TEL-TRU®

TEL-TRU® Manufacturing Co.

CHECK-SET® THERMOMETER CALIBRATORS

An accurate, safe, convenient, and cost-effective thermometer calibration system

Distributed by:

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Temperature + Pressure | *Since 1916*

Verify Thermometer Accuracy at Your Critical Control Point!

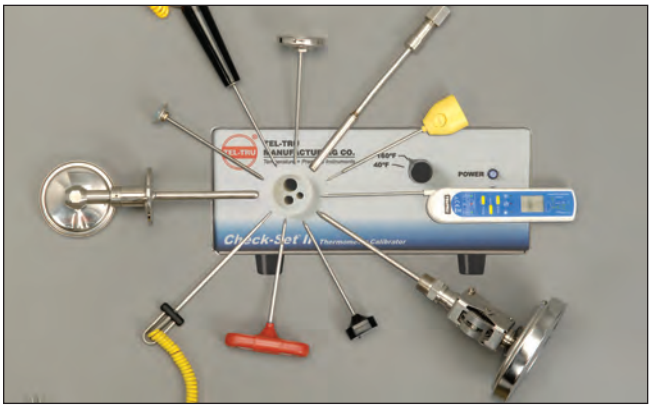
The Tel-Tru Check-Set Series of Thermometer Calibrators provides accurate, unambiguous, and cost-effective calibration and accuracy verification for a wide range of thermometers and temperature measurement instruments.

The Check-Set series is the perfect temperature reference device for:

- Plant quality assurance
- Process control
- Food safety
- Instrument calibration and service
- HACCP compliance (Hazard Analysis Critical Control Points)

The Check-Set is easy to use, reliable, accurate and compatible with a wide range of:

- Dial and digital thermometers
- Filled system bulbs
- Electronic temperature sensors



Compatible with thermometers and temperature probes of all sizes!

Typical users of the Tel-Tru Check-Set Calibrators are food safety professionals responsible for operating, inspecting or certifying:

- Food preparation and food service facilities
- Industrial canning, meat, dairy and beverage processing plants
- Users include:
  - HACCP compliance officers
  - QA managers
  - In-plant maintenance technicians
  - Field calibration contractors
  - Local, state, and federal agency compliance officers

FEATURES

- The series includes:
  - Check-Set I with one calibration set point
  - Check-Set II with two calibration set points
  - Check-Set IV with four calibration set points
- High accuracy
  - Certificate of Calibration traceable to NIST
  - Built-in warning circuitry to alert user when unit exceeds set-point by 1°F
- Fast calibration verifications
  - Simple to use
  - Easy operator training
- Serial number assigned to each unit
- Portable - optional padded shoulder strap available (except CS1-HOT models)
- Rugged enclosure and electronics for reliable service
- Quick Start Guide

CALIBRATION SERVICE

- An annual factory recertification service is available.
- Completion of recertification service extends the warranty for one year.

Check-Set Accuracy ±0.2ºF (0.1°C)

GENERAL SPECIFICATIONS

- Accuracy ±0.2°F (0.1°C)
- Input Power 115 volts, 50/60 Hz, 1.5 amps
- Recommended Ambient Operating temperature range:
  - 65-85°F (18-29°C)
- Type 304 stainless steel enclosure
- Weight:
  - All models: 9 lbs. (4 kg)
- Dimensions:
  - Check-Set I HOT: 11 x 6⅝ x 3⅛" (279 x 168 x 79mm)
  - All other models: 8¾ x 8⅞ x 4¼" (222 x 225 x 108mm)
- US patent #6,170,983

Dial Adjustment Tool makes calibrations easy! (sold separately)

IMPORTANT CALIBRATION TEMPERATURES

The Check-Set series of thermometer calibrators verifies the calibration of your temperature sensing devices at multiple temperatures. Their accuracy also allows you to validate your temperature measuring devices at temperatures specific to your application. For example, in the food and dairy industry, important temperatures or "set-points" include:

- 40°F (5°C): Recommended cold food holding temperature
- 140°F: Recommended hot food holding temperature
- 150°F: Clean-in-Place return lines
- 160°F: E.Coli safety temperature
- 161°F: HTST flash pasteurization - milk
- 175°F: HTST flash pasteurization - ice cream, eggnog, frozen desserts
- 212°F: Boiling point of water

"READY TO USE" TIMES

Users often keep the Check-Set units on all day so they are ready for use "on demand." Typical "ready to use" times from ambient:

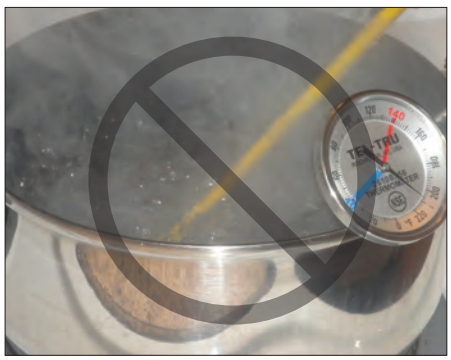
Model	Calibration Temperature	Ready to Use Time	Stability
Check-Set I HOT	140°F	10 min.	±0.06°F
	160°F	14 min.	±0.06°F
	212°F	20 min.	±0.06°F
Check-Set I COLD	40°F	5 min.	±0.03°F
Check-Set II	40°F	5 min.	±0.03°F
	160°F	7 min.	±0.03°F
	5°C	5 min.	±0.02°C
	90°C	12 min.	±0.02°C
Check-Set IV	40°F	6 min.	±0.03°F
	150°F	6 min.	±0.03°F
	161°F	7 min.	±0.03°F
	175°F	9 min.	±0.03°F

Eliminate Error-Prone and Cumbersome Calibration Methods

The Ice Water Method

- Difficult
- A "pain"
- Time consuming
- Error-prone

The Boiling Water Method



- Dangerous
- Time consuming
- Difficult
- Error-prone -- boiling point of water varies with altitude

Commercial Food Service
- Chain Restaurants
- Grocery Chains
- Corporations
- Airlines
- Hotels
- Restaurants
- Theme Parks
- Sports Arenas

Institutional Food Service
- Military Bases
- Public School Districts
- Colleges and Universities
- Hospitals
- Government Medical Centers
- Dept. of Corrections

Food Processing, Storage, and Distribution
- Red Meats
- Poultry
- Seafood
- Sausage and Hot Dogs
- Baked Goods
- Dairy Products
- Grains
- Tomatoes
- Pickles
- Corn Syrup
- Produce
- Wholesale Food Distribution

Training and Education
- Chef Training/Culinary Arts School
- HACCP and Food Safety Training

Environmental Safety and Health Professionals
- City Health Dept.
- County Dept. of Environmental Health
- State Dept. of Health
- Federal Agencies
- Military Food Safety Inspectors

Industrial/OEMs
- Research and Development Lab
- Industrial Laboratory
- Service and Calibration of:
  - Refrigeration Equipment
  - Industrial Ovens
  - Smokers for Meat/Poultry
- Manufacturer of Food and Beverage Testing Equipment

FOOD SAFETY/ HACCP

Background

HACCP (Hazard Analysis Critical Control Point) is a systematic preventative approach to food safety that involves the definition of specific measurements to reduce risk. HACCP techniques focus on the prevention of hazards and not upon final inspection. HACCP principles are widely applied to FDA and USDA regulated industries and a growing list of international industries, government agencies, and organizations.

Requirements

Satisfactory monitoring of CCPs requires accurate and precise measurements of parameter values (e.g. temperature, pressure, pH, etc.) to ensure that defined Critical Limits are met. Equipment used to make those measurements must be properly calibrated.

The HACCP plan must describe instrument calibration procedures and frequency, responsible individuals and required documentation records for instruments used measuring those parameter values.

Check-Set Series Delivers

Check-Set Calibrators are designed for Food Safety Professionals as ***an easy-to-use tool to verify the calibration of temperature measurement instruments in compliance with HACCP requirements.***

Check-Set users can check thermometers and other temperature sensing instruments at temperatures equal to or close to the critical control points of their processes.

DAIRY

Background

The ”Pasteurized Milk Ordinance” (“PMO”) regulates the production, transportation, processing, handling, sampling, examination, labeling, and sale of all “Grade A” milk and milk products, as well as the inspection of dairy farms, milk plants, receiving stations, transfer stations, milk tank truck cleaning facilities, milk tank trucks and bulk milk hauler/samplers.

Requirements

The PMO defines the performance requirements and testing methods for test, indicating, and recording thermometers, and other temperature instruments. The PMO requires that temperature instruments be “compared to a certified temperature source” upon installation and every 3 months thereafter, and after equipment is altered, serviced, repaired or replaced.

Check-Set Series Delivers

The Tel-Tru Check-Set IV Calibrator is optimized for ***compliance with the temperature instrument calibration and verification requirements of the dairy industry*** including milk, ice cream, and cheese processing plants.

Typical users include in-plant staff responsible for QA, food safety, HACCP compliance and instrument maintenance. Other users include field calibration contractors and regulatory agency personnel who inspect and certify these plants.

Enjoy less plant down time due to faster and easier certification of temperature instruments

- No ice water, no ice buckets
- No temperature controller circulators
- Easy to carry throughout the plant
- Probe inserts for most probe sizes

FOOD PROCESSING/ RETORTS

Background

Thermal processing of food in various types of pressure retorts is regulated by the Food and Drug Administration through the establishment of rules for equipment, and temperature indicating, recording and controlling devices.

A major food processing industry trade association also recommends voluntary guidelines for food processors to test and document the temperature distribution within their retorts.

Requirements

FDA Rule 21 CFR 113.40 specifies that each retort must be equipped with at least one temperature-indicating device, a temperature recording device, and a temperature controller. These instruments must be checked with a reference device that is directly traceable to National Institute of Standards and Testing (NIST) “to ensure accuracy during processing.”

FDA Rule 21 CFR 113.100 defines the required record keeping for reference devices including: identification of the device, a Certificate of Calibration, date and results of the test, and date of the next test.

The Institute for Thermal Processing (IFTPS) recommends voluntary guidelines for operators of retorts in food processing plants to test the thermal efficiency of their retort equipment:

- All temperature instruments conform to applicable Federal Regulations and are tested against an accurate and traceable reference device.
- A calibration process is recommended before and after testing to assure that the temperature indicators and sensors on the retort and on an external monitoring system are consistent and accurate.

Check-Set Series Delivers

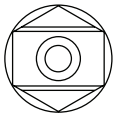
Tel-Tru Check-Set Calibrators are ***accurate and certified temperature reference devices that meet the requirements of the FDA and the recommendations of the IFTPS*** for verifying the accuracy of temperature instruments in food processing plants. Tel-Tru Check-Set features include a unique serial number, a certificate of accuracy traceable to NIST, and available annual recertification and maintenance service.

Do you need to verify hot temperatures only?

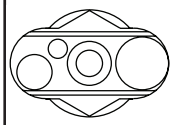
What temperature(s) do you want to verify?

HOT	Code
140°F	CS1-F01
160°F	CS1-F05
212°F	CS1-F16

What are the stem diameters of the instruments you are checking?

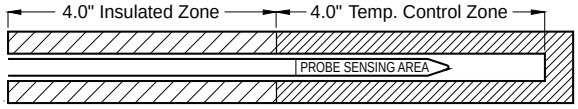


Single Hole Configuration
For probes up to .150" diameter. Calibrate dial thermometers with a 3/8", 7/16" or 5/8" hex calibration nut ____ **Code** -100



Four Hole Configuration
For probes up to .125", .187", .250", and .375" diameter. Calibrate dial thermometers with 3/8", 7/16" or 5/8" hex calibration nut ____ **Code** -400

Select your item number here ___ — ___ — ___



STEM-LENGTH COMPATIBILITY

For best results, the sensing area of the probe must be inserted completely into the Temperature Control Zone. The minimum immersion depth is dependent on the thermometer type. Check the manufacturer's user manual of your thermometer for the correct immersion length.

CS1 w/ single hole configuration—Code 100
Frequently used in food preparation or food processing plant environments to verify accuracy of digital or dial thermometers at a single hot test point. Built-in wrench is for easy calibration adjustment of spot check or meat cooking dial thermometers.

CS1 w/ multi-hole configuration—Code 400
Used in food preparation, food processing and industrial environments to verify accuracy of several types of temperature measurement instruments at a single hot test point. Built-in wrench is for easy calibration adjustment of spot check or meat cooking dial thermometers.

OPTIONS AND ACCESSORIES AVAILABLE FOR ALL UNITS	Part #
Dial Adjustment Tool for 1" and 2" thermometers (set of 3)	96100055
Cleaning Brushes for models that fit probe diameter up to .150" (set of 3)	96100054
Cleaning Brushes for multi-hole models (set of 2)	96100145
Carrying Strap (for all except CS1-HOT)	96100224

FACTORY RECALIBRATION/RECERTIFICATION SERVICE

Tel-Tru Manufacturing Co. offers annual maintenance, inspection, cleaning, and accuracy recertification of each Check-Set thermometer calibrator. Recertification automatically extends the product warranty for one year. Contact Tel-Tru Customer Service for details.

Visit our website at www.teltru.com/calibrator.asp for more information on the Check-Set series of thermometer calibrators and accessories.

Do you need to verify cold and/or hot temperatures?

What temperature(s) do you want to verify?

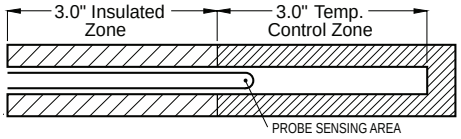
	Code
COLD	
40°F	CS1-F42
COLD / HOT	
40°F + 160°F	CS2-F50
5°C + 90°C	CS2-C53
40°F + 150°F + 161°F + 175°F	CS4-F80

What are the stem diameters of the instruments you are checking?

	Code
Single Hole Removable Wells	
.375"	-120
.500"	-130
.750"	-140
Three Hole Removable Well	
.187", .250" and .375"	-310
Three Hole Removable Well	
.125", .150" and .187" w/recal*	-320

** Calibrate dial thermometers with a 7/16" or 5/8" hex calibration nut, features wrench flats for pocket and laboratory thermometers.*

Select your item number here ➡ ___ – ___ – ___



STEM-LENGTH COMPATIBILITY

For best results, the sensing area of the probe must be inserted completely into the Temperature Control Zone. The minimum immersion depth is dependent on the thermometer type. Check the manufacturer's user manual of your thermometer for the correct immersion length.

CS1-F42-310 shown with removable well P/N 96100250
- Designed for use with refrigeration.

CS2-F50-320 shown with removable well P/N 96100249 - multi-hole configuration and built in wrench
- Hot-Cold dual set point unit for general HAACP verification of many types of temperature instruments in food service, food processing, and meat packing environments.
- Built-in wrench is for easy calibration adjustment of spot check or meat cooking dial thermometers.

CS4-F80-310 shown with removable well P/N 96100250
- Designed with 4 critical set points for use in dairy products plants.

ADDITIONAL WELL INSERTS FOR CHECK-SET I COLD, II AND IV ..... PART

Check-Set Well, 3-Hole (.125", .150", .187" Probes w/recal)	96100249
Check-Set Well, 3-Hole (.187", .250", .375" Probes)	96100250
Check-Set Well, 1-Hole (.375" Probe)	96100252
Check-Set Well, 1-Hole (.500" Probe)	96100253
Check-Set Well, 1-Hole (.750" Probe)	96100254

Note: Wells with other hole diameters available upon request

ADDITIONAL PRODUCTS AVAILABLE FROM TEL-TRU

Food / Dairy / Beverage

Spot Check / Laboratory Testing Thermometers

Sanitary Bimetal Thermometers

Sanitary RTDs and Transmitters

Non-Contact Thermometers

Digi-Tel™ Sanitary Thermometers

Sanitary Pressure Gauges

Sanitary Pressure Transmitters

Industrial

Digi-Tel Thermometers

Bimetal Thermometers

Glow Dial Thermometers

Industrial RTDs and Transmitters

Pressure Gauges

Pressure Transmitters

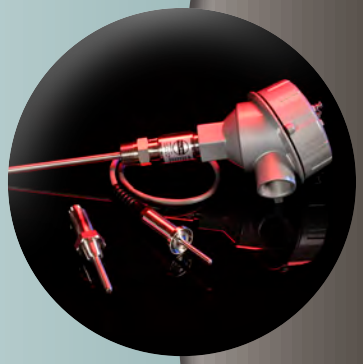
Thermowells

Gas Actuated Thermometers

Vapor Tension Thermometers

Surface Thermometers

Non-Contact Thermometers



ISO 9001:2008 CERTIFIED

MADE IN USA

CS616