

# ADT850

## Laboratory Thermocouple Calibration Furnace



- Temperature control from 300°C to 1200°C
- Stability of  $\pm 0.1^\circ\text{C}$
- Radial uniformity of  $\pm 0.25^\circ\text{C}$  @ 1200°C
- Axial uniformity of  $\pm 0.25^\circ\text{C}$  @ 1200°C
- Multi-zone temperature control
- Quick cool technology
- Sliding probe holder provides mechanical stability and precise probe depth control
- Pivoting color touchscreen display
- Internal and external probe control
- Alumina and metal inserts available
- Patent pending EMF shielding technology
- Advanced safety control
- Wi-Fi Communications



### OVERVIEW

Thermocouple calibration work can be challenging. Here at Additel, we understand the difficulties of this type of work. Our new ADT850 Laboratory Thermocouple Calibration Furnace is packed with features and a performance you will not find anywhere else. The ADT850 horizontal furnace covers a range of 300 to 1200°C and is commonly used in a multitude of industries such as energy, calibration laboratories, aerospace and metallurgy to name a few. It is generally used by primary and secondary calibration laboratories to calibrate noble and base metal thermocouples with the lowest possible uncertainties. Additel's ADT850 is the most accurate, stable and versatile furnace available!

## Industrial Design

With our customer's needs in mind, we have designed our all new ADT850 Laboratory Thermocouple Calibration Furnace with a modern look and feel. Users will experience that same easy to use menu structure and touchscreen interface that they have become accustomed to when using genuine Additel products. The display pivots and tilts so users can customize the product to fit their needs.



The ADT850 also includes a sliding probe holder labeled with measurement gradients to help safely insert standard and UUT probes to correct depths. The advanced probe holder design includes a clamp to securely hold the test probe in place at all times.



Both alumina and metal inserts are available to help provide support and mitigate cross contamination for both metal and ceramic style probes. The ADT850 Laboratory Thermocouple Calibration Furnace can also be used without an insert to accommodate larger probes and to allow for simultaneous testing of a large quantity of test probes.



**ADT110-850-ALUM**  
Tube Style Furnace Insert (Alumina)



**ADT110-850-CUP-LONG**  
Cup Style Furnace Insert (Long version - Metal)

## General Specifications

Specification	ADT850
Temperature Range	300°C to 1200°C
Stability	±0.1°C/min
Radial Uniformity	±0.25°C @ 1200°C
Axial Uniformity	±0.25°C @ 1200°C
Heating Time	(23°C~1200°C) 40 mins, (empty well)
Cooling Time	(1200°C~300°C) 90 mins, (empty well)
Operating Conditions	0°C to 50°C, 0-90%RH (0°C~50°C), non-condensing, <2000m altitude
Storage Temperature	-20°C to 70°C

Specification	ADT850
Display Screen	7 in (178 mm) color touch screen
Display Resolution	0.01°C
Heater Power	4000W (220V AC)
Fuse	T12A, 250V
SIZE (W x H x L)	342 x 424 x 680 mm (13.5 x 16.7 x 26.8 in)
Weight	45 kg (99.2 lbs) without insert
Communication	Wi-Fi, Bluetooth, USB, LAN
Warranty	1 year

## Ordering Information

### Model Number

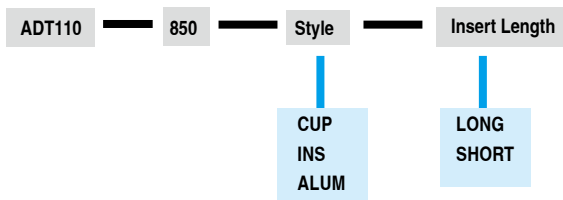


**Insert Style:**  
**ALUM** = Alumina tube (noble metal)  
**CUPL** = Long cup style (base metal)  
**NO** = No insert

### Accessories

Standard Accessories		
Model	Quantity	Picture
Power Cord	1 pc.	
Network Cable	1 pc.	
Type N Control TC-Left	1 pc.	
Type N Control TC-Middle	1 pc.	
Type N Control TC-Right	1 pc.	
Alumina tube (8 mm OD)	3 pcs	
Fuse	1 pc.	
Nickle wire (Expt ADT850-1200-ALUM)	1 pc.	
TC Calibration Kit (Only for ADT850-1200-ALUM)	1 pc.	
Alumina tube 6 mm OD x 4 mm ID x 400 mm L (except ADT850-1200-ALUM)	2 pcs	
Alumina tube 6 mm OD x 4 mm ID x 700 mm L	2 pcs	
Report of test with data	1 pc.	

### TC Calibration Kit Ordering Information



Optional Accessories		
Model	Description	Picture
AM1210-20-CJ	Reference TC - Type S: Platinum/10% Rhodium vs. platinum - 20" length (see AM1210 specs below)	
9085	Ice Point Dewar 120mm OD x 95mm ID x 300mm H (4.75" OD x 3.75" ID x 11.8" H)	
9080	CJC Cable Kit (includes TC to Plug, TC to TC, TC to Banana, and B,E,J,K,N,R,S,T,U cables)	
ADT110-850-CUP-LONG	TC calibration Kit, base metal calibration in the ADT850 including long cup Insert (1 pc), insulator set (1 large and 1 small per set)	
ADT110-850-CUP-SHORT	TC calibration Kit, base metal calibration in the ADT850 including short immersion cup Insert (1 pc), insulator set (1 large and 1 small per set)	
ADT110-850-INS-LONG	TC calibration Kit, base metal calibration in the ADT850 including multi-hole insert for deep immersion (7 x 8.5 mm ID holes) (1 pc), insulator set (1 large and 1 small per set)	
ADT110-850-INS-SHORT	TC calibration Kit, base metal calibration in the ADT850 including multi-hole insert for short immersion (7 x 8.5 mm ID holes) (1 pc), insulator set (1 large and 1 small per set)	
ADT110-850-ALUM	TC calibration Kit, noble metal calibration in the ADT850 including 26 mm OD x 20 mm ID x 630 mm L alumina tube (1 pc), 20 mm OD insulator (2pc)	

AM1210-20-CJ Type S Reference Standard Thermocouple	
Temperature Range	0°C to 1300°C
Type	Type S: Platinum/10% Rhodium vs. platinum w/ cold junction
Long Term Drift	±0.6°C at 1084.62°C after 1 year typical usage
Short Term stability	±0.2°C at 1084.62°C
Diameter of thermocouple wire	0.5 mm
Sheath Material	Quartz or Alumina
Sheath Dimensions	OD: 6 mm (0.236"); Length: 500mm (20.0")
External Lead Wire	S type thermocouple wire, 500 mm
Protective Carrying Case	Included
Documentation	Report of test with data

Note: ISO 17025 accredited probe calibration available, contact Additel for more information