



## Model CHX700 Column Temperature Controllers Operating Instructions

The CHX700 column temperature controller consists of a control box and a heating unit connected by a 100 cm cable. The heating unit includes three column blocks to hold columns from 6mm to 10mm dia. and up to 300 mm long. It has a heat exchanger to pre-heat the eluent before it enters the column. There is a low-volume pre-column filter with replaceable frits to protect your column from particulate fouling.

### INSTALLING THE CHX700

Place the control box on any clean, dry surface, where liquids will not spill into it, and away from flammable vapors. Attach the power cord to the back panel, and plug it in to a grounded power outlet. You may place the heating unit in any convenient location provided that it has one inch (25mm) clearance on the top and sides.

### INSTALLING YOUR COLUMN

1. Loosen the two thumb-screws at the side of the heating unit and lift off the cover.
2. Remove the thumb-screws holding the clamping plates. If necessary to fit the length of your column, you may use a phillips or pozidriv screwdriver to remove or re-arrange the column blocks on the heating plate.
3. Fasten the column in place with appropriate clamping plates.
4. If it has come loose in shipping, replace the friction washer holding the pre-column filter to the heater base. Attach one end of the capillary tube of the heat exchange plate to the pre-column filter using the nut and ferrule provided.
5. Connect the injector to the inlet of the filter. The pre-column filter uses standard 1/16" CPI fittings compatible with many common fittings. Flush the tubing and filter with clean eluent.
6. Attach the other end of the heat-exchange capillary to the inlet of the column. Connect the exit of the column to your detector; route the tubing for minimum length.
7. Check for leaks before turning on the power to the CHX700.
8. Replace the insulated cover on the heating unit. For your safety, and most efficient operation of the instrument, always operate the heater with the insulated cover installed.

### USING THE TEMPERATURE CONTROLLER

The main power switch is on the front panel where it is marked 1 for ON and 0 for OFF. Above it is the temperature control module.

The four digit display normally shows the actual temperature to the nearest degree. It also is used to display the temperature setpoint or the programming functions list.

There are three buttons below the digital display:

To view the setpoint, press the  button; the display will show the setpoint in flashing numbers as long as the  button is held down. To change the setpoint, press and hold the  button, then press the  button to increase or press the  button to decrease. The actual temperature display will return when you release the buttons.

Pressing the  and  buttons together enters program mode which is used by the factory to set the tuning and special features of the controller. *We discourage the user from altering these functions.* If you should accidentally enter program mode, wait 60 seconds and it will revert to normal operation.

The recommended maximum temperature for the CHX700 is 100° C. There is a thermal safety switch that limits the heater to about 110° C.



#### FUSES:

For continued protection against fire and electrical hazard, use only the recommended type fuse. For 100-120V instruments use a 250V, 1A time-delay fuse, North American type (UL/CSA). For 200-240V instruments use a 250V, 0.5A time-delay fuse, type IEC-127. (See spare parts list.)

The fuseholder is built in to the power cord connector on the back panel. To change the fuse, remove the power cord. With a small flat screwdriver, pry open the fuse drawer. There is a small tab for this purpose. The fuse fits into the rear compartment of the drawer; the space at the front is for a spare fuse.

#### REPLACING THE HEATING UNIT:

1. To protect against electrical shock, first disconnect the main power cord.
2. Remove the four screws holding the top cover of the control box, and lift it off.
3. Carefully observe the orientation of the strain-relief bushing on the heater cable so that you will re-install it correctly. The heater cable lifts out of the slot in the back panel of the control box; remove the strain relief bushing from the cable.
4. Disconnect the electrical snap connector. Attach the cable of the new heater; it is polarized to fit only one way.
5. Place the strain relief bushing around the cable, and press it into the slot on the rear panel of the control box. The bushing should firmly hold the cable when it is correctly oriented.
6. Replace the top cover on the control box and restore the power.

#### SPARE PARTS FOR CHX700:

<u>Cat. No.</u>	<u>Description</u>
1100-0409	Heat exchanger plate
3102-9030	Filter assembly
3102-9047	Replacement filter frit, 0.5µ
3543-0013	Fuse for 100-120V operation
1100-1015	Heating unit for 100-120V operation
3543-0011	Fuse for 200-240V operation
1100-1016	Heating unit for 200-240V operation

#### ELECTRICAL RATINGS

Cat.No. 1100-1005, Model CHX700, 100-120VAC, 50/60 Hz, 1.0A, 100W

Cat.No. 1100-1006, Model CHX700, 200-240VAC, 50/60 Hz, 0.5A, 100W

Mains supply voltage  $\pm 10\%$  of nominal voltage.

#### ENVIRONMENTAL RATINGS

Indoor use only. Altitude up to 2000 M. Ambient temperature 5 to 40°C. Relative humidity up to 80% up to 31°C, derated to 50% RH at 40°C. Installation (overvoltage) category II; pollution degree 2.

#### DIMENSIONS

Controller 12 x 14 x 28.5 cm (WxHxL)

Heating Unit 7.5 x 6 x 39 cm (WxHxL)

Cable 100 cm