# User's Guide


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# TCL Series
# Portable Sample Cooling Device

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Toll-Free: 0 800 6397678 TEL: +49 (0) 7059 9398-0
FAX: +49 (0) 7056 9398-29 e-mail: info@omega.de

**United Kingdom:**
ISO 9001 Certified
OMEGA Engineering Ltd.
One Omega Drive, River Bend Technology Centre, Northbank
Irlam, Manchester M44 5BD England
Toll-Free: 0800-488-488 TEL: +44 (0)161 777-6611
FAX: +44 (0)161 777-6622 e-mail: sales@omega.co.uk

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## BEFORE USE:

Please read the following instructions:

Carefully read the operating manual first before operating the device.

For indoor use only

Ambient temperature range +5°C to +40°C

Use in a well-ventilated area.

Relative humidity not exceeding 80%

Power supply fluctuation not exceeding 10%

## Overview

The **TCL-11 and TCL-12** are ideal for incubating any number of small laboratory sample vessels or micro tube sizes at sub-ambient temperatures for extended periods of time. They are an excellent alternative cooling device that replaces the need for those inconvenient and messy ice buckets that can often leave sample tubes floating in melting wet ice. This can lead to valuable sample loss and potential contamination. Each TCL-11 and TCL-12 are supplied with a pack of special ceramic coated metal beads designed to help maintain the cooling temperature while supporting the sample vessels during use. Beads are chemically inert and may be autoclaved (in a separate autoclavable container) if needed. Beads may also be pre-chilled prior to use for quicker cooling times. The TCL-11 and TCL-12 are manufactured to fit standard aluminum block tube inserts and includes a protective lid which helps to maintain the cool temperature.

Two models to choose from:

**TCL-11** is the standard analog cooling device. Set to maintain temperature at 0°C.

**TCL-12** is the digital (display & setting) cooling device. Temperature range can be easily adjusted by the user from 0°C up to ambient 25°C.

Simply assemble the electrical cord and adapter, plug in and turn on your TCL-12. Adjust the unit to its appropriate cooling temperature. Place sample vessels into the TCL-12.

***No mess, no sample loss, no potential contamination.***

For additional information on other quality labware accessories that might be used with your new TCL-11 and TCL-12 see below:

| | |
|---|---|
| TCL-10-B1 | Aluminum Block Insert 0.2ml tubes |
| TCL-10-B2 | Aluminum Block Insert 0.5ml tubes |
| TCL-10-B3 | Aluminum Block Insert 1.5ml tubes |
| TCL-10-B4 | Aluminum Block Insert 2.0ml tubes |
| TCL-10-B5 | Aluminum Block Insert Combination tubes |
| TCL-10-CB | Ceramic Beads |

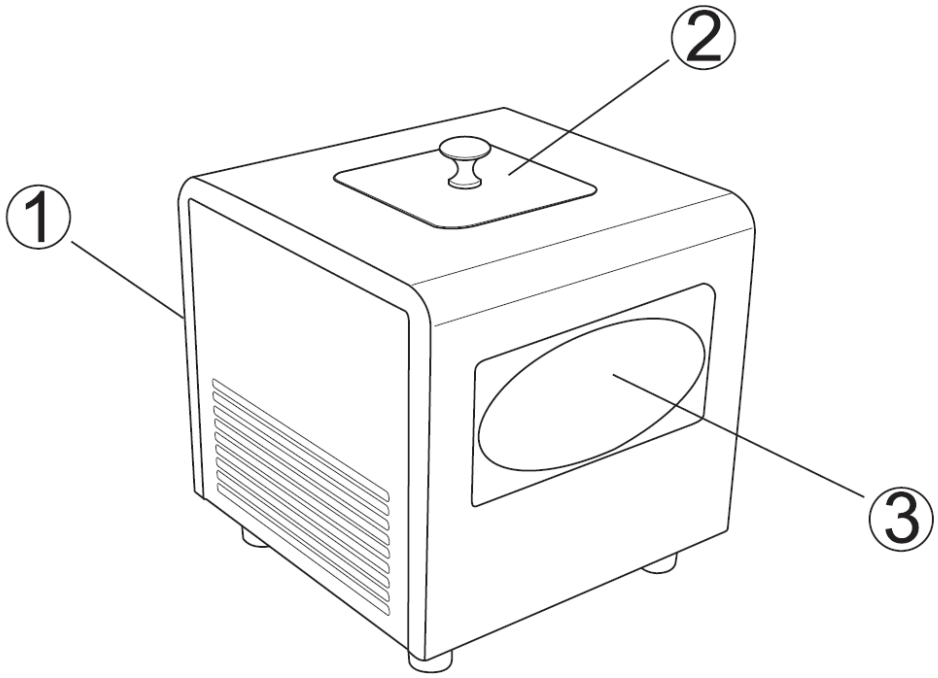


**Figure 1: Overview of the TCL-11 (1) case; (2) lid; (3) front panel**

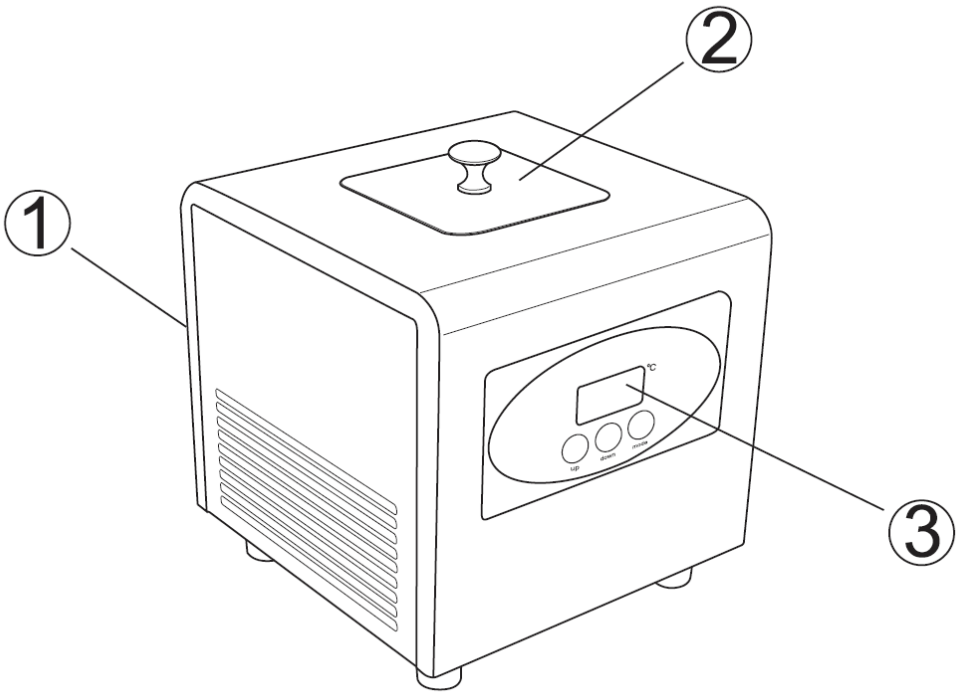


**Figure 2: Overview of TCL-12 (Digital). (1) case; (2) lid; (3) front panel with digital display**

## Operation

**Before Use.** Please make sure you have carefully read this operating manual. If there are any questions related to the proper use of TCL-11 and TCL-12 please contact Omega Engineering.

Contact with low (cold) temperatures and vessels may cause cold burns. Please use care and wear protective gloves to protect hands. Do not place liquids directly into the unit. The TCL-11 and TCL-12 are rated to operate at 90-230V, output 12V, 5A, 60 W.

**TCL-11:** simply assemble the electrical cord to its adapter. Plug into the Base Unit and power outlet. Turn on the TCL-11. It will cool to a final set temperature of 0°C.

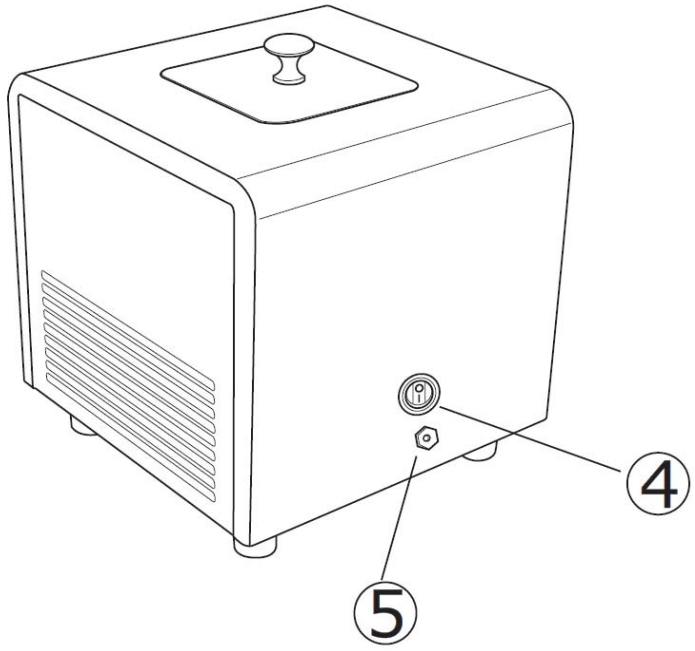


**Figure 3: The rear view of TCL-11 and TCL-12. (4) switch (5) power inlet**

**TCL-12.** Once the power is on, the TCL-12 shows the actual temperature of the sample chamber. Press and hold “mode” key, it shows the set temperature, use the “up” or “down” key to increase or decrease the setting temperature. After programming desired temperature, release the “mode” key, and the actual temperature will be shown. The TCL-12 will begin to ramp to set temperature.

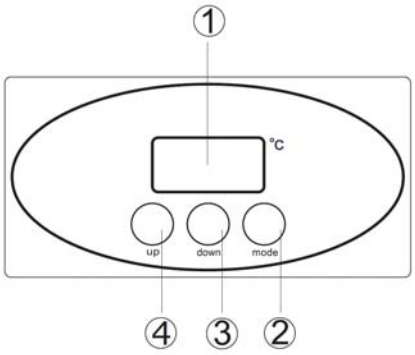


**Figure 4: Overview of the front panel of TCL-12. (1) digital display; (2) mode (set key); (3) down key; (4) up key**

**Post Use.** The ceramic coated beads and any block insert may remain cold for some time. Allow to warm up to ambient temperature before removing from the TCL-11 and TCL-12 and make sure to wear protective gloves. Avoid handling cold objects with wet hands.

**Maintenance.** Before cleaning always be sure to disconnect the TCL-11 and TCL-12 from the power source. The outer casing of the Units may be wiped clean with a damp cloth, mild detergent or ethanol. Do not immerse the TCL-11 or TCL-12 in water or solvents. Do not use aggressive solvents or abrasive cleaners. Please check chemical compatibility with wetted parts before using any other decontamination method or lab solvent. Always dispose of any contaminated cleaning articles properly & safely.

## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **36 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to normal **three (3) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

**OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.**

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## RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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