation—horizontal, vertical, etc.
- Closed system protection from dust, chips, moisture
- No vibration, noise
- Low maintenance
- Operates in -30°C (-20°F) to $+100^{\circ}\text{C}$ ($+212^{\circ}\text{F}$)
- No moving parts



Model LHP-150CP

When used by itself as a bench-top cooler or in a group for those components where a large flat surface area is not available, the LHP-150 has

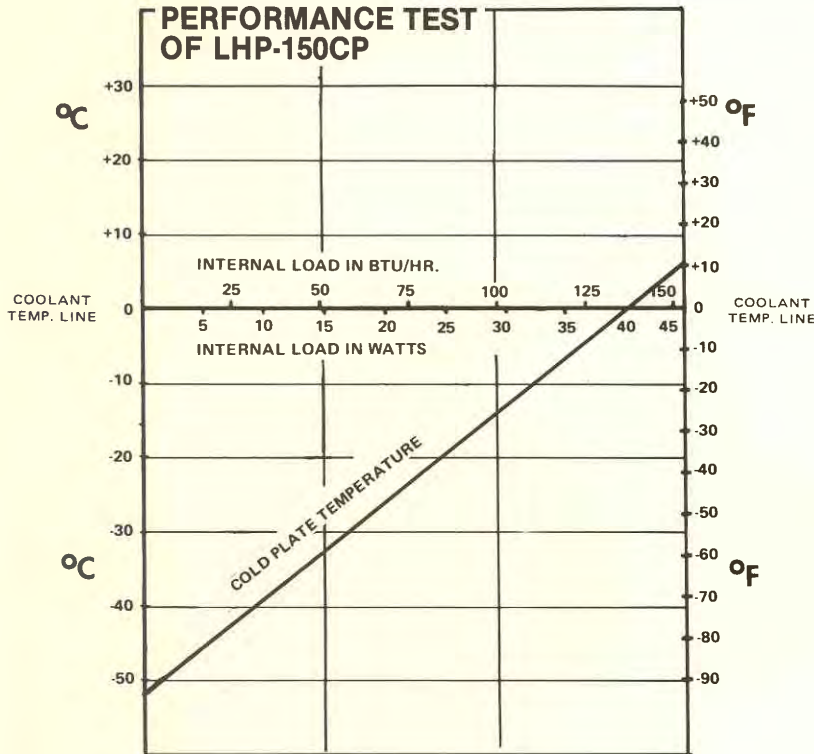
made its small size a key factor in its success. Occupying less than 1/100 of a cubic foot allows it to fit into hot spot areas where cooling is essen-

tial, yet space is at a premium. Its versatility is enhanced by its ability to operate from 0 to 16 VDC. (Note: performance curve is for 12 VDC operation.)

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LHP-150CP



Power Required:

0-16 VDC

(Curve at 12 VDC 4.5 Amps.)

Minimum Recommended

Coolant Flow Rate:

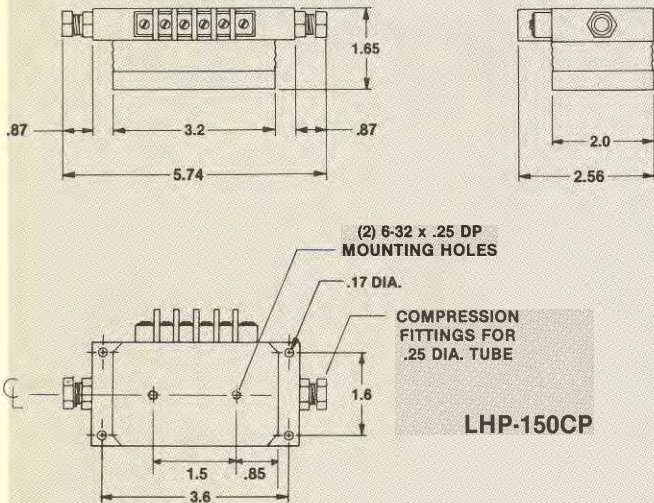
0.2L/Min. (0.05 Gal./Min.)

Weight:

0.34 Kg. (0.75 Lb.)

Note: Performance curve relative to 25°C coolant temp. Performance will improve approximately 10% as coolant temperature rises to 50°C.

All temperatures are relative to coolant temperature of +25°C (77°F)



All dimensions are in inches.

To Use Performance Curve:

REQUIRED INFORMATION:

- Total heat load (watts or BTU/Hr)
- Desired temperature differential from the ambient air temperature
- Liquid coolant temperature

METHOD:

- Locate correct heat load on liquid coolant temperature line (horizontal)
- Extend vertical line from heat load to intersect cold plate temp. line (diagonal)
- From that point of intersection extend a horizontal line to determine actual temp. differential from coolant temp. to cold plate temp. (°F or °C)

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C-2000; C-4000

(Air Cooled)

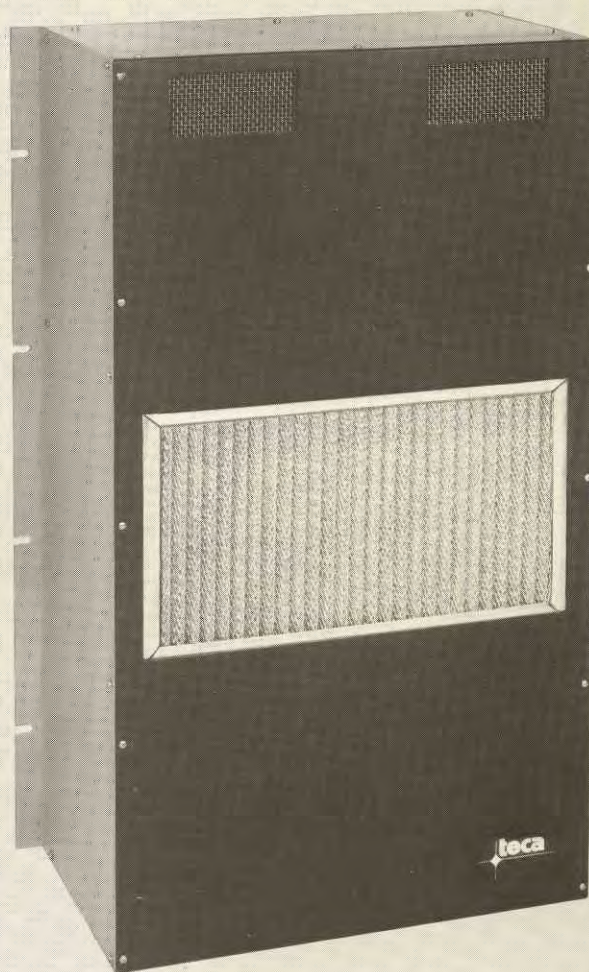
Industrial Air Conditioners

Rated 2000 & 4000 BTU/Hr Cooling

Application to computers, machine tools, robotics,
industrial electronic control systems

Features:

- No load cooling to 35°F in 77°F ambient
- Operates in ambients from +35°F to +125°F
- Rugged, rust-free stainless steel enclosure
- Air conditioner completely external to load cabinet
- Standard 19 inch rack mount
- Convenient mounting on side or back of load cabinet
- Closed system protection from dust provides clean environment
- Optional temperature controls with reliable solid state switching



Thousands of TECA NEMA-12 cabinet conditioners are in use today in environments ranging from steel mills and assembly lines to computer rooms and robotics. Capable of cooling to temperatures below ambient with industrial quality components makes the C-2000 &

C-4000 rugged, dependable air conditioners. Because they do not exchange air between the outside and the inside of a cabinet, clean air environment is maintained in the electronic enclosure. This is accomplished by completely isolating the evaporator section from the

condenser section. Separate reliable blowers used to circulate cooling air and to dissipate output heat to the ambient air. Standard 19" rack flanges allow for ease of mounting and power can be provided directly from 115 volt A.C.

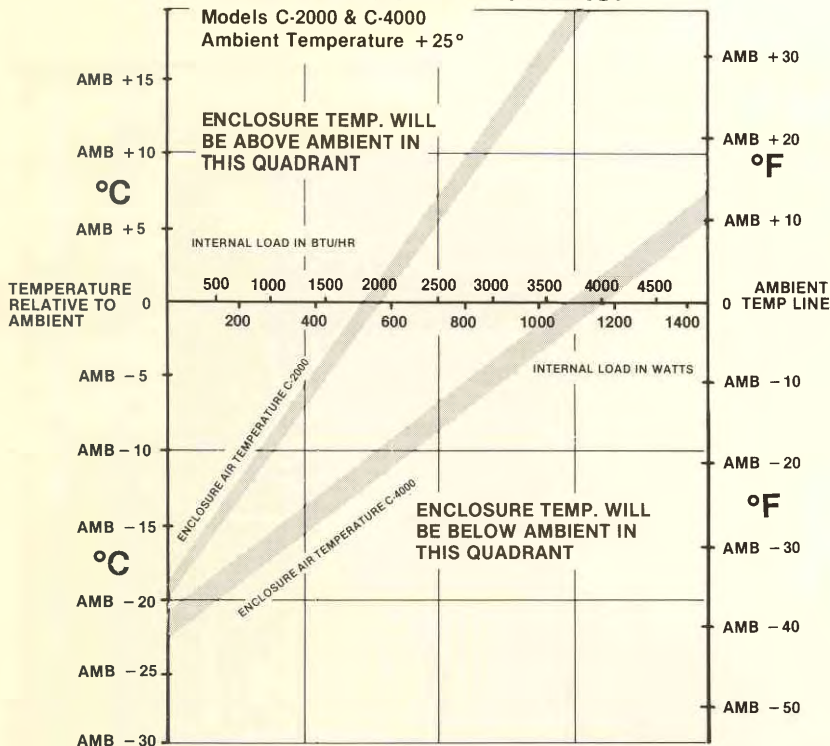
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C-2000; C-4000

PERFORMANCE OF TECA AIR CONDITIONERS:

Models C-2000 & C-4000
Ambient Temperature + 25°



Power Required:

C-2000 110 VAC at 10 Amps

C-4000 110 VAC at 12 Amps

Weight:

54.6 Kg. (120 Lbs.)

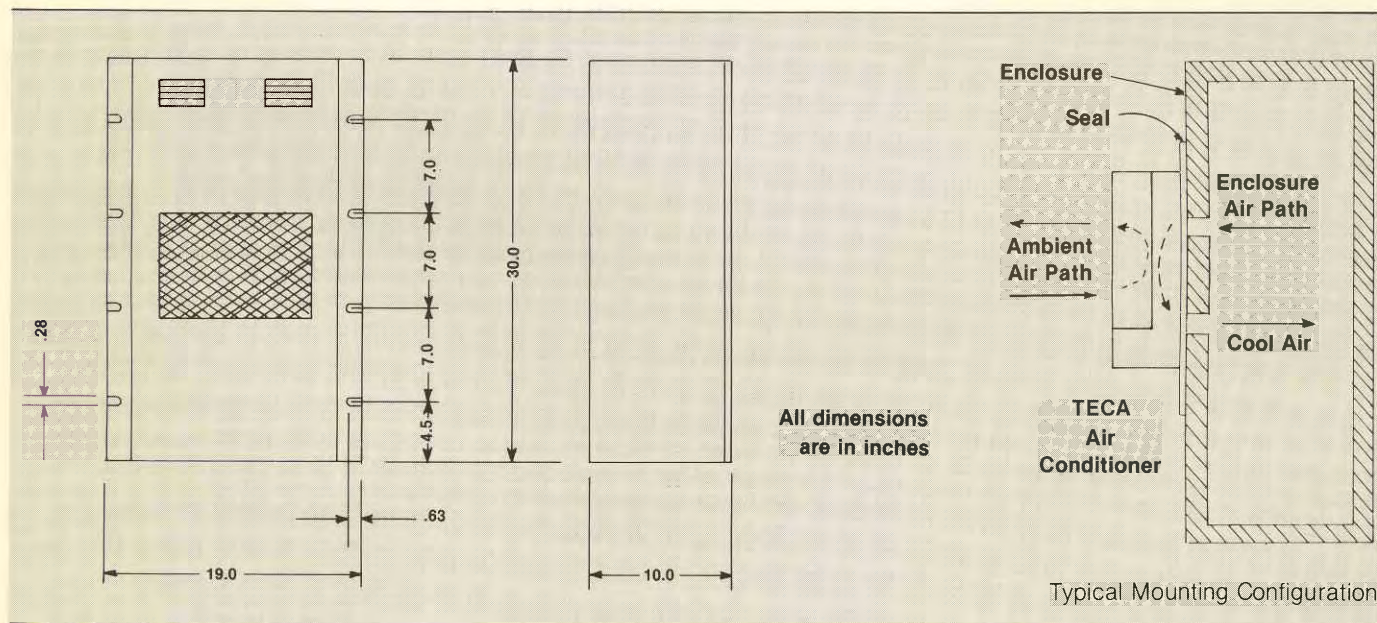
To Use Performance Curve:

REQUIRED INFORMATION:

- Desired temperature differential of enclosure air from the outside ambient air temperature.
- Total Heat Load (watts or BTU/Hr)

METHOD:

- Locate correct heat load on ambient temperature line (horizontal)
- Extend vertical line from heat load to intersect appropriate enclosure air temperature band (C-2000, C-4000)
- From that point of intersection, extend a horizontal line to determine temperature differential from the outside ambient air to the enclosure air temperature.



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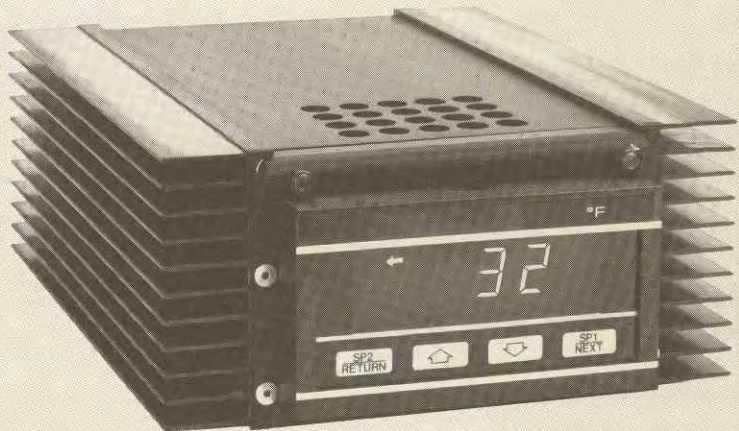
TC-4500

Solid State Dual Cool/Heat Temperature Controller

Applications in scientific laboratories, electronic testing, process control, temperature cycling and temperature stabilization

Features:

- Flexible industrial micro-processor master control
- All solid-state circuitry with switching output for 8 amperes AC
- Convenient viewing of set point and sensor temperature on fluorescent display
- Selection of time proportional or simple on-off control
- Front panel selection of temperature range, dead band, and integral-derivative control
- Independent adjustment of cooling and heating set points
- Nominal one degree F resolution, two degrees hysteresis and 0°F to +150°F range
- Convenient T type copper constantan thermocouple sensor input
- Green LED indicates cooling on, Red LED indicates heating on
- Computer input and communication options



Model TC-4500

The TC-4500 is a solid state temperature controller and is available in a rugged attractive instrument package. It is used in controlling the AC input of any one of several DC power supply designs providing energy to TECA thermoelectric modules or cooling conditioner

systems with the accompanying heating systems. It also has the ability to control other cooling and heating systems such as compressor motors, solenoid valve control and electrical resistance heaters. The desired temperature can be set and held within one degree F

with a simple keypad input to any temperature in the range -200° to +700°F. The 3½ digit fluorescent display provides a readout of the temperature sensed by the T type thermocouple and the set temperature.

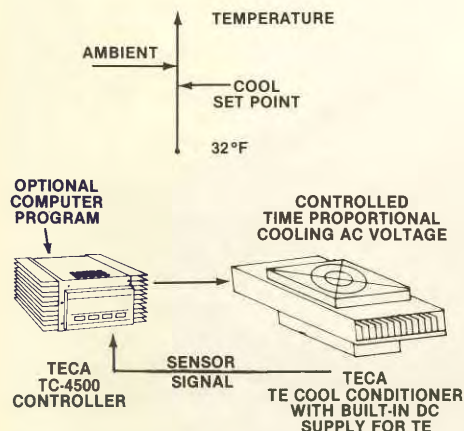
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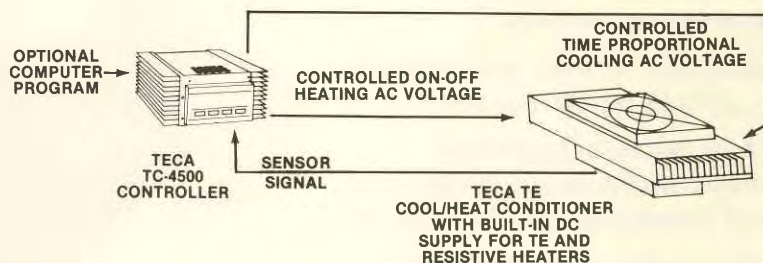
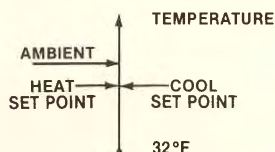
TC-4500

TYPES OF APPLICATIONS

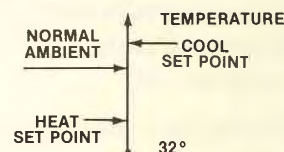
Controlled cooling below ambient temperature



Controlled combined heating-cooling set temperature for stable operation near ambient temperature



Controlled separate heating and cooling set temperatures to avoid equipment temperature extremes and to save energy expenditure, with variable ambient temperature



Options Available:

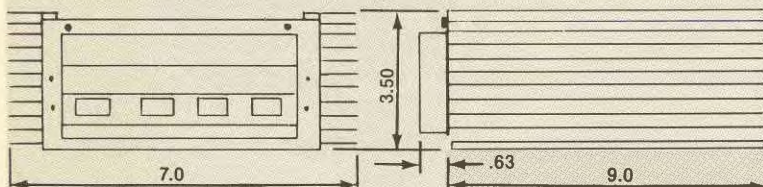
- Remote computer control
- RS-232 and RS-422 communication control
- Input for RTD and other thermocouple types
- DC signal output

Power Required: 120 VAC at 0.1 Amp.

Solid State Relay Rating: 8 Amperes AC

Weight: 6 Lbs.

All dimensions are in inches



INCLUDED

- Degree F or degree C display
- Interchangeable control of heat and cool outputs to either on-off or time proportioning
- High and low end of temperature range adjustable
- Easy selection of proportional band, reset, rate, time proportioning rate cycle time and on-off dead band
- Adjustment of conversion/display update rate

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teca™ Product Price List

AIR CONDITIONERS & HEAT PUMPS/Air Cooled

MODEL	PRICE	MODEL	PRICE
AHP-1700	\$1125.00	AHP-800FFHC	\$1425.00
AHP-1700 HC	1695.00	AHP-800CPHC	1425.00
AHP-1000FF	995.00	AHP-300FF	350.00
AHP-1000CP	995.00	AHP-300CP	350.00
AHP-1000FFHC	1625.00	AHP-300FFHC	695.00
AHP-1000CPHC	1625.00	AHP-300CPHC	695.00
AHP-800FF	725.00	AHP-150	225.00
AHP-800CP	725.00	AHP-150HC	395.00

AIR CONDITIONERS & HEAT PUMPS/Liquid Cooled

MODEL	PRICE	MODEL	PRICE
LHP-1700FF	\$1375.00	LHP-800CPHC	\$1625.00
LHP-1700CP	1375.00	LHP-300FF	435.00
LHP-1700FFHC	2075.00	LHP-300CP	435.00
LHP-1700CPHC	2075.00	LHP-300FFHC	825.00
LHP-800FF	925.00	LHP-300CPHC	825.00
LHP-800CP	925.00	LHP-150	295.00
LHP-800FFHC	1625.00	LHP-150HC	465.00

TEMPERATURE CONTROLLERS

MODEL	PRICE
TC-4500 Cool and/or Heat, Digital Display	\$750.00
TC-2A Cooling Only	175.00
TC-3A Automatic Heat/Cool	250.00

NOTE: TC-3A is used in conjunction with HC (Heat/Cool) Air Conditioners, Heat Pumps and Power Supplies.

DC POWER SUPPLIES

MODEL	PRICE
PS30-6V	DISCONTINUED \$225.00
PS120-12V	DISCONTINUED 311.00
PS80-12	175.00 275-
PS160-24	237.00 295 325-
PS400-30	300.00 395-
PS80-12HC	215.00 325
PS160-24HC	265.00 375
PS400-30HC	445.00

SINGLE STAGE MODULES

Cooling Modules (When ordering specify tinned (TBS) or lapped (DL) surfaces) Example: 950-71 DL

MODEL	930-7 930-11 930-17	940-7 940-11 950-7	950-11 950-17	930-35 940-15 950-35	930-71 940-31 950-71
Qty. 1-99	\$25.00			\$38.00	\$50.00



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Effective 11/1/86