CA2-29805 – Incubator 405 L, Heratherm

Thermometer placement: For annual mapping
1- Upper LEFT 2- Upper RIGHT
3- Lower LEFT 4- Lower RIGHT

HPC Incubator

Form ID: CFR046
Rev. #: 3
Effective Date: 11/28/18

Temperature Chart- Room # 111 **Thermometer ID:** Lab-284 -0.2 CF 9/6/19

Equipment Asset # [illegible] **Temperature Correction Factor **:** [illegible] **(if Any)**

Temperature Range: 35.0 +/- 0.5 C° Lower Limit: 34.5 High Limit: 35.5

M/Y: 1 / 20 C° M/Y: 10 / 2019 C°

Date	Time	Temp	Date	Time	Temp
1st	0945 / 1345	35.2 35.2	1st		
2nd	[illegible] / 1702	35.5 / 35.5	2nd		
3rd	0852 / 1650	35.5 ~ / 35.5 ~	3rd		
4th	1706 / 1251	35.5 / 35.5	4th		
5th	1236 / OFF	35.5 / OFF	5th		
6th			6th		
7th			7th		
8th			8th		
9th			9th		
10th			10th		
11th			11th		
12th			12th		
13th			13th		
14th			14th		
15th			15th		
16th			16th		
17th			17th		
18th			18th		
19th			19th		
20th			20th		
21st			21st		
22nd			22nd		
23rd			23rd		
24th	1358 / 1513	35.3 / 35.2	24th		
25th	1116 / 35.1	1450 / 35.4	25th		
26th	1023 / 35.1	1508 / 35.0	26th		
27th			27th		
28th			28th		
29th			29th		
30th			30th		
31st			31st		

Turned on 9/5/19 MCI

Monitoring to Surplus Incubators

Turned on 2/24/26 set to 35.2°

Changed to 35.0 setpoint

Turned off 2/27/26 Will Surplus

** *Documented temperature is recorded after correction factor is taken in account.***

Delivery of the Incubator

Packaging

Heratherm incubators are delivered in a rugged packaging box. All packaging materials can be separated and are reusable:

Packaging materials

Packaging carton:	Recycled paper
Foam elements:	Styrofoam (CFC-free)
Pallet:	Chemically untreated wood
Packaging film:	Polyethylene
Packaging ribbons:	Polypropylene

Acceptance Inspection

After the incubator has been delivered, check the delivery immediately for:

- completeness,
- possible damage.

If components are missing or damage is found on the incubator or the packaging, in particular damage caused by humidity and/or water, please notify the carrier as well as Thermo Scientific Technical Support immediately.

⚠WARNING **Risk of injury**

Should sharp edges have formed in damaged areas or elsewhere on the device, take all necessary precautions to protect personnel handling the incubator. For example, have them wear protective gloves and other personal protection equipment.

Scope of Supply

Incubators

Quantity of components supplied (pieces)	IGS Series
Perforated shelves	2
Support rail for shelf table-top units	4
Power cord	1
Operating manual	1
Shelf support	4
Clip springs for table-top units	4
Anti-tilt anchor	1
Short reference guide	1

Transport

Table-top units

For transport, do not lift the incubator using the doors or components attached to the incubator as lift points.

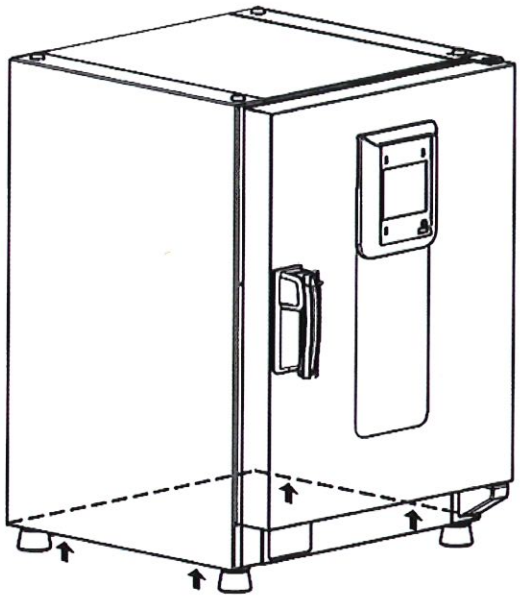

Figure 3-4 Lift Points

		CAUTION **Heavy loads! Lift with care!** **To avoid injury through physical strain, such as strain traumata and slipped discs, do not attempt to lift the incubator alone!** **To avoid injury through dropped loads, be sure to wear Personal Protection Equipment, such as safety shoes, when lifting the incubator.** **To avoid crushing your fingers or hands (particularly in a closing door) or damaging the incubator, do not use any other lift points than those indicated in the illustration above.**

Floor Stand Units

The floor stand units come equipped with four (4) casters. The lever for releasing the caster is located above the locking lever. After positioning the unit in its installation location ensure that the locking levers are pressed down on the casters.

To ensure the degree of stability specified by safety requirements the front casters must be turned so that they are facing forward after the unit has been positioned in its installation location and the locking levers pressed down on these casters.

CAUTION **Danger of tipping when moving!**

Before moving the unit, ensure that it has been unplugged.

Move the Heratherm floor stand units with caution.

Quick starts and stops can result in tipping!

Always ensure that the doors are closed when moving the unit.

Operation

Preparing the Incubator

The incubator must not be released for operation before all major start-up activities have been completed (see chapter 5, "Start-up.").

Device Check

Prior to starting operation, the following incubator components must be checked for their correct function:

- The door seal in the front frame must not be damaged.
- The glass door must not be damaged.
- The shelving components must be installed safely.
- Disinfecting the Incubator's Work Space

Disinfect the work space according to the operator-specified hygiene guidelines.

Starting Operation

1. Turn the incubator on using the control panel.
2. Adjust the temperature set value on the control panel.
3. The temperature controller starts adjusting the work space to the user-specified temperature set value now.

DANGER **To avoid any risk of explosion or fire**

- **refrain from loading the incubator with any of the substances listed in the section "Incorrect Use" on page 1-5**
- **make sure that the ambient air is free of any solvents**
- **do not operate the incubator in areas with an explosion hazard**

4. Load the work space with samples.

Handling and Control

Heratherm IGS Series incubators come with a front panel mounted control unit consisting of a multifunctional display, four control buttons, and an on/off button. The four control buttons interact with the display window to let users access all of the user control functions and adjustments of the incubator, including - for example, the temperature set value, timer, energizing/de-energizing the AC outlet in the work space, as well as a variety of other functions.

Under normal operating conditions the display presents user with the work space temperature. The display returns to its default mode upon completion of the adjustments or whenever no entries have been made for a period of 30 seconds.

The graphic below shows the Heratherm IGS 60/100/180/400/750 control panel with all of its visualization elements and controls.

Figure 7-1 Control Panel for Heratherm IGS Series Incubators

The table below contains brief descriptions of the buttons on the control panel (items K1 through K5 in figure 7-1).

Table 7-2 Display Features

Feature	Item	Function
	D1	Display field showing a permanent readout of the actual temperature in the work space either in °C or °F (depending on the user's preferences, see "Toggling the Temperature Display Unit" on page 7-13). At temperatures below 105 °C or 221 °F the temperature readout has one digit after the decimal point, while temperatures beyond are shown without any decimal places. A flashing time entry prompt of the general format **hh:mm** (hours:minutes, both with two digits) appears in this place while the user is setting up a timer. Upon occurrence of an error condition, the current error code flashes in this area, along with the red alarm icon at D3.
	D2	Menu bar with iconized representations of adjustable parameters. A red border is used to highlight the current menu item, as selected using the **Menu** (K1) and arrow buttons **Left** (K2) and **Right** (K4). Brief descriptions of the individual menu items are given in table 7-3 below. **Note** If a menu item cannot be selected, then the function it represents is not part of the equipment configuration of your unit.
	D3	Alarm icon: Upon occurence of an error condition, the red alarm icon will be illuminated. At the same time the current error code will flash in the temperature display field D1. The alarm may be acknowledged by pressing the ESC button.

The table below contains brief descriptions of the menu bar icons (item D2 in figure 7-1).

Table 7-3 Menu Bar Icons

Icon	Function
	**Temperature Set Value** Allows for changing the temperature set value (factory-preset to 37 °C/99 °F) within the permissible temperature range. The set value can be changed by pressing the **Left** and **Right** (item K2 or K4) and you can, after confirming your changes with the **Menu/Enter** button (item K1), track the impact on the actual temperature in the display field at D1. **Instructions:** "Temperature Set Value" on page 7-6.
	**Timer** Allows for having the incubator turn on and/or off upon expiry of a user-specified countdown period. When the user enables an "on timer" the display goes out. A rotating hand in the **Timer** icon and the illuminated readiness indicator icon in the status display area indicates that the timer is running. **Instructions:** "Timer" on page 7-7.
	**Power Outlet (IMH Series only)** Toggles the AC outlet in the work space of the incubator on and off. **Instructions:** "Power Outlet" on page 7-10.

Powering Up

1. Plug the power plug of the incubator into a suitable protection-earthed AC power outlet.

In the display window on the front panel the readiness indicator icon (rightmost icon in the menu bar at D2 in figure 7-1 on page 7-1) is illuminated.

2. Keep the **On/Off** button depressed for two seconds.

An initialization routine will be run after the incubator has been powered up. On completion of the initialization, the display will light up and the current work space temperature will appear in the temperature display field (item D1 in figure 7-1 on page 7-1). The incubator is ready for use now.

Switching the Incubator Off / Powering Down

1. Keep the **On/Off** button depressed for two seconds.

The display window goes out, except for the readiness indicator icon (rightmost icon in the menu bar at D2 in figure 7-1 on page 7-1) and a residual heat temperature readout in case the work space temperature is still higher than 50 °C (122 °F). The incubator is switched off now.

2. If required, unplug the AC power plug to power down the incubator completely.

Timer

The **Timer** feature from the menu bar enables the user to set a "countdown-type" on or off timer that switches the incubator on or off after a preset period of time. Instructions for setting an off timer are given in table 7-5 (see below), while the usage of an on timer is described in table 7-6 on page 7-8.

Programming a turn-on time causes the incubator to switch off until it is scheduled to restart, while a turn-off time keeps the device running before it shuts down at the user-specified time. The timer starts running immediately as soon as the user confirms his or her entries.

Table 7-5 Setting a Countdown-type Off Timer

	Press MENU to activate the menu bar, then use » to select the **Timer** icon and press MENU to confirm.
	The words **Shut** and **OFF** are flashing alternatingly in the multifunctional display pane. Choose the off timer with MENU.
	Set the hours and minutes until the incubator is supposed to shut down by pressing » or «, then press MENU to confirm.
	The display returns to its default mode. In the menu bar, the Timer icon is illuminated and a hand is rotating on the icon's face.

Table 7-7 Stopping an Off Timer Before It Expires

	Confirm the **OFF** message by pressing MENU, then press ESC to return to the main menu.
	In the menu bar, the Timer icon  will go out.

Table 7-8 Stopping an On Timer

	To cancel a pre-programmed on timer while the incubator is switched off, hold the On/Off button depressed for a few seconds.
	In the menu bar, the Timer icon will go out.

Settings

The **Settings** menu item opens a submenu populated with various commands for viewing general status information on the Heratherm unit and setting for the operation of the incubator or its display window:

- Read access to error log
- Calibrating the incubator
- Toggling the temperature display unit between °C and °F
- Entering a configuration control code

Instructions for using these features are given in the following.

Error Log

Users calling customer service for support may be asked by the Thermo Fisher Scientific agent to supply information from the error log of the incubator. It enables the user to browse through the most recent 22 alarm messages that were caused by hardware or control loop errors. Each error is displayed with an internal error code.

Error codes and instructions for clearing alarm conditions appear in the section "Error Codes" on page 12-1.

Table 7-11 Reading the Error Log

	Press MENU to activate the menu bar, then use » or « to select the **Settings** icon and press MENU to confirm.
	The word **Err** appears in the display pane to indicate that the error log has been selected.
	Use the MENU button to select the first entry in the error log, numbered **E01** (Error 01). After a few seconds, the display pane automatically switches to the internal error code - for example, **109**. E01 shows the latest fault, E22 shows the oldest fault.

Table 7-12 Entering the Calibration Reference Temperature Manually

	Press » to switch to the **CAL(ibration)** menu item. Press MENU to confirm the selection.
	The option **USEr** now appears in the display. Press MENU to confirm the selection.
	In the settings dialog that appears, set the temperature measured with the external reference sensor by using » or « and confirm your settings with MENU.
	The newly entered value will be stored and used to calibrate the internal temperature sensors with the value measured by the reference sensor. The display returns to its default mode. The **Settings** icon in the menu bar will go out.

Temperature Display Unit

The **Settings ->°C / °F** menu item allows for toggling the incubator used for displaying temperatures between degrees Centigrade and Fahrenheit.

Note This setting does not have any impact on data logging via the RS-232 interface. Any temperature data that is logged to a computer for operational parameter documentation purposes is handed over in °C.

Table 7-13 Toggling the Temperature Display Unit

	Press MENU to activate the menu bar, then use » or « to select the **Settings** icon and press MENU to confirm.
	Press » to switch to the **C - F** menu item. The text **C - F** is flashing in the display pane.

Shut-down

Shutting the Incubator Down

This chapter provides instructions for shutting the incubator down for prolonged periods of time, that is, at least for several days in a row.

⚠WARNING **Contamination hazard**

If the work space surfaces are contaminated, harmful biological material may spread to the environment of the incubator.

To rule out any risk for subsequent users, perform a full cleaning, disinfection and decontamination cycle to the standards set out in the section "Cleaning and Disinfection" on page 9-1 if you suspect (or if you are positive) that harmful biological material has been processed with the incubator.

1. Remove the containers with the cultures, all accessories, and other objects from the work space.
2. Clean and disinfect the work space, as explained in the section "Cleaning and Disinfection" on page 9-1.
3. When cleaning and disinfection and/or decontamination are done, turn the incubator off using the control panel.
4. Unplug the power cord and secure it against accidental reconnection.
5. Until the incubator is shut down, the work space must be continuously ventilated. Leave the glass door and the outer door open and secure them against accidental closure.

AI Overview

Transporting a Thermo Scientific Heratherm incubator safely requires fully emptying the chamber, securing all internal components, and protecting the unit from sudden drops or vibrations. Because these delicate laboratory units contain precise heating elements, electronics, and sometimes sensitive Peltier modules, you must always transport them fully upright. Fisher Scientific +1

1. Preparation

- **Decontaminate:** Thoroughly clean and disinfect the useable space and all surfaces before moving to prevent the spread of infectious or hazardous substances.
- **Empty the Unit:** Remove all samples, containers, and shelves. Empty the condensation tray completely.
- **Secure Parts:** Remove the shelf support rails and secure them safely. If possible, tape the glass inner door shut using non-marking lab tape to prevent it from swinging open during transit.
- **Power Down:** Unplug the unit entirely and secure the power cord so it does not drag or become a tripping hazard. Thermo Fisher Scientific +4

2. Moving & Lifting

- **Do Not Lift Alone:** Heratherm incubators are heavy. To avoid physical strain or crushing injuries, never move the unit by yourself.
- **Never Use Doors as Handles:** Grip the unit only from the bottom or designated lift points, and never use attached components, handles, or doors to lift or pull the incubator.
- **Use Equipment:** If transporting a heavy floor-standing model, use a dolly or cart. Ensure the front casters are locked into place when stationary. YouTube · Thermo Fisher Scientific +3

3. Transport & Vehicle Loading

- **Keep Upright:** Transport the incubator strictly in its normal, upright position. Tilting or laying the unit on its side can damage the internal air circulation fan motors and cooling modules.
- **Tie it Down:** Use securing straps to keep the incubator firmly in place in the vehicle. Avoid sudden stops and starts, which can cause the heavy unit to tip over. Cole-Parmer

4. Re-installation

- **Wait to Settle:** Allow the incubator to sit undisturbed for a few hours before plugging it in, especially if it was subjected to bumpy transport conditions.
- **Environment:** Place the unit on a vibration-proof, level, and solid surface away from direct sunlight and drafts. Leave enough clearance on all sides for proper ventilation.
- **Verify Recovery:** Upon powering it back on, clear any power-interruption error codes (such as E007) per the device's guidelines, and allow the chamber temperature to fully stabilize before loading samples. YouTube · Thermo Fisher Scientific +1

For exact lifting points or specialized instructions for your specific unit (such as a Compact vs. Refrigerated model), consult the Thermo Fisher Scientific Document Search to download the manufacturer's manual for y our exact Heratherm