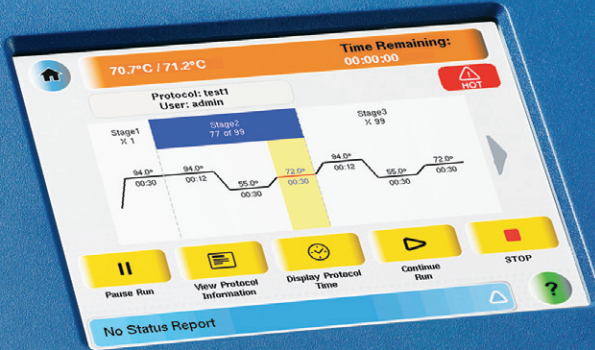


# Veriti™ Thermal Cycler

The Power of MORE



Applied Biosystems



Veriti 96 Well Fast Thermal Cycler

# Applied Biosystems, the most trusted name in PCR instruments, introduces a new line of innovative thermal cyclers

The Veriti™ Thermal Cycler delivers the proven reliability of Applied Biosystems 9600 and 9700 GeneAmp® instruments. The Veriti Thermal Cycler is available in four formats to suit your thermal cycling needs: 96-Well block (0.2 or 0.1 mL), 384-Well block, and 0.5 mL 60-Well block. Each system features a powerful color touch screen to simplify instrument setup and use.

Additionally, the Veriti 96-Well Thermal Cycler features the added control of VeriFlex™ Blocks which gives you six independent temperature blocks to provide precise control over your PCR optimization. The ability to run fast or standard PCR methods offers you flexibility to shorten your PCR cycling time.

## The Power of MORE

### Multiple temperature zones for PCR optimization

- Veriti 96-Well Thermal Cycler features innovative VeriFlex Blocks
- Six temperature zones for PCR optimization

### Optimal for fast and standard PCR

- Standard and fast cycling options with the Veriti 96-Well Thermal Cycler address your current and future PCR needs

### Reliability you expect

- Supported by Applied Biosystems worldwide service
- Part of an overall solution that includes plastics, reagents, and instruments

### Exceptionally easy to operate

- Easy-to-use graphical interface (6.5 inch VGA touch screen)
- Fast protocol setup
- Convenient protocol transfer from one Veriti Thermal Cycler to another with a USB memory stick

# Innovative 96-Well VeriFlex™ Block technology—a new way to do PCR

## VeriFlex Blocks: Enhanced PCR Functionality

The Veriti™ 96-Well Thermal Cycler features innovative VeriFlex Blocks for enhanced PCR functionality. Six separate peltier blocks provide maximal versatility and flexibility and offer two key benefits: 1) PCR Optimization: each block can be set with a specific temperature which is ideal for precise control over PCR optimization 2) Run more experiments: the six peltier blocks can also be used to run up to six different annealing temperatures in the same run. With this enhanced functionality, the Veriti 96-Well Thermal Cycler with VeriFlex Blocks is the ideal thermal cycler for any lab.

## VeriFlex Blocks: A better than gradient approach

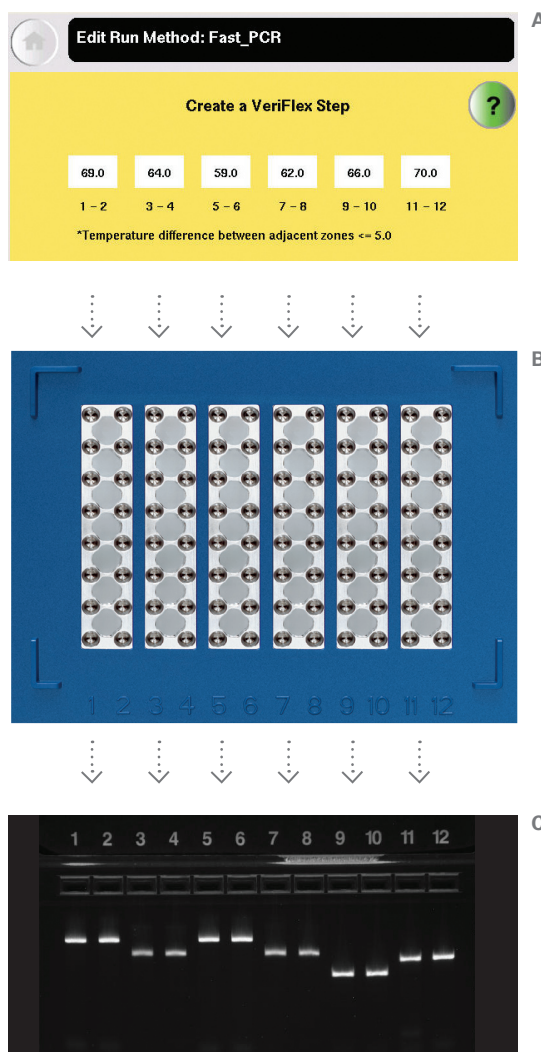
VeriFlex™ Blocks on the Veriti Thermal Cycler provide a better than gradient approach to PCR optimization. With six separate peltier blocks, you have precise control over the temperature that is set for the PCR optimization process.

- Use the on-board T<sub>m</sub> calculator to approximate the optimal annealing temperature.
- Run up to six separate temperatures in the same plate to determine the optimal annealing temperature.
- VeriFlex Blocks maintain their thermal characteristics between optimizing and isothermal conditions—eliminating the need for further optimization steps.

## VeriFlex Blocks: More than just for PCR optimization

VeriFlex Blocks have an additional benefit over gradient thermal cyclers. Since the peltier blocks are separate, it is possible to run up to six different temperatures in the same protocol step (Figure 1).

- Run up to six different annealing temperatures for cycle sequencing or endpoint PCR.
- Incubate samples at six different temperatures simultaneously.



**Figure 1A.** Screenshot from Veriti 96-Well Thermal Cycler showing the annealing temperature being set for six different primers.

**Figure 1B.** VeriFlex Blocks: Six individual peltier blocks.

**Figure 1C.** PCR results showing six primer sets run in a single PCR amplification cycle. Results indicate that the Veriti 96-Well Thermal Cycler can run six assays at six annealing temperatures during the same PCR run.

# Powerful, yet simple to operate

## Control at your fingertips

The powerful, yet simple-to-operate user interface on the Veriti™ system is driven by the 6.5 inch (16.51 cm) VGA color touch screen. The large screen allows for easy viewing of your temperature profiles (Figure 2). Additionally, the large navigation buttons put programming of the Veriti Thermal Cycler at your finger tips. Setup and navigation do not require the use of a stylus or mouse.



Figure 2. Veriti Thermal Cycler 6.5 inch VGA color touch screen.

## Fast setup, fast results

The Veriti system provides two options for method navigation. For quick setup, you may select one of the pre-programmed methods (Figure 3). If you prefer to program your own methods, simply touch the step you would like to set up and then use the touchpad to enter thermal cycling values (Figure 4). After completing a setup, you have the choice of saving the method to the instrument or to a USB memory stick.

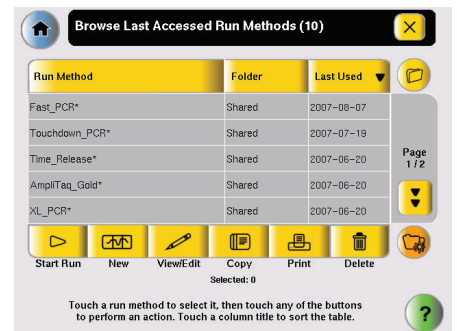


Figure 3. Screenshot of methods stored on the Veriti Thermal Cycler. Select a method to be edited or saved. Put shortcuts to methods on the main menu for easy access.

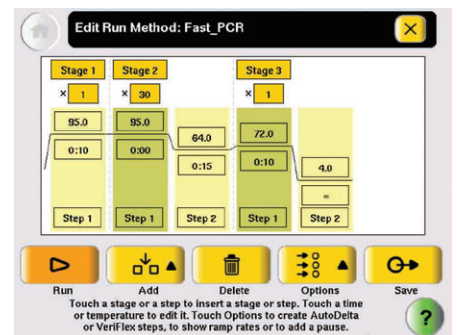
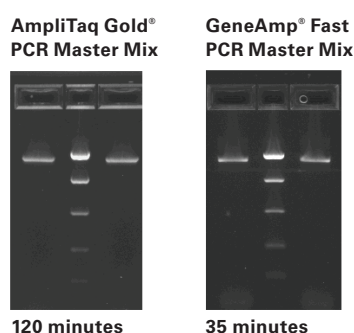


Figure 4. Edit run screen from Veriti Thermal Cycler. Simply touch a step and enter new values into keypad (not shown) to create new methods or to alter existing ones.

# Flexibility with you in mind

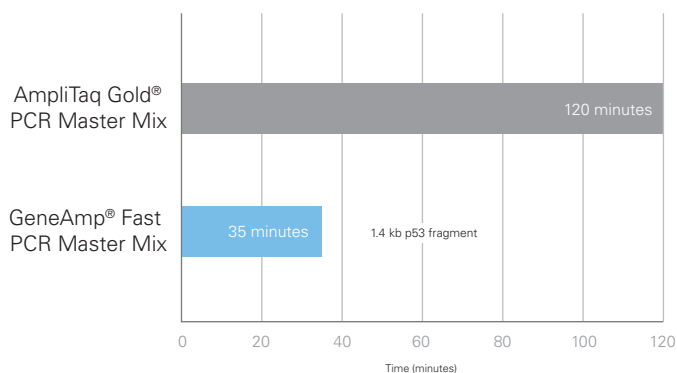
## Control your time: Go fast when you want

With the Veriti™ 96-Well Thermal Cycler you get both a standard and fast thermal cycler in one. So if you're currently performing standard PCR but anticipate a need for fast thermal cycling in the future, the Veriti 96-Well Thermal Cycler provides you with the flexibility to go fast when you want.



**Figure 5:** Gel image for p53 (1.4kb) comparing results from both fast and standard PCR amplification generated on the 0.2 mL Veriti 96-Well Thermal Cycler.

When using the GeneAmp® Fast PCR Master Mix on the Veriti 96-Well Thermal Cycler, amplicons of 500 bp can be generated in under 25 minutes, some in as little as 10 minutes. Larger fragments, up to 2 kb, can also be amplified in approximately 40–50 minutes using the convenient Fast PCR Master Mix.



**Figure 6:** Target p53 (1.4kb) generated using the Fast PCR Master Mix in 35 minutes versus 2 hours using standard PCR chemistry. All results were generated on the 0.2 mL Veriti 96-Well Thermal Cycler.

## GeneAmp® Fast PCR Master Mix

GeneAmp Fast PCR Master Mix is optimized to generate amplicons in under 25 minutes for 500 bp fragments. Converting your existing PCR protocols from traditional to fast is straightforward. By following simple guidelines, you can achieve results that are comparable to standard amplification for a variety of templates in a fraction of the time.

### ORDERING INFORMATION

| Description                                       | Quantity    | P/N     |
|---|-------------|---------|
| GeneAmp Fast PCR Master Mix (2X) with Protocol    | 2 x 1.25 mL | 4362070 |
| GeneAmp Fast PCR Master Mix (2X) without Protocol | 2 x 1.25 mL | 4359187 |

## Veriti Thermal Cycler Consumable Solution

The Veriti Thermal Cycler is supported worldwide by Applied Biosystems. In addition to world-class service, Applied Biosystems offers a complete line of complementary products designed to work with the Veriti Thermal Cycler. The full line of products includes isolation products, enzymes, buffers, dNTPS, control reagents, contamination prevention products, and plastics.

To learn more, please visit

[www.appliedbiosystems.com/pcr](http://www.appliedbiosystems.com/pcr)

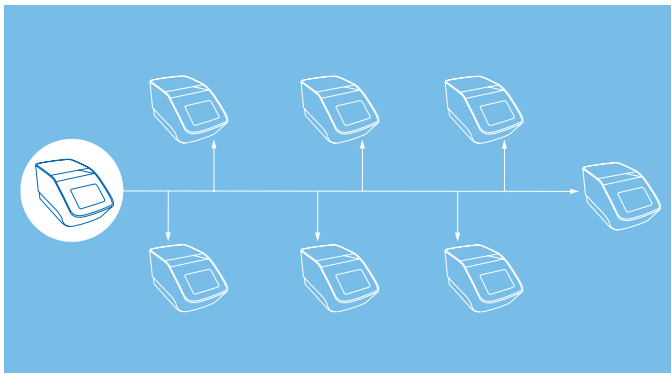
# Compact footprint, convenient data tools

## Control Multiple Veriti Thermal Cyclers with VeritiLink

VeritiLink allows up to 12 Veriti systems to be connected in a satellite format. Simply connect the Veriti instruments to an Ethernet hub and you can start a run from any Veriti Thermal Cycler. This allows you to start multiple thermal cyclers at once from one location. This combined with side-by-side placement of Veriti systems provides you with a more flexible, space-saving alternative to other four-block thermal cyclers.



**Figure 7.** Front and back venting allows for side-by-side placement of Veriti systems.



**Figure 8.** VeritiLink allows you to start multiple thermal cyclers at once.

## Simple data transfer

A convenient USB port is outfitted on all Veriti systems to simplify data transfer and product updates.



### PORTABILITY

Use the USB port on Veriti system to transfer methods from one Veriti system to another.

### SECURITY

Store your most important methods on a USB memory stick.

### STORAGE

Store an unlimited number of methods by using a USB memory stick.

### UPLOADS

Update firmware when enhancements become available.

**Figure 9.** USB functionality on the Veriti Thermal Cycler.

## VERITI™ THERMAL CYCLER SPECIFICATIONS

|                               | Veriti FAST 96-Well   | Veriti 96-Well  | Veriti 384-Well   | Veriti 60-Well   |
|-------------------------------|---|---|---|--|
| Block Format                  | 0.1 mL Alloy  | 0.2 mL Alloy  | 0.02 mL Aluminum  | 0.5 mL Aluminum  |
| Features                      | Fast 0.1 mL format and sample block enabled to run fast chemistry         | Standard 0.2 mL format and sample block enabled to run fast chemistry | High-throughput, single block system optimized for low volume reactions | Easy-to-handle reaction tubes for large volume reactions |
| Max Block Ramp Rate           | 5.00° C/sec   | 3.90° C/sec   | 3.70 ° C/sec  | 3.30 ° C/sec   |
| Max Sample Ramp Rate          | 4.25° C/sec   | 3.35° C/sec   | 3.10 ° C/sec  | 2.70 ° C/sec   |
| Enabled to run Fast Chemistry | Yes   | Yes   | No  | No   |
| VeriFlex™ Blocks              | 25° C (5° C zone-to-zone)   | 25° C (5° C zone-to-zone)   | No  | No   |
| Temperature Accuracy          | ±0.25° C (35–99.9° C)   |   |   |  |
| Temperature Range             | 4.0° C to 99.9° C   |   |   |  |
| Temperature Uniformity        | <0.5° C (20 sec after reaching 95° C)                                     |   |   |  |
| Dimensions                    | Height: 24.5 cm (9.6 in) Width: 23.7 cm (9.3 in) Depth: 48.5 cm (19.1 in) |   |   |  |
| Weight                        | 10.6 kg (19.9 lb)   | 10.6 kg (19.9 lb)   | 11.5 kg (25.4 lb)   | 10.9 kg (24.0 lb)  |
| PCR Volume Range              | 10–30 µL  | 10–80 µL  | 5-20 µL   | 25-100 µL  |
| Instrument Memory             | 800 protocols on board, unlimited with use of USB memory stick            |   |   |  |
| Display Interface             | 16.51 cm (6.5 in) VGA 32k color with touch screen                         |   |   |  |
| Warranty                      | 2 years   |   |   |  |
| Tm Calculator                 | Menu driven through touch screen  |   |   |  |

## ORDERING INFORMATION

| Description  | Quantity     | P/N     |
|--|--------------|---------|
| Applied Biosystems Veriti™ 96-Well Fast Thermal Cycler, 0.1 mL                                   | 1 instrument | 4375305 |
| Applied Biosystems Veriti™ 96-Well Thermal Cycler, 0.2 mL  | 1 instrument | 4375786 |
| Applied Biosystems Veriti™ 384-Well Thermal Cycler, 0.02 mL                                      | 1 instrument | 4388444 |
| Applied Biosystems Veriti™ 60-Well, 0.5 mL Thermal Cycler  | 1 instrument | 4384638 |
| 9 Channel Temperature Verification Kit for VeriFlex™ 96-Well, 0.1 mL Sample Block                | 1 kit        | 4373997 |
| 9 Channel Temperature Verification Probe for VeriFlex™ 96-Well, 0.1 mL Sample Block, Upgrade Kit | 1 kit        | 4375938 |
| 9 Channel Temperature Verification Kit for VeriFlex™ 96-Well, 0.2 mL Sample Block                | 1 kit        | 4377669 |
| 9 Channel Temperature Verification Probe for VeriFlex™ 96-Well, 0.2 mL Sample Block, Upgrade Kit | 1 kit        | 4377670 |
| 9 Channel Temperature Verification Kit for 384-Well, 0.02 mL Sample Block                        | 1 kit        | 4385338 |
| 9 Channel Temperature Verification Probe for 384-Well, 0.02 mL Sample Block, Upgrade Kit         | 1 kit        | 4385339 |
| 60-Well, 0.5 mL Temperature Verification Kit   | 1 kit        | 4309924 |

For more information on the Veriti Thermal Cyclers, contact your local Applied Biosystems representative or visit [info.appliedbiosystems.com/veriti](http://info.appliedbiosystems.com/veriti)

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

NOTICE TO PURCHASER: The Veriti™ Thermal Cyclers are covered by one or more of US Patents Nos. 5,038,852, 5,333,675, 5,656,493, 5,475,610, 5,602,756, 6,703,236, 7,238,517 and corresponding claims in their non-US counterparts, owned by Applied Biosystems Corporation. No right is conveyed expressly, by implication, or by estoppel under any other patent claim, such as claims to apparatus, reagents, kits, or methods such as 5' nuclease methods. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

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**Headquarters**  
850 Lincoln Centre Drive | Foster City, CA 94404 USA  
Phone 650.638.5800 | Toll Free 800.345.5224  
[www.appliedbiosystems.com](http://www.appliedbiosystems.com)

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