VeritiPro™ Thermal Cycler (384-well) Installation and Operation

Catalog Number A48140

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Note: For safety and biohazard guidelines, see the "Safety" appendix in the *VeritiPro™ Thermal Cycler User Guide* (Pub. No. MAN0019157). Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Product description

This document summarizes procedures for installing and using the VeritiPro™ Thermal Cycler with isothermal 384-well 0.02 mL block. For detailed instructions, see the *VeritiPro™ Thermal Cycler User Guide* (Pub. No. MAN0019157).

Fig. 1 VeritiPro™ Thermal Cycler

Required materials not provided

- Can of compressed air (For use in cleaning wells of sample block).
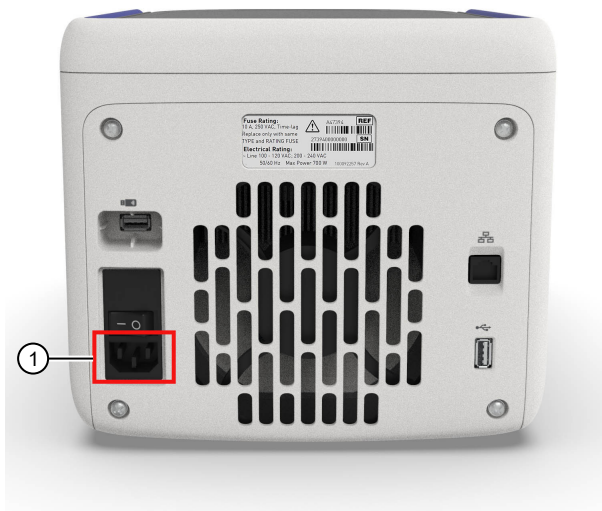- *(Optional)* Electrical protective devices.

  Note: The use of one or more of the following electrical protective devices is recommended.

  - Power line regulator (100–240 V)
  - Surge protector/line conditioner (10-kVA)
  - Uninterruptible power supply (1.5-kVA)

Set up the VeritiPro™ Thermal Cycler

IMPORTANT! Save the packing materials and box in case you need to ship the instrument in for service.
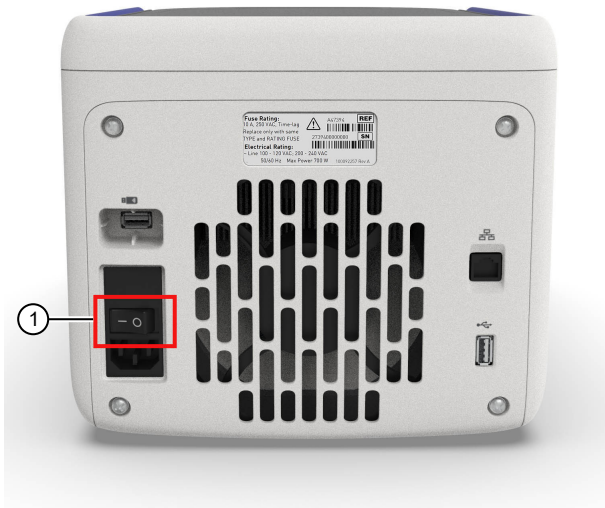
1. Open the shipping crate to unpack the instrument. You should receive one box containing the thermal cycler and the accessories.
2. Remove the packing material, then inspect the instrument for shipping damage.
3. Use compressed air to clear out each well of the sample block to remove particles that may have collected inside during shipping.
4. Move the instrument to an installation site that meets the spatial and weight requirements for the thermal cycler (see "Technical specifications" on page 4).
5. Connect the instrument to a power outlet.
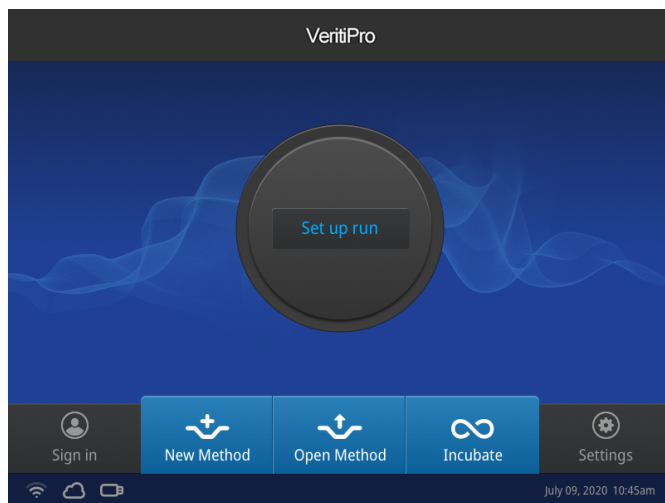   a. Connect the power cord to the instrument.

① Power cord port

   b. Install any desired electrical protective devices.
   c. Connect the power cord to a wall plug.
6. Turn the power switch on, then wait for the instrument to start up. Proceed with the installation after the touchscreen displays the Home screen, indicating that the instrument is active.

   When you power on the instrument, the instrument will take under a minute to start up.

For Research Use Only. Not for use in diagnostic procedures.

Thermo Fisher
S C I E N T I F I C

① Power switch

The Home screen will display following successful installation.

Connect the PCR instrument to the Internet

Connect your thermal cycler to the Internet. See the instrument user guide for detailed instructions.

- Connect through the instrument Ethernet port using a cable.
- Connect via wireless connection with the High-Power USB Wi-Fi Module (Cat. No. A26774).

Create a user profile on the PCR instrument

1. Select 👤 **(Sign In)** > **Get started** > **Create profile**.
2. Fill in the required text fields and enter a four digit PIN to create your user profile.

   Note: The first profile created is automatically given an Administrator profile (indicated by an asterisk after the **Username**).

Create a Connect account

1. Go to **thermofisher.com/connect** from your web browser.
2. Click **Sign up now** and follow the prompts to create an account.

Link the PCR instrument to Connect

1. Select 👤 **(Sign In)** ▸ **Connect**, then select the cloud region of the instrument.
2. Select the method for linking the instrument to Connect .
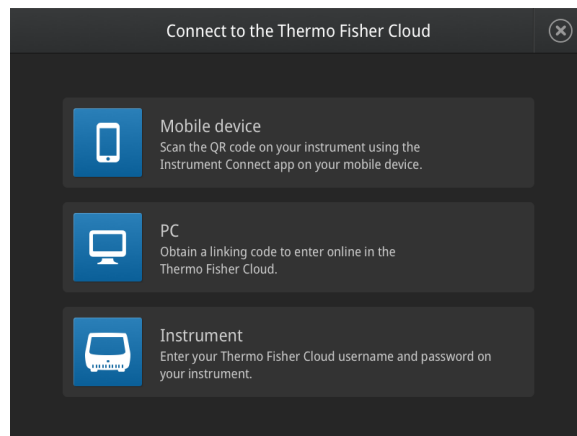
Connect by mobile device

Select 👤 **(Sign In)** ▸ **Get started** ▸ **Connect** ▸ **Mobile device** from the instrument to generate a QR code.

1. Download the "Instrument Connect Mobile Application" on your mobile device.
   a. For iPad™ or iPhone™ devices, download the application from the iTunes™ music store by searching for Instrument Connect by Thermo Fisher Scientific.
   b. For Android devices, download the application from Google™ Play by searching for Instrument Connect by Thermo Fisher Scientific.
2. Launch the Instrument Connect Mobile Application and log in using your Connect login and password.
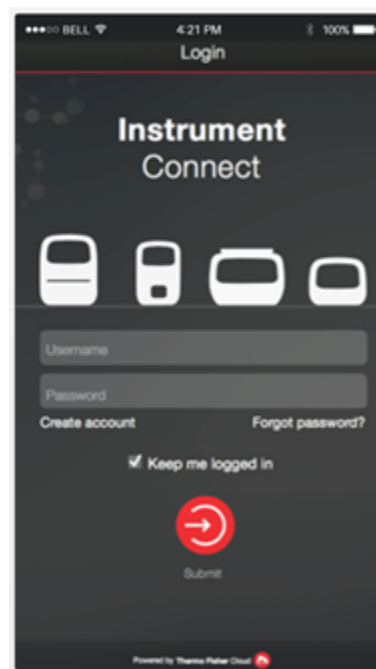
3. Capture the QR code on the instrument screen.

Connect by PC

Select 👤 **(Sign In)** ▸ **Get started** ▸ **Connect** ▸ **PC** from the instrument to generate a linking code.

1. Log in to your Connect account using a web browser from a computer.
2. Select 🖥 **(InstrumentConnect)** from the left navigation strip.
3. Select 🖥 **(Add an Instrument)** from the top navigation strip.
4. Select **VeritiPro** from the drop down menu, then click **Next**.
5. Enter the linking code generated by the instrument in the text box, then click **Send**.

   Upon successful authentication, the instrument is linked to Connect.

Connect by instrument

1. Enter your Connect **Username** and **Password** from the instrument.
2. Click **Link account**.

   Note: If you do not have a PIN, you will be prompted to create one.

   Upon successful authentication, the instrument is linked to Connect.

How to use the VeritiPro™ Thermal Cycler

Operate the instrument using the touchscreen. For detailed instructions on using the thermal cycler, see the *VeritiPro™ Thermal Cycler User Guide* (Pub. No. MAN0019157).

Set up a run from the Home screen by opening an existing method, or creating a new method. To set up a run using a new method:

1. Select **New Method** or **Set Up Run**.
2. Select a template.
3. In the edit mode, edit the parameters of the method template such as temperature, time, number of steps/stages.
4. To access advanced editing options, select **Actions**. Advanced editing options can be used to:
   - Modify stages and steps
   - Increase or decrease time and temperature
   - Change ramp rates
   - Perform temperature optimization
   - Perform simulation mode
   - Add comments
5. Save the new method in a folder.
6. (Optional) Select **Start Run** to start the Method.

Maintenance guidelines

⚠ **CAUTION!** During instrument operation, the temperature of the heated cover can be as high as 110°C, and the temperature of the sample block(s) can be as high as 100°C. Before performing the procedure, keep hands away until the heated cover and sample block(s) reach room temperature.

To ensure proper operation:
- Regularly:
  – Wipe the instrument surfaces with a lint-free cloth.
  – Clean the vents, touchscreen, and sample block of the instrument.
  – Clean the sample wells with 100% isopropanol.
- Use only consumables recommended by Thermo Fisher Scientific for the instrument.

  Use of consumables that are larger or smaller than the specified volume can damage the instrument, contaminate the sample block, and/or decrease the PCR yield (due to inefficient thermal transfer).
- **Do not use sharp objects on the touchscreen.**

Use only your fingers or blunt objects to enter commands on the instrument touchscreen. Sharp and/or pointed objects such as writing utensils can damage the surface of the touchscreen.

- **Back up frequently.**

  Routinely back up the configurations and files on your instrument to a USB drive. Regular backups protect against data loss caused by user error, power failure, or instrument error. For more information, see the *VeritiPro™ Thermal Cycler User Guide* (Pub. No. MAN0019157).

Prepare samples using MicroAmp™ EnduraPlate™ Optical 384-Well Clear Reaction Plates

The following procedure describes how to properly load and seal MicroAmp™ EnduraPlate™ PCR plate with the MicroAmp™ Adehesive Film Applicator to produce a tight seal and minimize air bubbles, prevent well-to-well contamination, and sample loss.

1. Pipette the reaction mixture into the wells.
2. Place the PCR plate on a benchtop.
3. Remove the backing from the adhesive film and place the adhesive film on the PCR plate, making sure to cover all the wells.
4. Seal plate. Rub the flat edge of the applicator back and forth along the long edge of the plate.

5. Rub the flat edge of the applicator back and forth along the short edge (width) of the plate.

6. Rub the end of the applicator horizontally and vertically between all wells.

7. Rub the end of the applicator around all outside edges of the plate using small back and forth motions to form a complete seal around the outside wells.


8. Place the sealed PCR plate into the instrument.

Technical specifications

Feature	Specification
Maximum block ramp rate [1]	5.0°C/sec
Maximum sample ramp rate	3.5°C/sec
Temperature accuracy	±0.25°C (35–99.9°C)
Temperature range for protocol run	0.0–100.0°C
Temperature non-uniformity [2]	≤0.5°C
Dimensions	• Height: 21.7 cm (8.54 in) • Width: 24.5 cm (9.65 in) • Depth: 46.5 cm (18.31 in)
Weight	13 kg (28.7 lb)
PCR volume range	• Supported: 5–20 μL • Allowable: 1–30 μL
Instrument memory	USB, 16 GB on-board
Display interface	8 inch color TFT LCD
Power	100–120 VAC, 200–240 VAC, 50–60 Hz, Maximum 700 W
Ambient humidity	15–80% Relative Humidity, non-condensing (acceptable range)
Ambient operating temperature	15–30°C (acceptable range)

[1] Reaction volume of 1 μL.

[2] 30 seconds after clock starts.

Power and communication port symbols

Port	Description
∼	AC power cable port
品	10/100 Fast Ethernet port for connecting to a network
⌁	USB v2.0 port for connecting to an external network drive, jump drive, or other USB storage device
▣◖	USB v2.0 port for connecting to USB-enabled Wi-Fi Card

The information in this guide is subject to change without notice.