

# solution heaters

## SC-20

### Dual In-line Solution Heater/Cooler

#### Bipolar Temperature Control for Flowing Solutions



- Heats and cools from 0° to 50°C
- Compatible with Warner Series 20 Chambers
- Optimized for use with the CL-100 Bipolar Temperature Controller

In-line solution heating has proven to be one of the most effective methods of maintaining the temperature of perfusion solutions. The SC-20 Dual In-line Solution Heater/Cooler utilizes Peltier thermoelectric devices to regulate temperature both above and below ambient levels.

The SC-20 is designed to thermally regulate one or two solutions at the same temperature. Solution temperature can be maintained at 0°C at flow rates of 2 ml/min., 5°C at 5 ml/min., or as high as 50°C at 5 ml/min.

An integral water jacket is used to remove excess heat from the SC-20 peltier device. Running water either from a tap or a large reservoir can be used. Flow rates as low as 4 liters per hour are sufficient to maintain cooling efficiency.

The SC-20 can be used with either one or two discrete perfusate solutions, or with a solution/gas combination. When coupled with a PHC Series Imaging Chamber Heater/Cooler Jacket, the SC-20 provides an effective means of temperature control in a Warner chamber, even in the absence of solution flow.

*Each SC-20 is supplied with a TA-29 Thermistor Cable Assembly for monitoring the bath temperature during use, 10 feet of PE-160 tubing and 10 feet of 1/8" I.D. x 1/4" O.D. Tygon tubing.*

#### Specifications

Minimum Temperature	0°C (2 ml/min. max flow)
Maximum Temperature	50°C
Maximum Flow Rate at 5°C	5 ml/min.
Accuracy	±0.1°C
Internal Dead Volume	330 µl
Perfusion Lines	Type 316 Stainless Steel 0.032 in ID x 0.062 in OD
Water Jacket Ports	Type 316 Stainless Steel 0.12 in ID x 0.147 in OD
Controller	Model CL-100 Bipolar Controller
Physical Dimensions:	
Body (D x L)	21 x 165 mm
Weight	109 g
Cable Length	1.9 m
Connector Type	15 pin Male "D"
Warranty	One year

#### Order # Model Product

**W4 64-0353** SC-20 Solution Heater/Cooler Two Line

**W4 64-0352** CL-100 Bipolar Temperature Controller

#### Replacement part

**W4 64-0107** TA-29 Cable with Bead Thermistor for Heater Controllers