

Tubing & Fittings Guide

A Quick Guide to Tubing and Fittings

PolyScience offers a variety of tubing and fittings for use when using your Circulator to control the temperature of an external bath or device. Here are some guidelines for selecting the best tubing and fittings for your application:

Materials

Buna N Tubing – A synthetic (nitrile) rubber, Buna N is able to withstand temperatures from about -40° to +120°C and performs well with ethylene glycol, propylene glycol, mineral oil, and water.

Viton® Tubing – A synthetic rubber and fluoropolymer elastomer, Viton® has a broad operating temperature range (-32° to +200°C) and a chemical compatibility similar to Buna N.

Braided Teflon® Tubing – This high-strength tubing consists of an extruded Teflon® core with an outer stainless steel braid. It can handle extreme temperatures (-50° to +225°C) and pressures and also offers excellent chemical compatibility. Available in 1 m (39") lengths only, braided Teflon® tubing should be used in applications where the distance between the circulator and external device is relatively short. Each end has a male 1/4" pipe to 1/4" tube connector which can be quickly connected and disconnected.

Stainless Steel Fittings – Stainless steel fittings can handle extreme temperatures while also offering good chemical resistance. PolyScience Performance Series Temperature Controllers are shipped with stainless steel fittings.

Nylon Fittings – Their somewhat better chemical resistance to low temperature bath fluids than brass fittings make nylon fittings an excellent choice for applications where fluid does not exceed 90°C. Nylon fittings are standard equipment on PolyScience Advanced Programmable, Advanced Digital, and Standard Digital Temperature Controllers.

Brass Fittings – Strong and durable, brass fittings offer excellent corrosion resistance. They are best suited for low temperature applications (below 80°C).

Tubing & Fitting Temperature Ranges

