

Highlighting innovative design features
and useful application information for
Thermo Scientific Temperature Control

smart notes

operation/installation tips ► Bath Circulators

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Q A

How do I achieve the best (fastest) time-to-temperature from a heated bath circulator?

Optimize the installation: If you have already purchased a bath that is not meeting your time-to-temperature requirements, there may be more performance already available to you. Taking steps to achieve the best thermal performance by minimizing mass, maximizing heat transfer to your application, and minimizing heat loss to ambient will decrease the time it takes to achieve setpoint. If you still need more speed, adding a Boost Heater accessory will improve time to temperature performance. A Boost Heater accessory works by safely and conveniently adding 40% to 100% more wattage to what your heated bath circulator already has.

Optimize selection: Before selecting a bath circulator talk with one of our application specialists. They can help you determine if your application requires more heat than a heated bath circulator alone can provide. This is achieved by combining the Boost Heater accessory with the heated bath circulator for a perfect fit.



what can I do?

Optimizing the installation for speed

Maximize Heat Transfer: Use short hoses with a larger inner diameter (12mm rather than 8mm) and run the pump at the highest speed possible to improve flow.

Reduce Heat Loss: Use the shortest hoses possible with insulation that is appropriate to the temperature.

Minimize Mass: This includes everything that heats up, not just the application itself. Remember to take in account the fluid that is in the bath, hoses, and the application. Because it is unlikely that you can reduce the mass of the application itself, using the smallest bath and the shortest hoses possible will make more heat available for the application.

If you have done all of the above and find that the time required to achieve set point is still too long, then a Boost Heater accessory may be the solution.

Boost Heater

Depending on what is needed, this is available with 1200W or 1600W of additional heat. Available with the Thermo Scientific™ ADVANCED and PREMIUM heated immersion circulators that can be matched with Thermo Scientific™ S7, S13 and S30 heated baths as well as the Thermo Scientific™ A28 and G50 refrigerated/heated baths.

▶ Summary

When you need speed, take the proper steps to optimize your application/installation. If your bath circulator cannot attain the required set point within the allotted time, adding a Boost Heater accessory will give you the speed you need.

Visit www.thermoscientific.com/tctechlibrary for product brochures and detailed application notes.

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