

RFHTT DUAL RECORDING THERMOMETER

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BASIC RFHTT MODEL

CHART DRIVES

Description		Code
125V/60Hz	24 H	01
125V/60Hz	7 D	02
125V/60Hz	12 H	03
125V/60Hz	48 H	04
125V/50Hz	24 H	05
125V/50Hz	7 D	06
Spring	24 H	07
Spring	7 D	08
250V/50Hz	24 H	09
250V/50Hz	7 D	10
250V/60Hz	24 H	11
250V/60Hz	7 D	12

HOW TO ORDER

First select the proper ordering number for the RFHTT unit. Next consult element selection matrix (this unit requires 2 thermal sensing element), see Page 62. Select chart number, see page 70 and 71, and specify as a separate line item. The chart selected must correspond to specific range of sensing element selected. The RFHTT instrument requires a hollow (L-Type) element plunger (code 51 or 52). High ambient temperature head assembly (code 51) is used when the instrument will be located in ambient temperatures between 32°F but not greater than 150°F. Low ambient head assembly should be called out (code 52) when the instrument will be located in ambient temperatures between -30°F and 125°F. If the solution the sensing bulb is being immersed in is of a corrosive nature, see Form 3052, "Guide for use in Corrosive Applications".

Note: Availability of charts will limit element selection.

Sample Order:

Description	Required Number
RFHTT Unit	RH01010
with charts	00208004 (from page 71)
with element	109510520 (from page 62 and 63)

For pricing see Form 3028, Mechanical Price Book, page 13.

ABOUT THIS INSTRUMENT

Description

This unit is a dual recording thermometer designed to sense and record temperature from two separate locations simultaneously on a single chart. The case contains two pen mechanisms with individual thermal sensing elements. The pens operate on 1/12 revolution of the chart, for example 2 hours per 24 hour rotation to prevent possible interference when both sensed temperatures happen to coincide. Flush or wall mount available (brackets supplied). Available in 12 ranges from -30°F to 1100°F.

Operation

The unit consists of a chart drive either electrically driven or spring wound. This chart drive rotates a 10" chart on which two independent pens mark temperature. The mechanism pens function as a result of the Piston Pak expanding or contracting due to temperature change.

Recorders

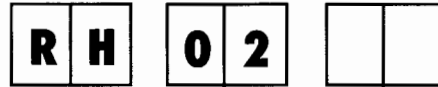
Specifications

Dimensions	15 1/8" W x 13 3/16"H x 4 7/8" D
Chart Diameter	10 inch.
Chart Marking	Felt Tip Cartridge.
Chart Drive	Electric with toggle switch, or spring wound.
Chart Rotation Periods	24 and 48 hour, 7 day, other options.
Flush Mount Cutout	13 1/2" W x 12 11/16" H
Surface Mounting	Mounting brackets included.
Electrical Hookup	Terminal block accessible with cover open.
Conduit Openings	One 7/8 inch diameter hole on each side of the case for 1/2 inch conduit fitting; drill guide hole spotted in the rear of the case showing optional rear opening location.
Rated Accuracy	1% of element range.
Warranty	One year, see page 80 for details.
Approx. Net Weight*	9 lbs.
Approx Ship. Weight*	14 lbs.

*Weight may vary depending on element length.



RFH15-79/15-15 DUAL RECORDING TEMPERATURE CONTROL



BASIC RFH15-79/15-15 MODEL

#73 switch is available in place of #79.
It must be ordered separately and installed in the field.
#73 Close (1/2%) Sensitivity p/n 64403018

CHART DRIVES

Description		Code
125V/60Hz	24 H	01
125V/60Hz	7 D	02
125V/60Hz	12 H	03
125V/60Hz	48 H	04
125V/50Hz	24 H	05
125V/50Hz	7 D	06
Spring	24 H	07
Spring	7 D	08
250V/50Hz	24 H	09
250V/50Hz	7 D	10
250V/60Hz	24 H	11
250V/60Hz	7 D	12

Note: Set pointers cannot be crossed more than 50% of chart span.

HOW TO ORDER

First select the proper ordering number for the RFH15-79/15-15 unit. Next consult element selection matrix (this unit requires 2 thermal sensing elements), see Page 62. Select chart number, see page 70 and 71, and specify as a separate line item. The chart selected must correspond to specific range of sensing element selected. The RFH15-79/15-15 instrument requires a hollow (L-Type) element plunger (code 51 or 52). High ambient temperature head assembly (code 51) is used when the instrument will be located in ambient temperatures between 32°F but not greater than 150°F. Low ambient head assembly should be called out (code 52) when the instrument will be located in ambient temperatures between -30°F and 125°F. If the solution the sensing bulb is being immersed in is of a corrosive nature, see Form 3052, "Guide for use in Corrosive Applications".

Note: Availability of charts will limit element selection.

Sample Order:

Description	Required Number
RFH15-79/15-15 Unit	RH0201
with charts	00208004 (from page 71)
with element	109510520 (from page 62 and 63)

For pricing see Form 3028, Mechanical Price Book, page 13.

ABOUT THIS INSTRUMENT

Description

This dual instrument controls and records two temperature variables on a single chart. It is ideal for temperature and humidity controlled applications such as growth chambers, smokehouses, and kilns. The unit is made up of two switch mechanisms. UL and CSA listed. Flush or wall mount (brackets available).

Operation

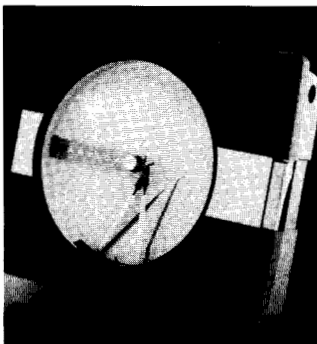
The unit is a mechanical, recording controller that incorporates two independent control switching systems in a single case. To avoid interference, the two pens register a difference on one-twelfth revolution of the chart, or a two hour differential on a 24 hour chart. Control points are indicated by a red setting pointer on the right hand mechanism, a green pointer on the left.

There are two control switches mounted on each mechanism, they are mounted one behind the other. First switch to be actuated on a temperature rise is the leaf-type switch. The second switch (a pin type for left mechanism and a leaf type for the right mechanism) is actuated when the recorded temperature exceeds the operation of the first switch. Temperature actuation points between the two switches (differential) is adjustable from 0 to 5% of scale range, with tolerance on switch setting $\pm 1/2\%$, adjustment is made by set screws inside the instrument case.

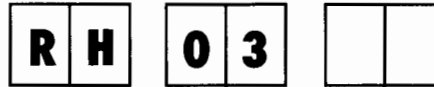
Specifications

Dimensions	15 1/8" W x 13 13/16"H x 4 7/8" D
Chart Diameter	10 inch.
Chart Marking	Felt Tip Cartridge.
Chart Drive	Electric with toggle switch, or spring wound.
Chart Rotation Periods	24 and 48 hour, 7 day, other options.
Flush Mount Cutout	13 1/2" W x 12 5/8" H
Surface Mounting	Mounting brackets included.
Electrical Hookup	Terminal block accessible with cover open.
Switch Type	Three wire SPDT, 2 per each mechanism.
Switch Sensitivities	Normal 1% of range (#79) standard. Super Sensitive (#73) 0.5% of range-field installable.
Conduit Openings	One 7/8 inch diameter hole on each side of the case for 1/2 inch conduit fitting; drill guide hole spotted in the rear of the case showing optional rear opening location.
Electrical Rating	50VA, inductive; 500VA, non inductive; 250V maximum AC only.
Agency Listings	UL and CSA.
Warranty	One year, see page 80 for details.
Approx. Net Weight*	9 lbs.
Approx Ship. Weight*	14 lbs.

*Weight may vary depending on element length.



RFHAA - DUAL RECORDING PNEUMATIC TEMPERATURE CONTROL



BASIC RFHAA MODEL

CHART DRIVES

Description		Code
125V/60Hz	24 H	01
125V/60Hz	7 D	02
125V/60Hz	12 H	03
125V/60Hz	48 H	04
125V/50Hz	24 H	05
125V/50Hz	7 D	06
Spring	24 H	07
Spring	7 D	08
250V/50Hz	24 H	09
250V/50Hz	7 D	10
250V/60Hz	24 H	11
250V/60Hz	7 D	12

Note: Set pointers cannot be crossed more than 50% of chart span.

HOW TO ORDER

First select the proper ordering number for the RFHAA unit. Next consult element selection matrix (this unit requires 2 thermal sensing element), see Page 62. Select chart number, see page 70 and 71, and specify as a separate line item. The chart selected must correspond to specific range of sensing element selected. The RFHAA instrument requires a hollow (L-Type) element plunger (code 51 or 52). High ambient temperature head assembly (code 51) is used when the instrument will be located in ambient temperatures between 32°F but not greater than 150°F. Low ambient head assembly should be called out (code 52) when the instrument will be located in ambient temperatures between -30°F and 125°F. If the solution the sensing bulb is being immersed in is of a corrosive nature, see Form 3052, "Guide for use in Corrosive Applications".

Note: Availability of charts will limit element selection.

Sample Order:

Description	Required Number
RFHAA Unit	RH0301
with charts	00208004 (from page 71)
with element	109510520 (from page 62 and 63)

For pricing see Form 3028, Mechanical Price Book, page 13.

ABOUT THIS INSTRUMENT

Description

This unit is designed to control pneumatically and record two separate temperature variables on a common chart. Relative humidity can be governed through the control of wet and dry bulb temperatures. Two independent control systems in a single case. Humidity and temperature control, output 3-15psi. Manual reset adjustment with adjustable throttling range 5-25%.

Operation

The dual RFHAA operates air powered throttling valves regulating the flow of steam, water or gas or actuates other pneumatic devices such as pressure switches or relays. Wet and dry bulbs are recorded when it is used to control temperature and relative humidity.

Two instruments with independent pen arms comprise the control. Pen arms are set at two-hour time differential on a 24 hour chart to prevent interference when recording at or near the same control temperature.

Pen arms move up or down scale in response to the expansion or contraction in the thermal sensing element. As a pen arm enters the throttling range and approaches set point, it changes the effective orifice size in its control mechanism's bleed valve.

Pressure transmitted by the instrument is reflected by the valve position of the air-operated device which modulates the flow of heating or cooling medium.

The control produces an output pressure of 3 to 15 psi, approximately 16 psi input pressure is required to obtain this range. Throttling span is adjustable within the extremes of 5 to 15% of the scale range.

Load arm, inherent in throttling controls, is compensated by a manual reset adjustment.

Specifications

Dimensions	15 1/8" W x 13 13/16"H x 4 7/8" D
Chart Diameter	10 inch.
Chart Marking	Felt Tip Cartridge.
Chart Drive	Electric with toggle switch, or spring wound.
Chart Rotation Periods	24 and 48 hour, 7 day, other options.
Flush Mount Cutout	13 1/2" W x 12 11/16" H
Surface Mounting	Mounting brackets included.
Conduit Openings	One 7/8 inch diameter hole on each side of the case for 1/2 inch conduit fitting; drill guide hole spotted in the rear of the case showing optional rear opening location.
Air Hookup	1/4-NPT inlet and outlet openings at top and back of case.
Air Input Requirements	Approximately 16 psi to 20 psi.
Air Output Pressure	3 to 15 psi.
Air Consumption	12 cfm maximum per mechanism.
Throttling Span	Adjustable from 7 to 35% of element range.
Load Error Adjustment	Manual reset for load error compensation.
Control Action	Reverse or Direct Acting (Factory set - reverse, field changeable to direct acting).

Warranty One year, see page 80 for details.

Approx. Net Weight* 10 lbs.

Approx Ship. Weight* 11 lbs.

*Weight may vary depending on element length.

Recorders

