

PreProgrammed Temperature Controllers

Preprogrammed temperature controllers have an internal program chip which is installed in the temperature controller, and contains the protocol information required to run the freezer system. Specimen temperature is matched with the pre-installed temperature data, and precisely follows the selected temperature protocol. The fixed programs stored in the memory chip of preprogrammed controllers make these controllers ideal for routine applications. Simply set to the desired program and leave to run with minimum supervision. New freezing (or thawing) programs can be specified at a later date. These will be supplied on another memory chip with installation instructions.

Preprogrammed controllers have a temperature control range of +20°C to -43°C, but can monitor and display temperature information beyond the ranges specified above, and are able to meet lower temperatures through "freefall".

The **CL5500** is a preprogrammed unit with a built-in battery pack and battery charger, designed for users who require a freezer for in-the-field applications away from mains power, or for security in areas with unreliable mains power. It is controlled by a program chip containing up to eight protocols supplied by the customer.

The **CL2200** is a simpler preprogrammed unit which can have up to four protocols pre-installed. The **CL2200** controller can also be used in the field away from mains, or where mains power is potentially unreliable, by connecting to our external power pack (the CL-P10). The **CL2200** offers a convenient, reliable and low cost entry into the cryopreservation field.



Technical Specifications	CL 2200	CL 5500
Controlled Temperature Range	+20°C to -43°C.	+20°C to -43°C.
Temperature Warning Sound	±1.5°C deviation	±1.5°C deviation
Temperature Sensor	Platinum resistance element	Platinum resistance element
Temperature Display	Digital LCD 0.1°C resolution	Digital LCD 0.1°C resolution
Timing	Digital, quartz crystal	Digital, quartz crystal
Dimensions (LxWxH)	175x155x90 mm	220x192x118 mm
Weight	1.5 Kg	6 Kg
Power Requirements	110V/240V	110V/240V
Number of Fixed Protocols	4 (8 optional)	8 (16 optional)
Duration of Protocols	160	160
Power Pack	External CL-P10	Internal
Battery Type	~	Sealed Lead Acid
Battery Charge	~	12V, 6Ah
Battery dimensions	~	150x100x65 mm
Warranty	2 years	2 years

User-Programmable Temperature Controllers

User-programmable temperature controllers can be run from any PC operating under WINDOWS®, using our proprietary software, CryoGenesis™. Through CryoGenesis™ software the user can specify temperature protocols of any complexity. Specimen temperature is matched with computer generated temperature data and precisely follows the selected temperature protocol.

Programmable controllers have a temperature control range of +40°C to -120°C. These controllers can monitor and display temperatures beyond the ranges specified above and are able to meet lower temperatures through "freefall".

The **CL8800** and **CL3300** are fully user-programmable temperature controllers.

The **CL8800** can be run from a computer, or can be pre-programmed to allow the freezer to operate without a computer (up to sixteen customer specified protocols can be pre-installed). The **CL8800** has an internal temperature logging facility. It can be connected to our external power pack (CL-P10) for operation away from mains power or for security where mains power is unreliable.

The **CL3300** is a smaller and more compact unit, and can be run only from a computer. It can be connected to our external temperature logger (TL-13); it can also be connected to our external power pack.



Technical Specifications	CL 3300	CL 8800
Controlled Temperature Range	+40°C to -120°C.	+40°C to -120°C.
Temperature Warning Sound	±1.5°C deviation	±1.5°C deviation
Temperature Sensor	Platinum resistance element	Platinum resistance element
Temperature Display	Digital LCD 0.1°C resolution	Digital LED 0.1°C resolution
Timing	Digital, quartz crystal	Digital, quartz crystal
Dimensions (LxWxH)	175x155x90 mm	225x195x90 mm
Weight	1.5 Kg	1.9 Kg
Power Requirements	110v/240V	110V/240V
Number of Fixed Protocols	Unlimited	Unlimited/16 internal
Duration of Protocols	> 240 mins	> 240 mins/233 mins internal
Battery Type	Power Pack CL-P10	Power Pack CL-P10
Warranty	2 years	2 years