

CPV Temperature Gradient Bar

Thermal Gradient Bar

OVERVIEW

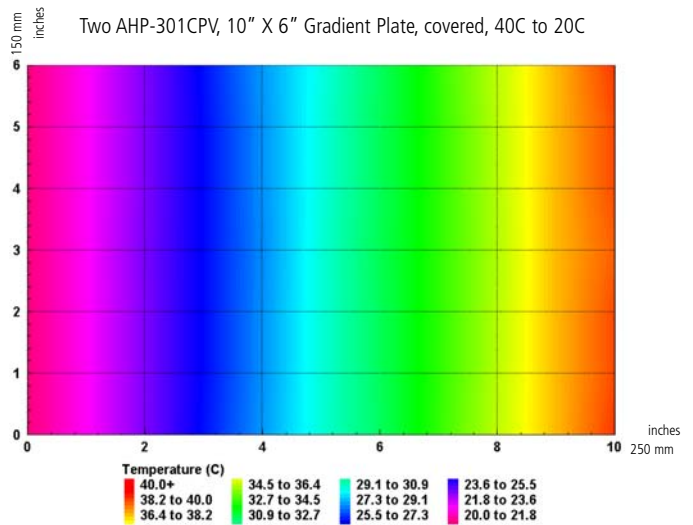
TECA's Gradient Bar options expand the use of the CPV line of Cold Plates. With a TECA model CPV cold plate at each end the gradient bar has programmable gradient areas with near linear gradients between the two ends and near uniform temperatures along the width of the bar. The temperature at each end of the gradient area can be programmed to a single set point or with a ramp/step and soak profile creating constant, expanding, contracting or moving gradients. Set the gradient profile to be large for initial observations then adjust the end set points to zoom in on a temperature range of interest. The temperature at the end of the gradient area is measured from underneath the plate at approximately .05 from the surface leaving the top gradient area clean and smooth. Optional external surface sensors can be used to change the size of the gradient area.

FEATURES

- Near Linear Temperature Gradient differentials from 2C to 30C
- Independent Temperature Set points
- Includes two bottom mounted 3 wire RTD sensors
- Programmable set points, step or ramp changes
- Fixed or adjustable gradient areas
- Gradients above and below ambient
- Bench top
- Air Cooled
- Anodized aluminum surface
- Used with model AHP-301CPV or AHP-1200CPV units
- Custom sizes available
- Custom Acrylic covers and barriers available
- End Temperatures from -10C (minimal ΔT) to 70C (ΔT of 45C)

TEMPERATURE STUDY APPLICATIONS

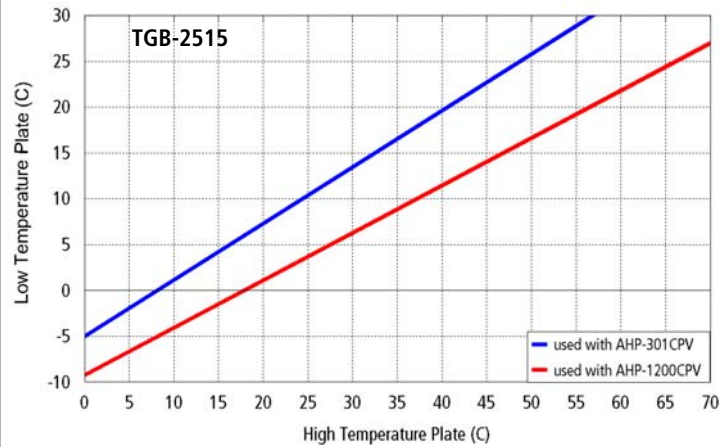
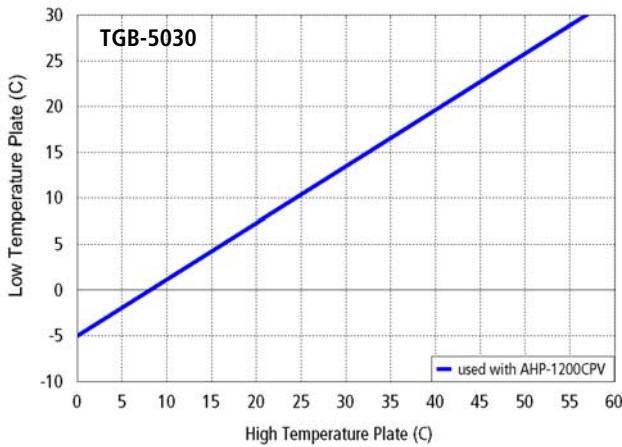
- Insects
- Mammals
- Micro-organisms
- Plants
- Chemicals
- Incubation
- At rest
- Feeding
- Preference
- Soil Biochemistry
- Root Growth
- Seed Germination
- Film forming
- Paints
- Adhesives
- Melting Points
- More



SPECIFICATIONS

MODEL	GRADIENT PLATE SIZE (L X W X H) mm	GRADIENT AREA	FINISH	USE WITH 2 Each	EMBEDDED SENSORS
TGB-2515	558 X 150 X 25	250 X 150	Clear anodize	AHP-301CPV or AHP-1200 CPV	3 WIRE RTD
TGB-5030	914 X 300 X 25	500 X 300	Clear anodize	AHP-1200CPV	3 WIRE RTD

TEMPERATURE RANGE CURVES



How to use the curves to help determine the maximum gradient delta T.

On the X-axis find the temperature you want to hold on one end of the gradient.

Extend a vertical line up until you meet the characteristic line of your preferred gradient plate/CPV combination.

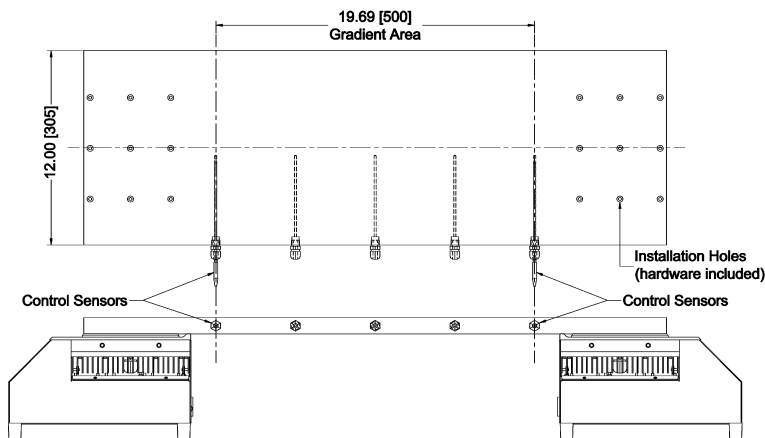
Extend a horizontal line to the Y-Axis to find the temperature you can hold on the other end of the gradient plate.

The difference between the two temperatures is the maximum delta T you can expect across the gradient plate under your defined conditions.

The curves shown, are test results in a 20 C ambient non condensing and the gradient area covered by an acrylic cover.

DIMENSIONS

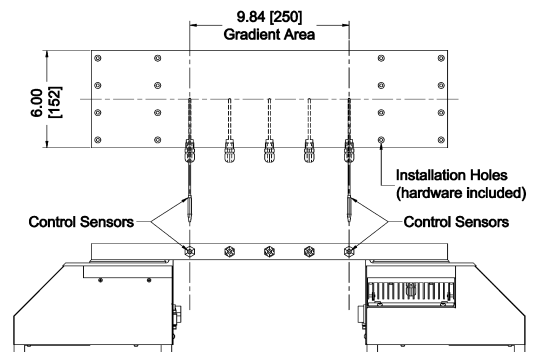
TGB-5030



Gradient plate shown with two AHP-1200CPV

Dimensions: Inches [Millimeters]

TGB-2515



Gradient plate shown with two AHP-301CPV